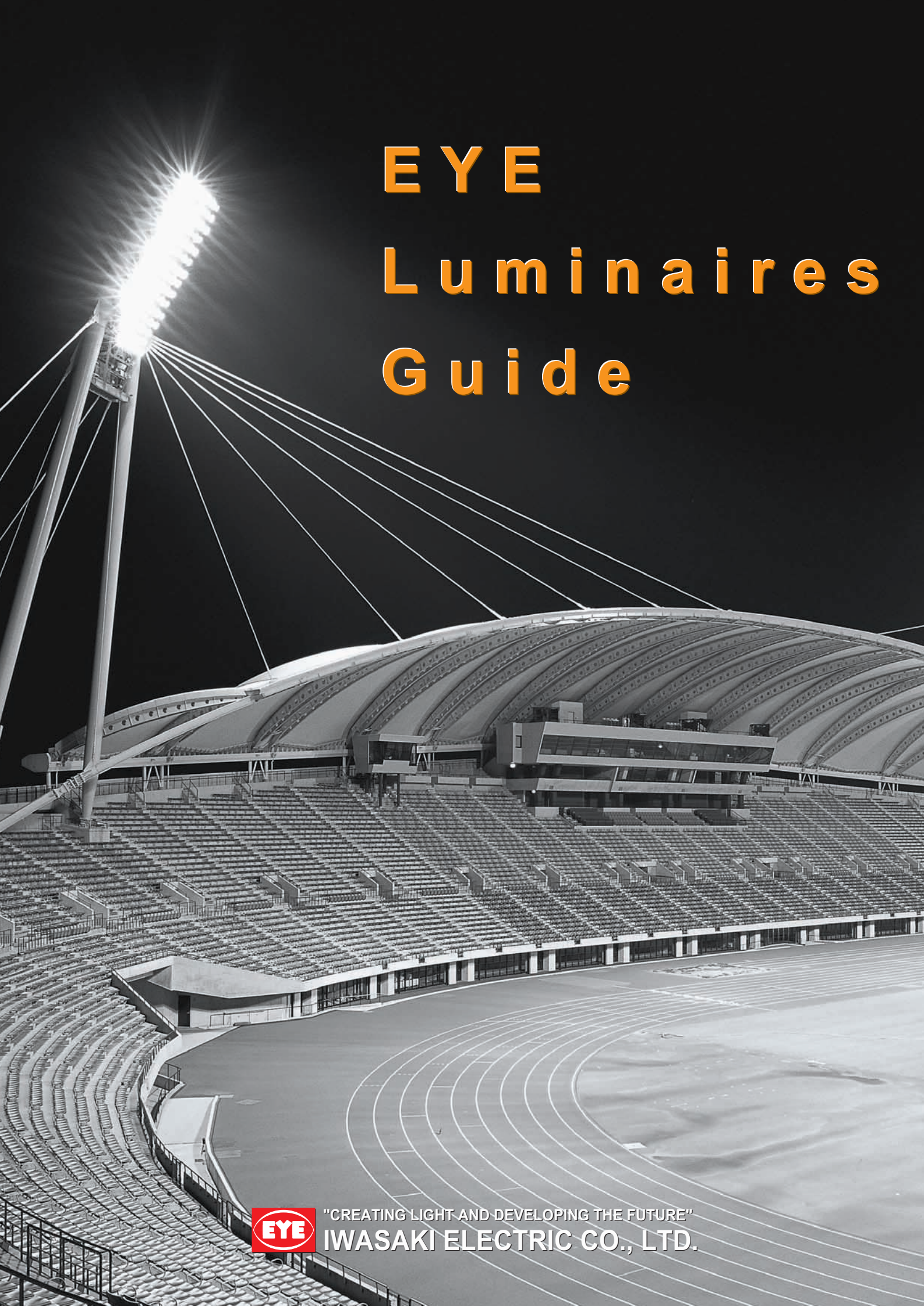




# EYE Luminaires Guide



"CREATING LIGHT AND DEVELOPING THE FUTURE"  
IWASAKI ELECTRIC CO., LTD.

# EYE

# Luminaires

# Guide

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# URBAN ACT $\beta$

Evolved design of Floodlight with built-in electronic ballast



Floodlight in harmony with function and design achieved save time and save space for installation and save energy.

Dark grey colour

**HCF1571 BHE**

White colour

**HCF1571 BHE/ W**

Dark grey colour

**HCF1572 BHE**

White colour

**HCF1572 BHE/ W**

## Specification

- Lamps : MT150FSDW, MT150FSW, MT150D
- Body : Aluminium die cast
- Reflector : Wide ; Aluminium, dimpled finish  
Medium ; Aluminium, faceted/dimpled
- Front glass : Curved shape tempered glass
- With dust proof filter
- Weight : 3.5 kg
- Lamp installation : Front open construction



HCF1571 BHE



HCF1571 BHE/ W



HCF1572 BHE



HCF1572 BHE/ W



Sign board



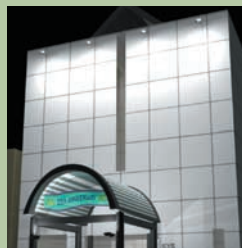
Area lighting



Light up



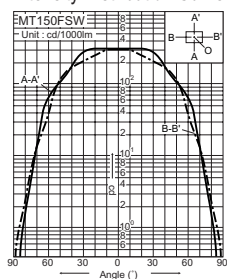
Wall washer



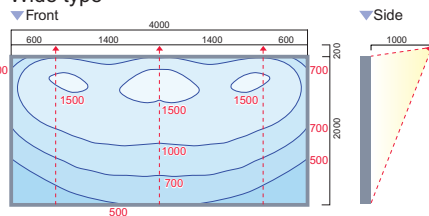
Exhibition



Intensity Distribution Curve

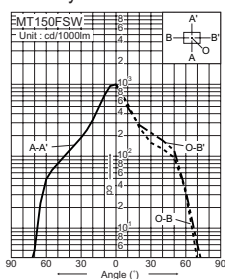


Illuminance Distribution  
Wide type

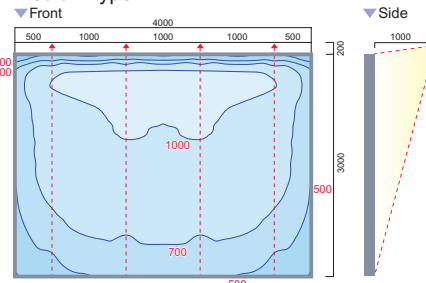


- Specification**
- 2m x 4m sign board
  - Floodlight : HCF1571BHE x 3 sets
  - Lamp : MT150FSW
  - Average illuminance : 970lx

Intensity Distribution Curve



Illuminance Distribution  
Medium type

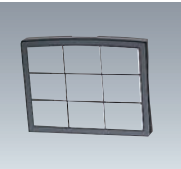


- Specification**
- 3m x 4m sign board
  - Floodlight : HCF1572BHE x 4 sets
  - Lamp : MT150FSW
  - Average illuminance : 780lx

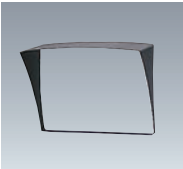
# URBAN ACT $\beta$



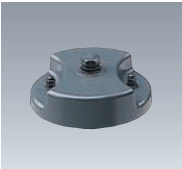
## Accessories



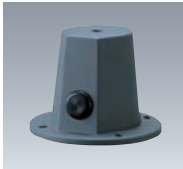
Guard  
**GHCF571**  
Heatproof resin  
Stainless steel  
Weight : 250g



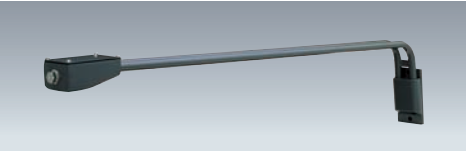
Anti-Glare Shield  
**FHC571**  
Heatproof resin  
Stainless steel  
Weight : 350g



Flange  
**FA17**  
Dark grey  
**FA17/W**  
White  
Aluminium die cast  
Weight : 350g



Flange  
**FA1**  
Dark grey  
**FA1/W**  
White  
Aluminium die cast  
Weight : 150g



Arm  
600mm type, Weight : 2.0kg  
**FA2** - Dark grey  
**FA2/W** - White  
900mm type, Weight : 2.3kg  
**FA3** - Dark grey  
**FA3/W** - White  
Junction box : Aluminium die cast



Arm (For indoor use only)  
600mm type, Weight : 1.7kg  
**FA18** - Dark grey  
**FA18/W** - White  
Junction box : Aluminium die cast

## Installation examples



GHCF571



FHC571



FA17



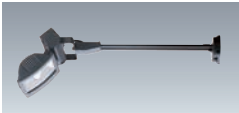
FA17 (On the wall)



FA1



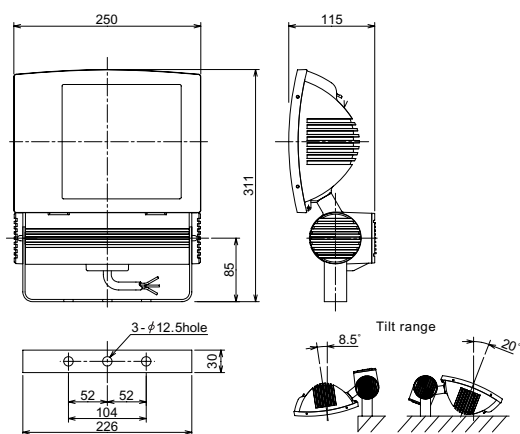
FA2



FA18

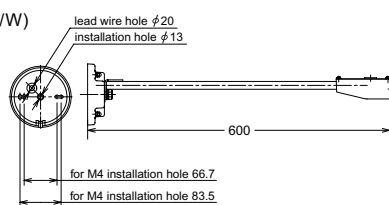


### Accessories



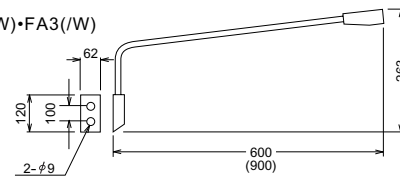
### Arm

FA18(/W)



### Arm

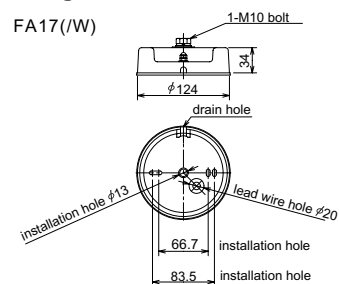
FA2(/W)•FA3(/W)



( ) shows the dimensions for FA3

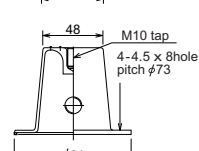
### Flange

FA17(/W)



### Flange

FA1(/W)

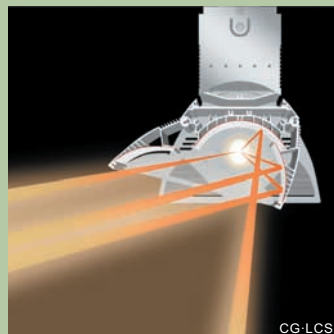


# SPACE WING

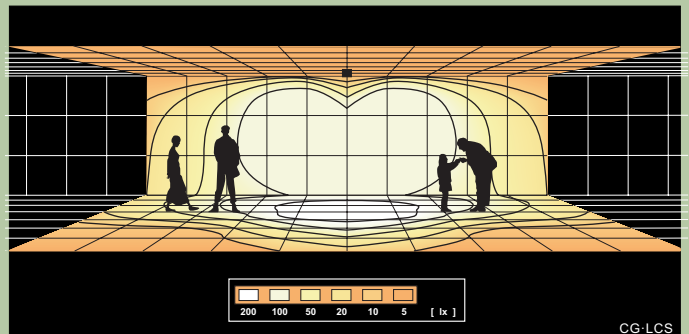
Flexible light solution for multi purpose space  
The reflector can be tilted max. 40°



Base lighting can be changed to the wall washer lighting.  
The reflector moves like a wing to change the light distribution.



CG-LCS



CG-LCS

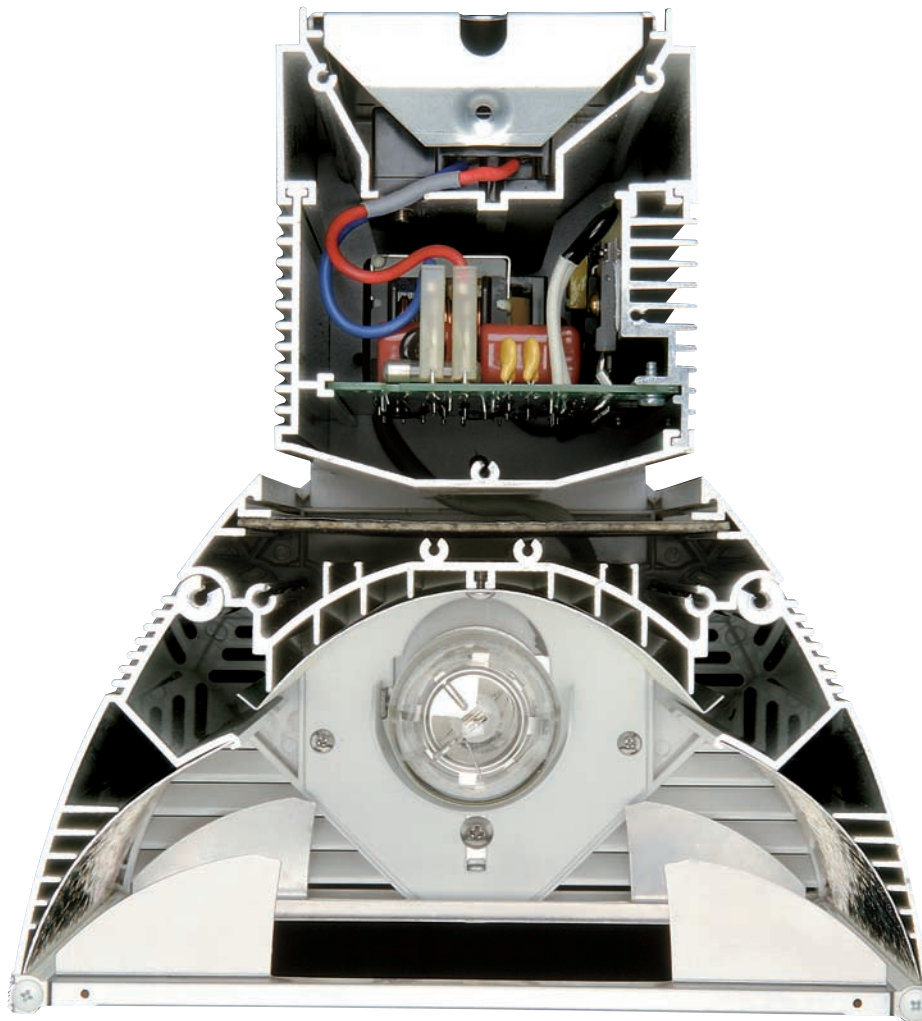
For example, the SPACE WING is installed 3m height from a floor and 2m away from a wall, the luminaire will illuminate not only the floor but also the wall uniformly by setting the reflector 40 degrees. The movable reflector is designed by using a lot of computer simulation.

The illuminance is always kept as an ideal level at any angle of the reflector.

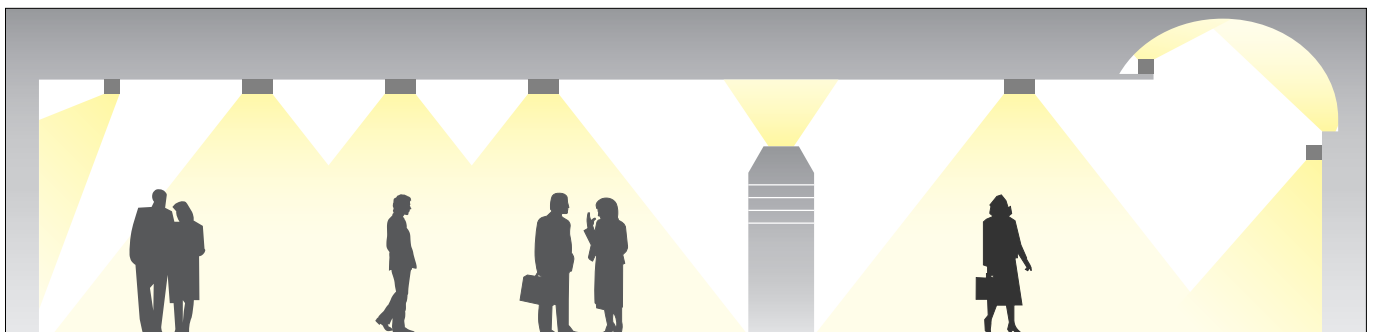
Illuminance distribution : Height - 3m, width - 10m  
The SPACE WING is installed at 2m from the wall and tilted 40 degrees to the wall.  
Lamp : Ceralux150W

# SPACE WING

The luminaire built-in electronic ballast will enable to achieve better and various illuminating plans.



The built-in electronic ballast construction of the luminaire will make the easy installation without the secondary wiring for ceiling type and bracket type. It achieved the elegant appearance.



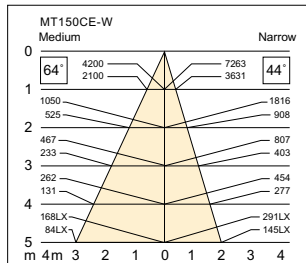
The luminaires will provide design uniformity and variety of lighting ways.  
Ceiling type, Bracket type, Architectural lighting and Recessed type are available.  
The light distribution can be adjustable according to the application :  
Base lighting, wall washer lighting and indirect lighting.

# SPACE WING Ceiling type ( Built-in electronic ballast )

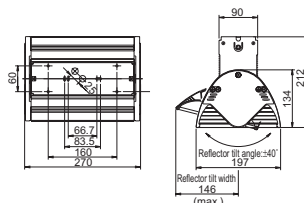


For MT150W  
**HSL3051B**  
(Ceiling surface mounted type)

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 3.5 kg
- Reflector tilt angle :  $\pm 40$  degrees

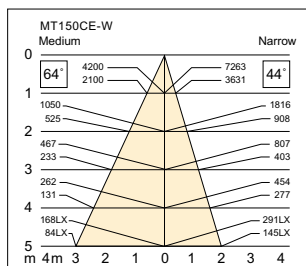


drawing

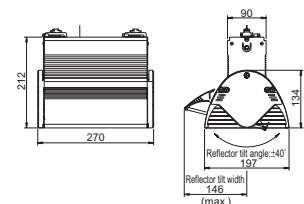


For MT150W  
**HSL3052B**  
(with duct wiring plug )

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 3.5 kg
- Reflector tilt angle :  $\pm 40$  degrees

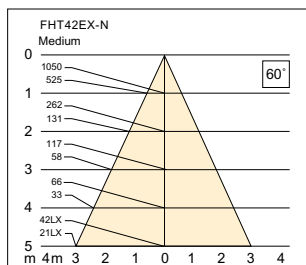


drawing

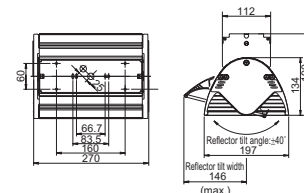


For compact fluorescent lamp 42W  
**FHSL42151**  
(with duct wiring plug )

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Resin, silver mirror finish
- Colour : White
- Weight : 3.2 kg
- Reflector tilt angle :  $\pm 40$  degrees

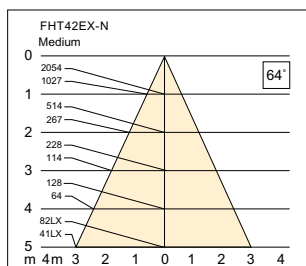


drawing

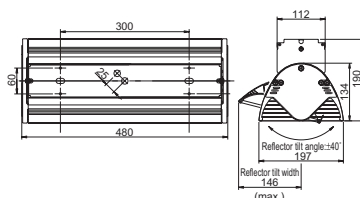


For compact fluorescent lamps 42W x 2  
**FHSL42251**  
(Ceiling surface mounted type)

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Resin, silver mirror finish
- Colour : White
- Weight : 4.5 kg
- Reflector tilt angle :  $\pm 40$  degrees

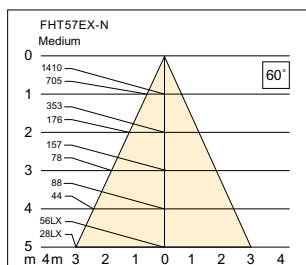


drawing

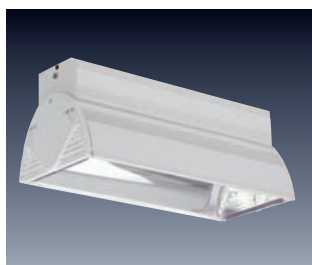
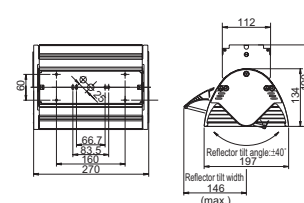


For compact fluorescent lamps 57W  
**FHSL57151**  
(Ceiling surface mounted type)

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Resin, silver mirror finish
- Colour : White
- Weight : 3.2 kg
- Reflector tilt angle :  $\pm 40$  degrees

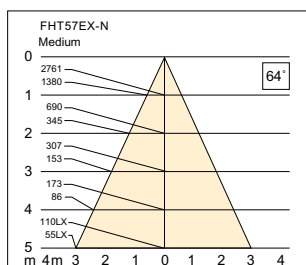


drawing

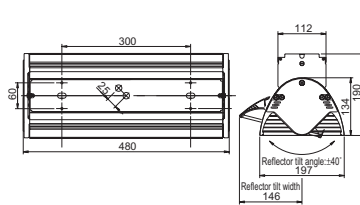


For compact fluorescent lamps 57W x 2  
**FHSL57251**  
(Ceiling surface mounted type)

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Resin, silver mirror finish
- Colour : White
- Weight : 4.5 kg
- Reflector tilt angle :  $\pm 40$  degrees



drawing

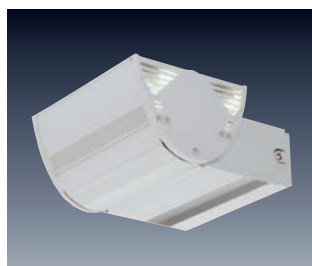
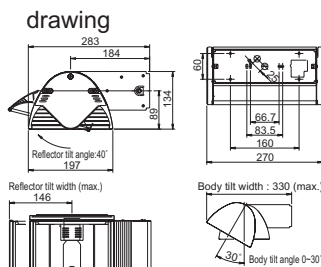
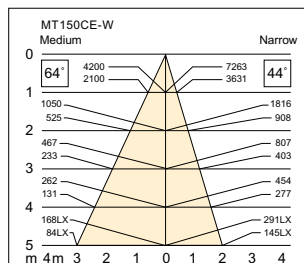


# SPACE WING Bracket type ( Built-in electronic ballast )



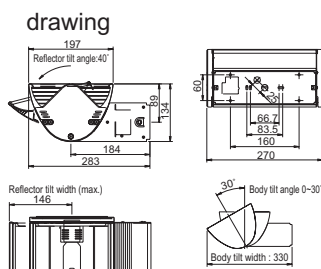
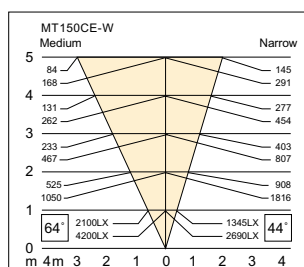
For MT150W  
**HBL3051B**  
(Ceiling surface mounted type)

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 3.5 kg
- Reflector tilt angle : 0~40 degrees



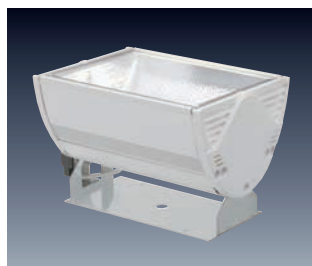
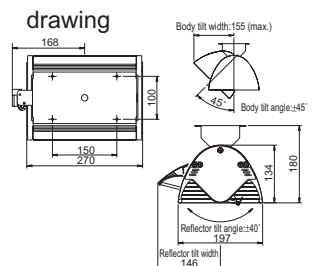
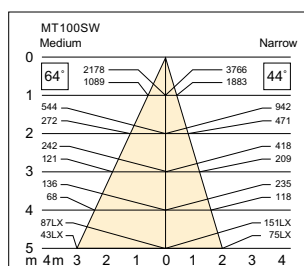
For MT150W  
**HBL3052B**  
(Bracket type, only up lighting)

- Body and reflector : Aluminium
- Front : Clear tempered glass
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 3.9 kg
- Reflector tilt angle : 0~40 degrees



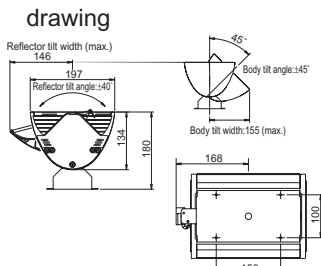
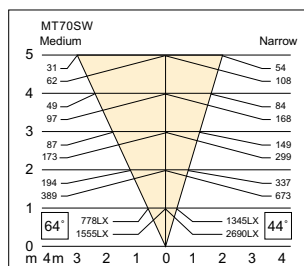
Architectural lighting For MT70W~150W  
**HEP3051**  
(Only down lighting)

- Body and reflector : Aluminium
- Front : Clear tempered glass
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 2.0 kg
- Reflector tilt angle : ±40 degrees



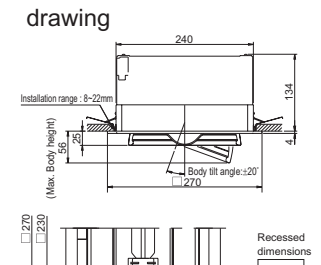
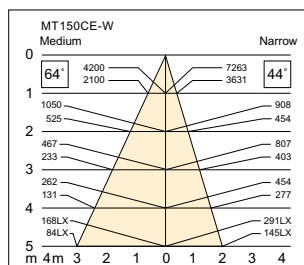
Architectural lighting For MT70W~150W  
**HEP3052**  
(Only up lighting)

- Body and reflector : Aluminium
- Front : Clear tempered glass
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 2.4 kg
- Reflector tilt angle : ±40 degrees



Recessed type, For MT70W~150W  
**HDW30521**

- Body and reflector : Aluminium
- Side : Resin
- Reflector : Aluminium mirror dimple finish
- Colour : White
- Weight : 3.0 kg
- Body tilt angle : ±20 degrees



# The Bouton

## Combined castool luminaires for superior cost saving installation

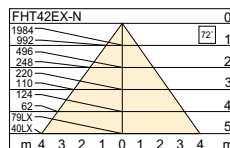


### FHDW42271ERH

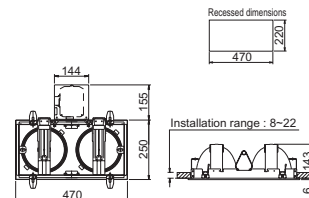
Compact fluorescent lamps 42W x 2

- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Energy efficiency : 66.3lm/ W
- Lumens : 5240lm, Wattage 79W
- Weight : 2.8 kg

Luminous intensity distribution



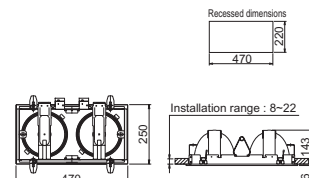
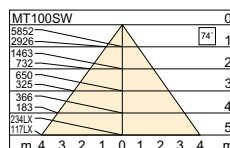
Dimensions



### HDW20571

Color Arc, SDX lamps 70W~100W x 2

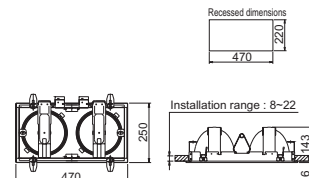
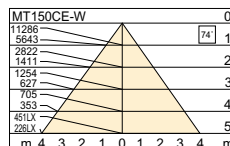
- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Weight : 2.5 kg



### HDW30571

Color Arc 150W x 2

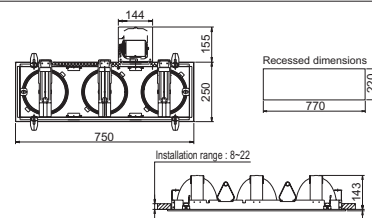
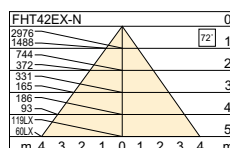
- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Weight : 2.5 kg



### FHDW42371ERH

Compact fluorescent lamps 42W x 3

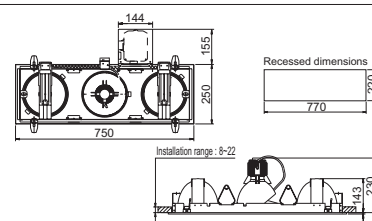
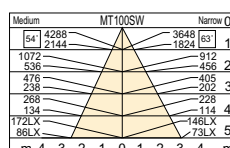
- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Energy efficiency : 65.0lm/ W
- Lumens : 7860lm, Wattage 121W
- Weight : 3.5 kg



### MXDW42211ERH

Compact fluorescent lamps 42W x 2 and Color Arc 70W~100W

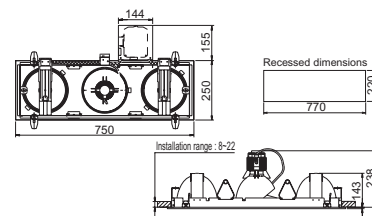
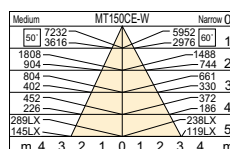
- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Weight : 3.4 kg



### MXDW42311ERH

Compact fluorescent lamps 42W x 2 and Color Arc 150W

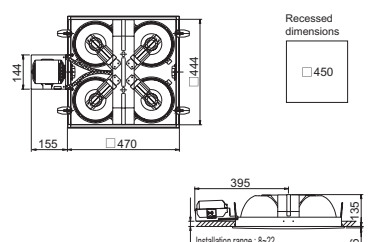
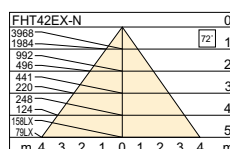
- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Weight : 3.4 kg



### FHDW42471ERH

Compact fluorescent lamps 42W x 4

- Flame : Steel plate, white colour
- Reflector : Aluminium fine matt finish
- Shielding angle : 30 degrees
- Energy efficiency : 66.3lm/ W
- Lumens : 10480lm, Wattage 158W
- Weight : 4.2 kg



# Floodlight : Features & Applications

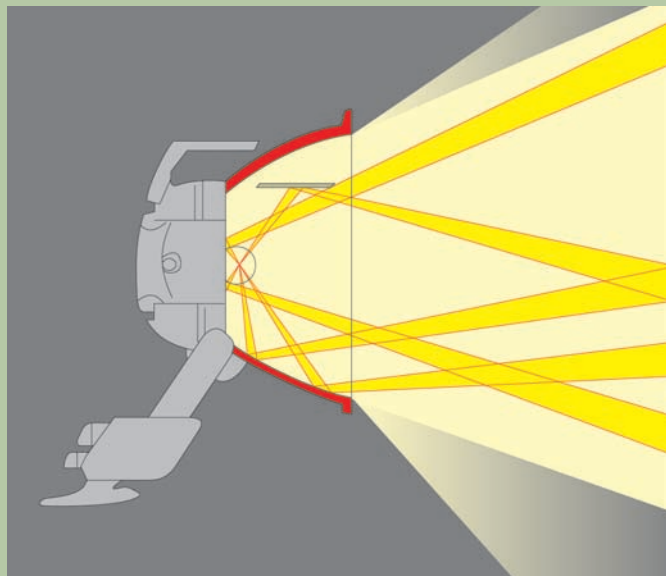
| Name                             | Photo                                                                               | Features                                                                                                                                                                           | Applications                                                    |
|----------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| EYE<br>SUPA-FOCUS                |    | The compact SUPA-FOCUS system provides excellent lighting for many kind of facilities with short arc type Quartz Arc lamps.                                                        | Large and medium sized stadiums<br><br>Entertainment complexes  |
| EYE<br>Sports-Beam               |    | The compact Sports-Beam system provides superior lighting for many facilities with long arc type Quartz Arc lamps.                                                                 | Large and medium sized stadiums<br><br>Entertainment complexes  |
| EYE<br>Floodlight,<br>BEAM-ON    |   | The ALGLAS® finish of the reflectors and Enhanced reflective coating of the reflectors retain a clean surface condition and high reflectance over a long service. (ALBRAIN finish) | Sports facilities and other facilities                          |
| EYE<br>Multi-Focus<br>Floodlight |  | The floodlight is square shaped and higher coefficient of utilization and greater uniformity ratio of illumination than the conventional floodlight                                | Gymnasiums and stadiums                                         |
| EYE<br>Multi-Space<br>Floodlight |  | The floodlight is square shaped and higher coefficient of utilization and greater uniformity ratio of illumination than the conventional floodlight                                | Gymnasiums and stadiums                                         |
| Floodlight for<br>halogen lamps  |  | The ALGLAS® coating reflector provides high durability performance.<br>The floodlights for compact JD type halogen lamps.                                                          | Medium and small sized facilities<br><br>Park & garden lighting |
| EYE<br>TENNISTER                 |  | The fixture specifically designed for tennis courts. They illuminate the courts effectively and symmetrically                                                                      | Tennis courts                                                   |

| Name                                      | Photo                                                                               | Features                                                                                                                      | Applications                                                     |
|-------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| EYE<br>Area Star                          |    | This unique computer designed facet reflector put more light forward than conventional floodlight. Less spilled light design. | Indoor and out door sport ground<br>Park, Parking lot            |
| EYE<br>Area Light                         |    | This unique computer designed facet reflector put more light forward than conventional floodlight. Less spilled light design. | Indoor and out door sport ground<br>Park, Parking lot            |
| Tungsten<br>Halogen<br>Floodlight         |   | Compact floodlight for double ended halogen lamps<br>Wide luminous intensity distribution                                     | Building floodlighting,<br>Signboards,<br>Advertising towers     |
| 500A Series<br>Halogen<br>Floodlight      |  | Super Narrow, Narrow & Wide beam types are available For 250W, 500W JD type halogen lamps                                     | Building light up,<br>Billboard                                  |
| 250B,150C Series<br>Halogen<br>Floodlight |  | Wide beam type compact halogen floodlight<br>For 50W, 75W, 100W, 150W and 250W JD type halogen lamps                          | Park & garden lighting<br>Small scale floodlighting applications |

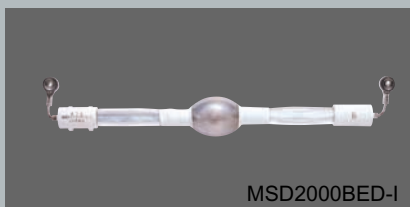
## EYE SUPA-FOCUS

With spectator and professional sporting events, spotlights have to meet a wide range of demands. In addition to providing illumination suitable for a wide range of situations, they must also provide lighting that is compatible for the recording of high-definition TV. They must also be installed with due consideration to the surroundings and be designed to blend in with the architecture and existing fixtures.

To meet these demands, Iwasaki has come up with the "Power Beam," a new generation of floodlighting system, and the "Quartz Arc," a high-performance metal halide lighting system designed to optimize colour rendering. These add a new dimension to sporting events with a completely new lighting experience, combining high-quality colour rendering and with a powerful light flux of 200,000 lm. The equipment is also compact and can result in lower initial set-up costs.



### Quartz Arc (short arc type) 2000W



The Quartz Arc for 2000 W provides you with the output lumen as much as 200,000 lm.

The sharp light distribution and high colour rendering index make each sports scene more lively. It is best suited to the lighting that is compatible for the recording of high-definition TV.

#### Features

- The average colour rendering index (Ra) of 92 is enough for the colour rendering for high-definition TV.
- High power: total luminous flux 2000,000 lm, luminous efficacy 100 lm/W
- Vivid colour rendering: Colour temperature 5,500K
- The short arc length (distance between electrodes) allows quality light distribution just as the case of point light source.

#### EYE ballast

Use of the ballast for 400 V reduces the power facility cost and the corrosion-resistant stainless steel case with contact terminal requires no construction work.

#### Lamp characteristics

| Lamp Type MSD2000BED-I |                     |       |
|------------------------|---------------------|-------|
| Dimension (mm)         | Bulb diameter       | φ40   |
|                        | Nominal length      | 309   |
|                        | Light center length | 154.5 |
| Base                   | special             |       |
| Lamp wattage (W)       | 2,000               |       |
| Lamp voltage (V)       | 215                 |       |
| Lamp current (A)       | 10.6                |       |
| Initial lumens (lm)    | 200,000             |       |
| Lamp efficacy (lm/W)   | 100                 |       |
| Colour Temp. (K)       | 5,500               |       |
| CRI (Ra)               | 92                  |       |
| Rated life (hrs.)      | 3,000               |       |

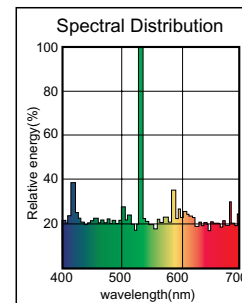
## For high definition TV broadcast

Quartz Arc features high colour rendering (average colour rendering index (Ra): 92) that makes colours vivid to suit to the HDTV. The natural light just like the sun light creates comfortable sports environment. Its correlated colour temperature is 5,600K.

Quartz Arc 2000W



standard type metal halide lamp



## High colour rendering index and luminous efficacy

Powerful (200,000 lm/w or 100 lm/w) lighting with high colour rendering index and luminous efficacy

## Compact

The size of about 40% of conventional floodlight for 2000 W. The light is covered with a net.



## Eco-friendly

Spilled light is minimized for consideration of peripheral environment while maintaining effective light distribution.



SUPA-FOCUS



standard type floodlight

## Safe

The built in interlock switch makes your lamp replacing work safe.



## Simple construction

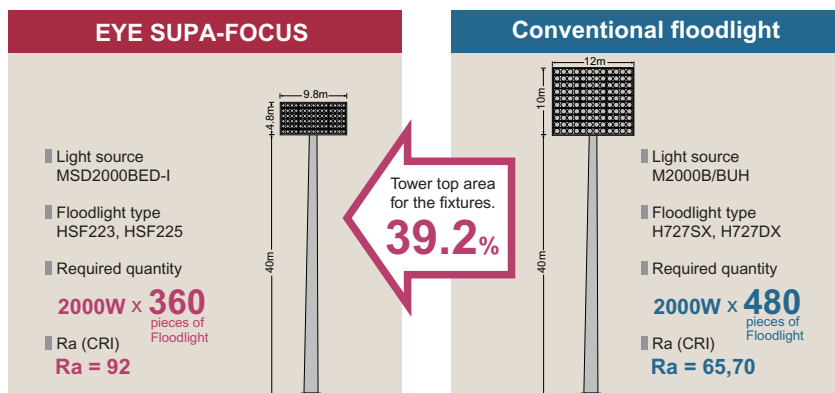
The simple contact terminal in the terminal box makes the construction simpler.



\*An optional aiming device is available to maintain an accurate lighting direction.

## High colour rendering, luminous efficacy and compact design will reduce your equipment expenses.

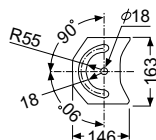
Shown at the right is a comparison between SUPA-FOCUS and our standard type floodlight for 2000 W under the same operating conditions.



# SUPA-FOCUS™ 2000W

Quartz Arc, short Arc type 2000W  
waterproof type

## Mounting dimensions



Tilt range from the horizontal level  
Down to 60 degrees only

## General Specification

- Front part
  - Clear heat tempered glass
- Front support, support ring & Body :
  - Aluminum alloy die-casting
- With protector net
- With ignitor
- With inter-lock switch
- With terminal box
- Finished colour
  - Ivory, Dark gray
  - ( Munsell colour system N6 )
- Designed max. velocity
  - of the wind 60m/s
- Effective projected area 0.17m<sup>2</sup>
- Weight 15.3 kg

## Suitable lamps

- Super Narrow
- Narrow
- Medium
- Wide

Quartz Arc short arc type  
MSD2000BED-I



**Super Narrow**

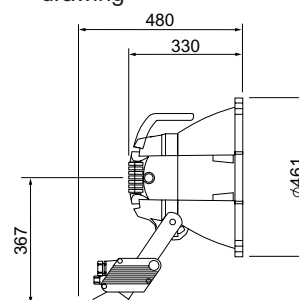
## Corrosion resistance

# HSF222

- Reflector : Aluminum mirror surface
- Inner surface ; ALGLAS finished
- Outer surface ; ALGLAS finished

Optical data **p.191**

## drawing



**Narrow**

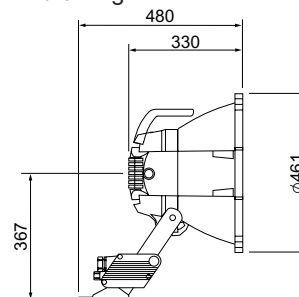
## Corrosion resistance

# HSF223

- Reflector : Aluminum mirror &  
Sand blasted aluminium
- Inner surface ; ALGLAS finished
- Outer surface ; ALGLAS finished

Optical data **p.191**

## drawing



**Medium**

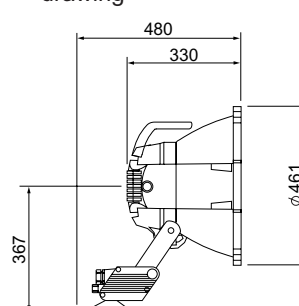
## Corrosion resistance

# HSF224

- Reflector : Aluminum facetted &  
Sand blasted aluminium
- Inner surface ; ALGLAS finished
- Outer surface ; ALGLAS finished

Optical data **p.191**

## drawing



**Wide**

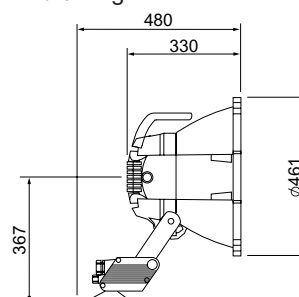
## Corrosion resistance

# HSF225

- Reflector : Aluminum dimpled surface
- Inner surface ; ALGLAS finished
- Outer surface ; ALGLAS finished

Optical data **p.191**

## drawing



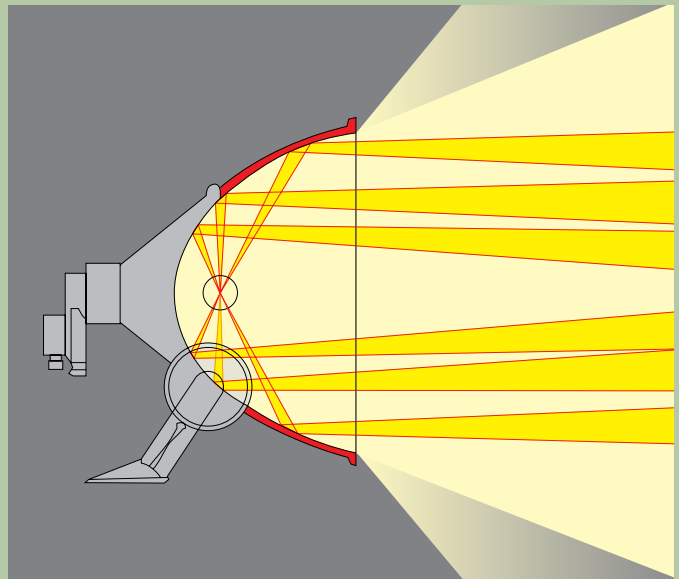
## EYE Sports-Beam

The long arc type of Quartz Arc (with double-ended base) features compactness and high luminous efficacy. It greatly reduces the construction and initial costs for facilities along with the required capacity of electric services. Its high colour rendering performance is best suited to the illumination for sports recorded for HDTV.

### Features

- The diameter of the front is same as that of conventional floodlight (for 700 to 1500 W).
- Luminous efficacy is high. Number of fixtures can be reduced by 24 % when compared to the square type floodlight for 2000 W.
- Average colour rendering index (Ra) is as high as 85, which is good for the recording for HDTV.

Comparing to conventional fixtures, the capacity of electric services and number of fixtures required are reduced by 24%.



|                         | Sports-Beam                                                         | Conventional floodlight                                                  |
|-------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------------|
| Illumination equipments | HSF254 X 105<br>2kW Quartz Arc<br>Long arc type lamps<br>105 pieces | Square type floodlight X 138<br><br>2kW Metal halide lamps<br>138 pieces |
| Ra (CRI)                | Ra : 85                                                             | Ra : 65                                                                  |
| Correlated colour Temp  | 5,500K                                                              | 4,200K                                                                   |
| Capacity of electricity | 238KVA (76%)                                                        | 312KVA (100%)                                                            |

The average illumination level=1,000lx



## Quartz Arc (long arc type) 2000W



MLD2000BED-I

The Quartz Arc for 2000W provides the total luminous flux as much as 200,000 lm. The compact fixture without an external bulb, but with double-ended base minimizes the number of required fixtures and initial facility cost.

### Features

- The compact double-ended base makes the fixture compact and luminous efficacy high.
- High average colour rendering index (Ra):85  
The correlated colour temperature is 5,500K.
- The light similar to the sunlight makes the sporting environment comfortable.
- High luminous efficacy: 100 lm/W

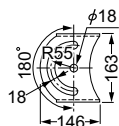
### Lamp characteristics

| Lamp type            |                     | MLD2000BED-I |
|----------------------|---------------------|--------------|
| Dimensions (mm)      | Bulb diameter       | φ 30         |
|                      | Nominal length      | 280          |
|                      | Light center length | 140          |
| Base                 |                     | Special      |
| Lamp wattage (W)     |                     | 2,000        |
| Lamp voltage (V)     |                     | 230          |
| Lamp current (A)     |                     | 9.2          |
| Initial lumens (lm)  |                     | 200,000      |
| Lamp efficacy (lm/W) |                     | 100          |
| Colour Temp. (K)     |                     | 5,500        |
| CRI (Ra)             |                     | 85           |
| Rated life (hrs.)    |                     | 3,000        |

# Sports-Beam™ 2000W

Quartz Arc, long Arc type 2000W

Mounting dimensions



Tilt range from the horizontal level



Down to 60 degrees only

## General Specification

- Reflector Aluminium  
ALGLAS finished
- Support frame  
Aluminium alloy die-casting with polyester coating
- Body Stainless steel with polyester coating
- Arm Iron steel (zink galvanised finish)
- Designed max. velocity of the wind 60m/s
- Effective projected area 0.27m<sup>2</sup>
- Finished colour Grey  
(Munsell colour system N6)
- Weight 12.3 kg
- With inter-lock switch

## Suitable lamps

- Narrow
- Medium

Quartz Arc long arc type  
MLD2000BED-I



**Narrow**

Anti-corrosion type

## HSF251

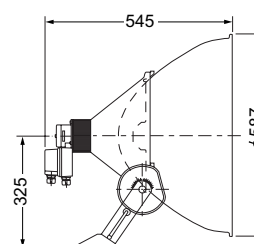
Anti-corrosion type

## HSF254

With louver

Optical data p.191

drawing



**Medium**

Anti-corrosion type

## HSF252

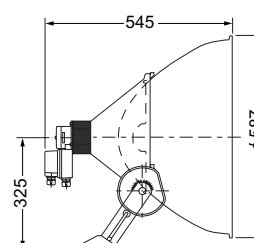
Anti-corrosion type

## HSF255

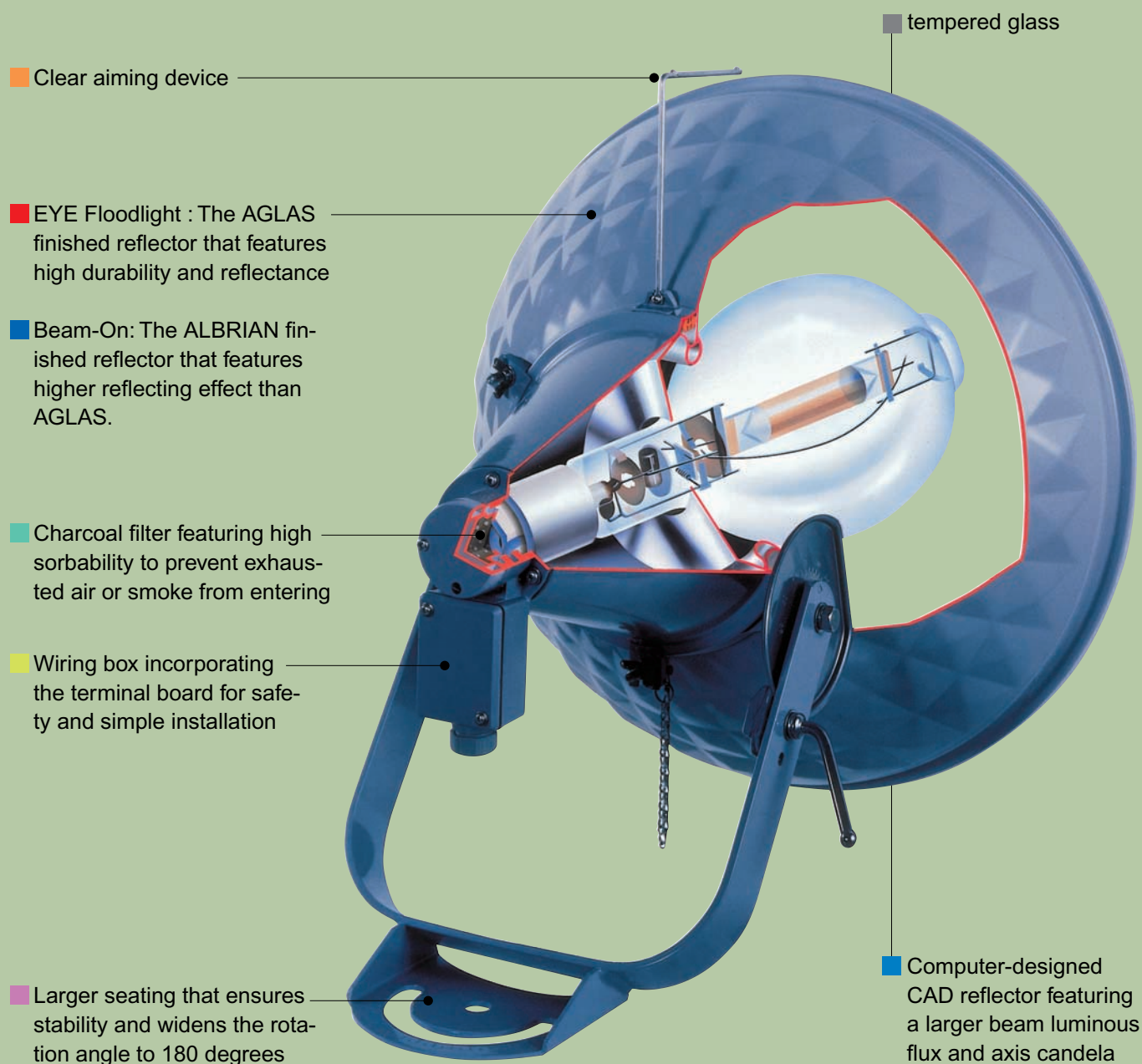
With louver

Optical data p.191

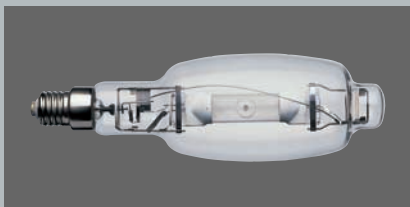
drawing



# EYE Floodlight



## Quartz Arc (long arc type) 1500W



Higher colour rendering performance comparing to conventional Metal Halide lamps. With the floodlights for 1000 W (H574S(D)X, H575S(D)X, H566S(D)X, H567S(D)X), high quality lighting for recording HDTV at low cost is possible.

### Features

- Average colour rendering index (Ra) is as high as 92, higher than that of conventional Metal Halide lamp of high luminous efficacy type. It is good for recording for colour HDTV.
- The correlated colour temperature of 5,500 K reproduces vivid colours.

### Application

Medium or small-sized indoor and outdoor sports arenas where high colour rendering performance is required.

### Cautions

- Make sure to use your fixture with an appropriate ballast. If you connect the fixture directly to the power source without using a ballast, the lamp will be damaged.
- If your lamp blinks or is not lit, immediately switch it off and replace it, or the high voltage pulse may damage the ballast or the lighting circuit.
- Before use, check the type of the fixture once again.

### Lamp characteristics

| Lamp type            |                     | MT1500B-D/BH |
|----------------------|---------------------|--------------|
| Dimension (mm)       | Bulb diameter       | φ120         |
|                      | Nominal length      | 390          |
|                      | Light center length | 245          |
| Base                 |                     | E40          |
| Lamp wattage (W)     |                     | 1,500        |
| Lamp voltage (V)     |                     | 265          |
| Lamp current (A)     |                     | 6.3          |
| Initial lumens (lm)  |                     | 130,000      |
| Lamp efficacy (lm/W) |                     | 86.7         |
| Colour Temp. (K)     |                     | 5,500        |
| CRI (Ra)             |                     | 92           |
| Rated life (hrs.)    |                     | 6,000        |

## EYE Floodlight ALGLAS-finished (ALGLAS coating)

The ALGLAS finished reflector featuring high light distribution performance and endurance is used in all of Iwasaki's HID floodlights, Multi-Focus, Multi-Space, EYE Earia Star and Eye Area Light.

### ALGLAS COATING

Aluminum plate formed and polished as a reflector is coated with two layers of several microns of high purity quartz glass by soaking the plate in the silicate solvent (water glass) and baked at high temperature.

#### (1) High corrosion resistance

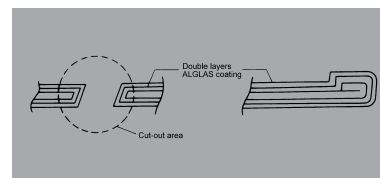
Aluminum plate surface is coated with two layers of high purity quartz glass. The surface is chemical resistant and the double layers keep the reflector corrosion resistant.

#### (2) Smooth surface with high reflectance

The smooth ALGLAS-coated surface is easy to be serviced and keeps high reflectance for long time. Its smooth surface does not allow dust to accumulate on it, so that high reflectance remains unchanged.

#### (3) Flexibility, strength and heat resistance

ALGLAS chemically coated on an aluminum plate is flexible and is not damaged even when the plate is bent. Its performance remains unchanged even if it is cracked. It also features low thermal expansion and high thermal resistance.



## BEAM-ON ALBRIAN finish (Reflectance intensifier film coating)

BEAM-ON incorporates the ALBRIAN-finished reflector which offers the luminous efficacy about 16% higher than that of other ALGLAS-finished floodlights. Even when you reduce the number of equipment by about 15%, the luminosity remains unchanged, and so you can save the cost.

### ALBRIAN finish (Reflectance intensifier film coating)

Vapour deposition performed on an undercoated aluminum plate and high refraction substance and low refraction substance laminated on it in order increase the reflectance.

## Computer-designed reflector

The computer (CAE)-designed reflector provides high reflectance by blocking useless light. EYE Floodlight S is equipped with the CAD reflector that features high axis candela. EYE Floodlight D is equipped with the facet reflector that features large effective luminous flux. The multi-focus reflector and other Iwasaki's design technique allow the fixture to provide the highest performance.

## Wiring box with terminal board

The wiring box with terminal board makes your construction work simple.

## Aiming device

An aiming device comes with standard item to make the aiming easy when you install a floodlight. With it, you will enjoy simple construction and high optical performance.



## Seating (rotation angle: 180 degrees)

The rotation angle of the floodlight seating is 180 degrees to both right and left. After installing a floodlight (with scale), you can select an angle in a wider range, that will allow a wider variation of construction.

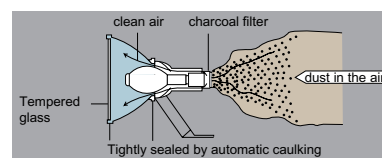


180 degrees

90 degrees

## Filter

The luminous efficacy is kept high for long time, because the filter prevents dust from entering into the luminaire, dispensing you from maintenance work for a long period of time. The front glass, reflector and frame are completely sealed so that the air flows only through the filter. The water-repellent-finished filter also prevents the entrance of moisture.



## Corrosion resistance

Even the materials used in standard types are highly salt-resistant to dispense you from maintenance work. For use in coastal or heavy industrial areas, highly corrosion-resistant type or double corrosion-resistant structure are also available.

## Series for special-purposes

Select luminaire models that suit to the installation environments because performance of luminaries may not be maintained for long depending on some environments.

### High corrosion resistance

#### model

The ALGLAS-finished aluminum reflector is coated with corrosion-resistant film to enhance the corrosion resistance.

#### Double corrosion resistance (double structure) model

The double-structured reflector is highly corrosion resistant and rigid.

#### Vibration-proof model

The model is resistant to up and down, back and force, and constant vibration, (but not to rolling).

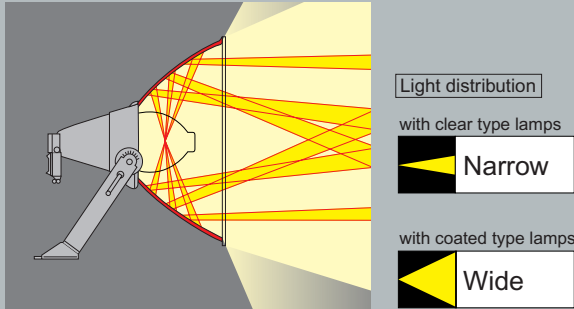
#### Rigid front model

The front reinforced glass makes the model resistant to strong shock, even to the impact by a hardball thrown at the speed of 126 km/h in a baseball stadium.

# EYE Floodlight / BEAM-ON

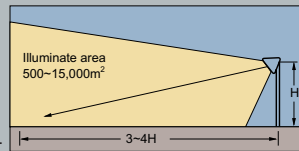
## Type S

The computer-designed high efficiency CAD reflector of the long range floodlight, EYE Floodlight S features high axis candela and beam luminous flux. It is especially suited to pro-baseball stadiums which require high illuminance in wide area. The ALGLAS-finished reflector of EYE Floodlight and ALBRIAN-finished reflector of BEAM-ON provide high reflectance and corrosion-resistance, and the filters preventing the entrance of dust also enhance the performance.



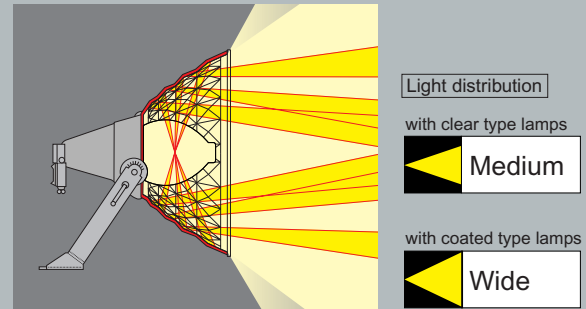
### Usage note

Select a clear type of lamp to use the fixture as a long range floodlight. A coated or diffused type of lamp makes the luminary a close range floodlight. If you use the floodlight for close and medium range like EYE Floodlight D or EYE Multi Focus together, you will enjoy highly uniform lighting in wide area.



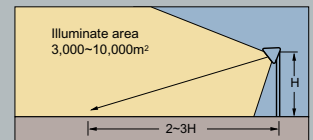
## Type D

Close and medium range floodlight, type D features high effective luminous flux in beam and thick light distribution. The computer-designed facet (multi-faceted) reflector realizes effective and comfortable lighting without glare. The ALGLAS-finished reflector of EYE Floodlight and ALBRIAN-finished reflector of BEAM-ON provide high reflectance and corrosion-resistance, and the filters permit to save maintenance work of the luminaries.



### Usage note

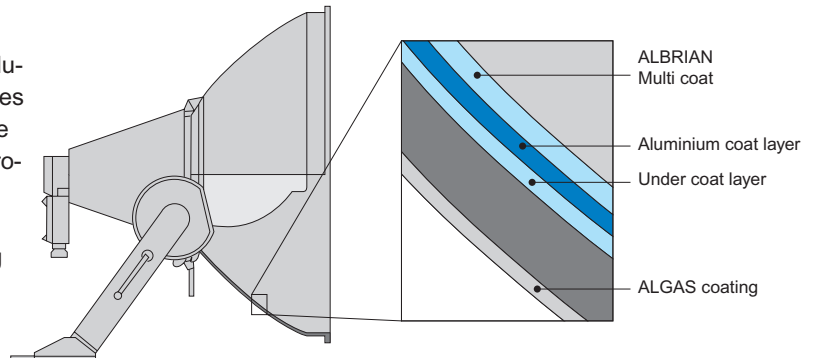
For a medium range floodlight, select a clear type of lamp, and for a close range floodlight, use a coated or diffused type of lamp. Those types provide small or medium-sized facilities with uniform lighting at any illuminance level.



## ALBRIAN (high reflection film) finished reflector provides efficiency 16% higher than conventional type's

### ■ ALBRIAN (high reflection film) coating

Vapour deposition is performed on undercoated aluminum plate and high and low refraction substances are laminated on it to increase the reflectance. The ALBRIAN (high reflection film) finished reflector provides efficiency 16% higher than conventional ALGLAS type's. You can have a same level of illuminance with 15% less number of luminaires, saving initial facility cost and electric power expense.



# EYE Floodlight / BEAM-ON

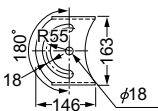
| Specification                                        |   | Lamp                                                                                                                                                                                              | 2000W              |                                                                                                                                                                                                                 | 1500W              |                                                                                                                                                                                                                 | 1000W              |                                                                                                                                                                                                                                         | 400W               |                                                                                                                                                                                                                                             | 200W               |  |
|------------------------------------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|
|                                                      |   | Clear                                                                                                                                                                                             | Coated<br>Diffused | Clear                                                                                                                                                                                                           | Coated<br>Diffused | Clear                                                                                                                                                                                                           | Coated<br>Diffused | Clear                                                                                                                                                                                                                                   | Coated<br>Diffused | Clear                                                                                                                                                                                                                                       | Coated<br>Diffused |  |
| Anti-corrosion<br>type                               | S | H727SX<br> Narrow  Wide<br>p.23 |                    | H567SX / H575SX<br> Narrow  Wide<br>p.24 p.22 |                    | H567SX / H575SX<br> Narrow  Wide<br>p.24 p.22 |                    | H367SX<br> Narrow  Wide<br>p.28                                   |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | D | H727DX<br> Medium  Wide<br>p.23 |                    | H567DX / H575DX<br> Medium  Wide<br>p.25 p.22 |                    | H567DX / H575DX<br> Medium  Wide<br>p.25 p.22 |                    | H367DX<br> Medium  Wide<br>p.29                                   |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | M |                                                                                                                                                                                                   |                    | H567MGX<br> Medium  Wide<br>p.34              |                    | H567MGX<br> Medium  Wide<br>p.34              |                    |                                                                                                                                                                                                                                         |                    |                                                                                                                                                                                                                                             |                    |  |
| Corrosion<br>resistance                              | S | H726SX<br> Narrow  Wide<br>p.23 |                    | H566SX / H574SX<br> Narrow  Wide<br>p.24 p.22 |                    | H566SX / H574SX<br> Narrow  Wide<br>p.24 p.22 |                    | H366SX<br> Narrow  Wide<br>p.28                                   |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | D | H726DX<br> Medium  Wide<br>p.23 |                    | H566DX / H574DX<br> Medium  Wide<br>p.25 p.22 |                    | H566DX / H574DX<br> Medium  Wide<br>p.25 p.22 |                    | H366DX<br> Medium  Wide<br>p.29                                   |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | M |                                                                                                                                                                                                   |                    | H566MGX<br> Medium  Wide<br>p.34            |                    | H566MGX<br> Medium  Wide<br>p.34            |                    |                                                                                                                                                                                                                                         |                    |                                                                                                                                                                                                                                             |                    |  |
| Corrosion<br>resistance<br>special tempered<br>glass | S |                                                                                                                                                                                                   |                    | H590SX<br> Narrow  Wide<br>p.24           |                    | H590SX<br> Narrow  Wide<br>p.24           |                    |                                                                                                                                                                                                                                         |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | D |                                                                                                                                                                                                   |                    | H590DX<br> Medium  Wide<br>p.25           |                    | H590DX<br> Medium  Wide<br>p.25           |                    |                                                                                                                                                                                                                                         |                    |                                                                                                                                                                                                                                             |                    |  |
| Corrosion<br>resistance<br>special<br>construction   | S |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    | H580SX<br> Narrow  Wide<br>p.26           |                    | H380SX<br> Narrow  Medium<br>p.30                             |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | D |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    |                                                                                                                                                                                                                 |                    |                                                                                                                                                                                                                                         |                    |                                                                                                                                                                                                                                             |                    |  |
| Standard<br>type                                     | S |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    | H573S<br> Narrow  Wide<br>p.26            |                    | H373S<br> Narrow  Wide<br>p.30                                |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | D |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    | H573D<br> Medium  Wide<br>p.27            |                    | H373D<br> Medium  Wide<br>p.31                                |                    |                                                                                                                                                                                                                                             |                    |  |
| Anti-vibration<br>type                               | S |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    | H565SX<br> Narrow  Wide<br>p.26           |                    | H365SX<br> Narrow  Wide<br>p.30                               |                    |                                                                                                                                                                                                                                             |                    |  |
|                                                      | D |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    | H565DX<br> Medium  Wide<br>p.27           |                    | H365DX<br> Medium  Wide<br>p.31                               |                    |                                                                                                                                                                                                                                             |                    |  |
| Built-in<br>ballast<br>type                          | S |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    |                                                                                                                                                                                                                 |                    | H373SB4CCA(50Hz)<br>H373SB4CCB(60Hz)<br> Narrow  Wide<br>p.32 |                    | H373SB2.5CCB(50Hz)<br>H373SB2.5CCB(60Hz)<br> Narrow  Wide<br>p.33 |                    |  |
|                                                      | D |                                                                                                                                                                                                   |                    |                                                                                                                                                                                                                 |                    |                                                                                                                                                                                                                 |                    | H373DB4CCA(50Hz)<br>H373DB4CCB(60Hz)<br> Medium  Wide<br>p.32 |                    | H373DB2.5CCB(50Hz)<br>H373DB2.5CCB(60Hz)<br> Medium  Wide<br>p.33 |                    |  |

# EYE Floodlight (BEAM-ON) (without ballast)

## For 700W~1500W lamps

Metal halide lamps, High pressure sodium lamps, Mercury Lamps

### Mounting dimensions



### Tilt range from the horizontal level



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees (left & right)

### General Specification

- Support Flame & Terminal box : Aluminium alloy die-casting with polyester coating
- Front part : Tempered glass
- Body : Stainless steel with polyester coating
- Handle, Angle plate, Metal parts, Sight : Stenless steel
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5 \text{mm}$
- Designed max. velocity of the wind : 60m/s
- Effective projected area :  $0.24 \text{m}^2$
- Finished colour : Grey (Munsell colour system N6)
- Weight : 8.8kg

### Suitable lamps

- Narrow
- Medium

#### With clear type lamps

Metal halide lamps  
MT1500B-D/BUH, M1500B-D/BUH  
M1500B/BUH, BD  
M1000B/BUH, BD  
M700/BUH, BD  
M1000LE/BUH, BD  
M700LE/BUH, BD

High pressure sodium lamps  
NH940LX

Mercury lamps  
H1000  
H700

- Wide

#### With coated type lamps

Metal halide lamps  
MF1500B/BUH, BD  
MF1000B/BUH, BD  
MF700/BUH, BD  
MF1000LE/BUH, BD  
MF700LE/BUH, BD

High pressure sodium lamps  
NH940FLX

Mercury lamps  
HF1000PD  
HF700PD



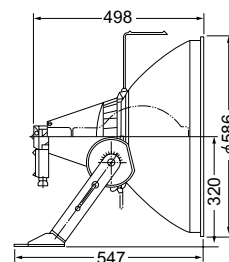
- Narrow
- Wide

## Anti-corrosion type H575SX

- Reflector : Aluminium  
Inner surface : ALBRIAN finished  
Outer surface : ALGLAS finished
- Arm : Fused galvanized steel plate
- Stand : Fused galvanized steel plate

Optical data p.192

### drawing



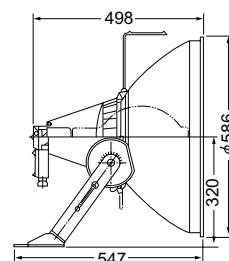
- Narrow
- Wide

## Corrosion resistance H574SX

- Reflector : Aluminium  
Inner surface : ALBRIAN finished  
Outer surface : ALGLAS finished, acrylic coating
- Arm : Stainless steel plate with polyester coating
- Stand : Stainless steel plate with polyester coating

Optical data p.192

### drawing



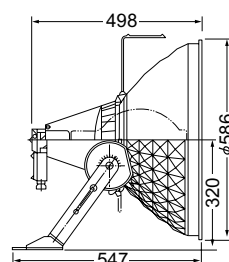
- Medium
- Wide

## Anti-corrosion type H575DX

- Reflector : Aluminium  
Inner surface : ALBRIAN finished  
Outer surface : ALGLAS finished
- Arm : Fused galvanized steel plate
- Stand : Fused galvanized steel plate

Optical data p.192

### drawing



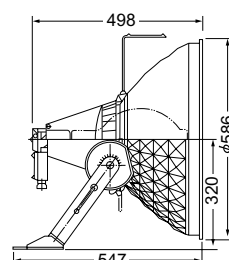
- Medium
- Wide

## Corrosion resistance H574DX

- Reflector : Aluminium  
Inner surface : ALBRIAN finished  
Outer surface : ALGLAS finished, acrylic coating
- Arm : Stainless steel with polyester coating
- Stand : Stainless steel with polyester coating

Optical data p.192

### drawing

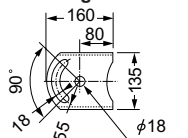


# EYE Floodlight (without ballast)

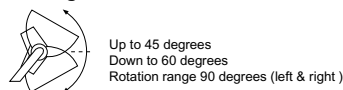
## For 2000W lamps

Metal halide lamps, High pressure sodium lamps, Mercury Lamps

### Mounting dimensions



### Tilt range from the horizontal level



### General Specification

- Support Flame & Terminal box : Aluminium alloy die-casting with polyester coating
- Front part : Tempered glass
- Body : Stainless steel with polyester coating
- Handle, Angle plate : Metal parts, Sight, Stainless steel
- Adaptable cable diameter  $\phi 10.5 \sim 12.5 \text{mm}$
- Designed max. velocity of the wind : 60m/s
- Effective projected area : 0.44m<sup>2</sup>
- Finished colour : Grey (Munsell colour system N6)
- Weight : 15.6kg

### Suitable lamps

#### Narrow

With clear type lamps

Metal halide lamps  
M2000B/BUH  
M2000B/BD

Mercury lamps  
H2000B

#### Medium

With clear type lamps

Metal halide lamps  
M2000B/BUH  
M2000B/BD

Mercury lamps  
H2000B

#### Wide

With coated type lamps

Metal halide lamps  
MF2000B/BUH  
MF2000B/BD

Mercury lamps  
HF2000BPD



Narrow

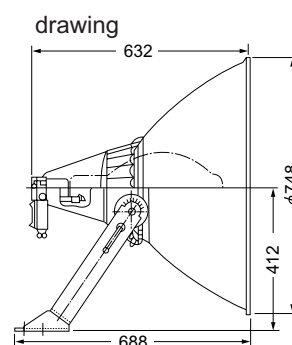
Wide

### Anti-corrosion type

## H727SX

- Reflector : Aluminum  
Inner and Outer surface : ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel

Optical data p.192



Narrow

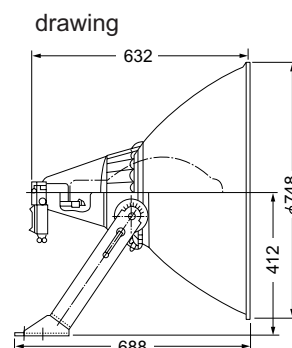
Wide

### Corrosion resistance

## H726SX

- Reflector : Aluminum  
Inner and outer surface : ALGLAS finished  
Outer surface : Acrylic coating
- Arm : Stainless steel polyester coating
- Stand : Stainless steel polyester coating

Optical data p.193



Medium

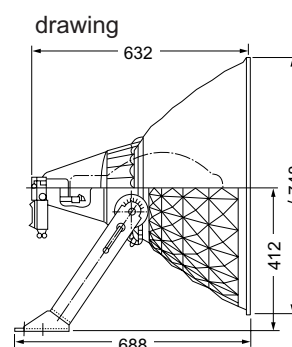
Wide

### Anti-corrosion type

## H727DX

- Reflector : Aluminum  
Inner and outer surface : ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel

Optical data p.193



Medium

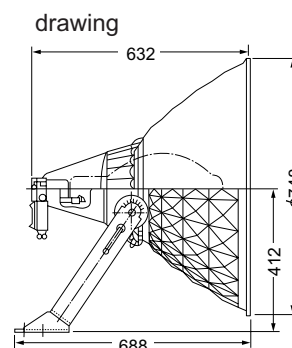
Wide

### Corrosion resistance

## H726DX

- Reflector : Aluminum  
Inner and outer surface : ALGLAS finished  
Outer surface : Acrylic coating
- Arm : Stainless steel polyester coating
- Stand : Stainless steel polyester coating

Optical data p.193

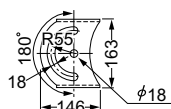


# EYE Floodlight (S type) ( without ballast)

## For 1000W (1500W) lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions



### Tilt range from the horizontal level



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General Specification

- Support frame & Terminal box  
Aluminum alloy die-casting with polyester coating
- Front part  
Clear tempered glass
- Body  
Stainless steel with polyester coating
- Handle, Angle plate,  
Metal parts, Sight : Stainless steel
- Adaptable cable diameter  
φ10.5~12.5 mm
- With filter
- Terminal box  
Aluminum alloy die-casting with polyester coating
- Designed max. velocity of the wind 60m/s
- Effective projected area 0.27m<sup>2</sup>
- Finished colour  
Grey ( Munsell colour system N6 )

### Suitable lamps

#### Narrow

With clear Arc lamps

Quartz Arc lamps

MT1500A-D/BH

MT1500B-D/BH

Metal halide lamps

M1500B/BUH

M1000B/BUH

M1000B/BD

M700/BUT, BD

M1000LE/BUH, BD

M700LE/BUH, BD

High pressure sodium lamps

NH940LX

NH660LX

Mercury lamps

H1000

H700

#### Wide

With coated type lamps

Metal halide lamps

MF1500B/BUH

MF1000B/BUH, BD

MF700/BUH, BD

MF1000LE/BUH, BD

MF700LE/BUH, BD

High pressure sodium lamps

NH940FLX

NH660FLX

Mercury lamps

HF1000PD

HF700PD



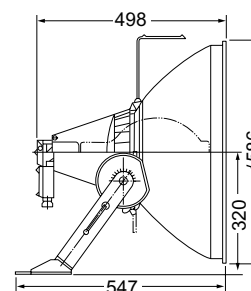
### Anti-corrosion type

## H567SX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel
- Weight 8.8 kg

Optical data p.193

### drawing



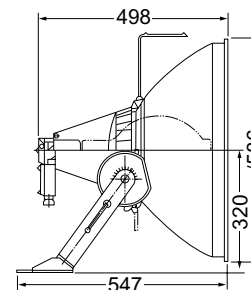
### Corrosion resistance

## H566SX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished & acrylic coating
- Arm : Stainless steel with polyester coating
- Stand : Stainless steel with polyester coating
- Weight 8.8 kg

Optical data p.193

### drawing



### Corrosion resistance

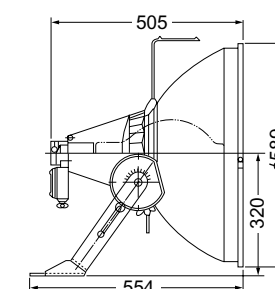
### Rigid front model

## H590SX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished & acrylic coating
- Arm : Fused galvanized steel with polyester coating
- Stand : Fused galvanized steel with polyester coating
- Weight 13.6 kg

Optical data p.194

### drawing

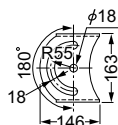


# EYE Floodlight ( D type ) ( without ballast )

## For 1000W (1500W) lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions



### Tilt range from the horizontal level



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General Specification

- Support flange  
Aluminum alloy die-casting with polyester coating
- Front part  
Clear tempered glass
- Body  
Stainless steel with polyester coating
- With filter
- Handle, Angle plate,  
Metal parts, Sight : Stainless steel
- With a sight : Stainless steel
- Adaptable cable diameter  
φ10.5~12.5 mm
- Terminal box  
Aluminum alloy die-casting with polyester coating
- Designed max. velocity of the wind 60m/s
- Effective projected area 0.27m<sup>2</sup>
- Finished colour  
Grey ( Munsell colour system N6 )

### Suitable lamps

| Medium                     | Wide                       |
|----------------------------|----------------------------|
| With clear type lamps      | With coated type lamps     |
| Quartz Arc lamps           | Metal halide lamps         |
| MT1500A-D/BH               | MF1500B/BH                 |
| MT1500B-D/BH               | MF1000B/BUH, BD            |
| Metal halide lamps         | MF1000LE/BUH, BD           |
| M1500B/BUH                 | MF700LE/BUH, BD            |
| M1000B/BUH                 | MF700/BUH, BD              |
| M1000B/BD                  | High pressure sodium lamps |
| M700/BUH, BD               | NH940FLX                   |
| M1000LE/BUH, BD            | NH660FLX                   |
| M700LE/BUH, BD             | Mercury lamps              |
| High pressure sodium lamps | HF1000PD                   |
| NH940LX                    | HF700PD                    |
| NH660LX                    |                            |
| Mercury lamps              |                            |
| H1000                      |                            |
| H700                       |                            |

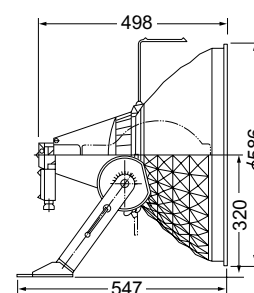


## Anti-corrosion type H567DX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel
- Weight 8.8 kg

Optical data p.194

### drawing

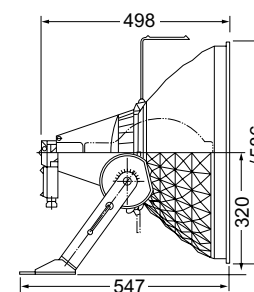


## Corrosion resistance H566DX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished & acrylic coating
- Arm : Stainless steel with polyester coating
- Stand : Stainless steel with polyester coating
- Weight 8.8 kg

Optical data p.194

### drawing

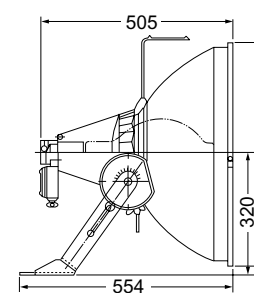


## Corrosion resistance Rigid front model H590DX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished & acrylic coating
- Arm : Stainless steel with polyester coating
- Stand : Stainless steel with polyester coating
- Weight 13.6 kg

Optical data p.194

### drawing

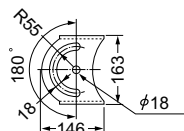


# EYE Floodlight ( S type ) ( without ballast )

## For 1000W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions for H573S and H580SX



### Tilt range from the horizontal level for H573S and H580SX



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General Specification

- Support flame
  - Aluminum alloy die-casting with polyester coating
- Front part
  - Clear tempered glass
- With filter
- Designed max. velocity of the wind 60m/s
- Finished colour
  - Grey ( Munsell colour system N6 )

### Suitable lamps

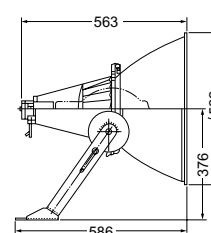
| Narrow                     | Wide                       |
|----------------------------|----------------------------|
| With clear type lamps      | With coated type lamps     |
| Metal halide lamps         | Metal halide lamps         |
| M1000B/BUH                 | MF1000B/BUH, BD            |
| M1000B/BD                  | MF1000B/BD                 |
| M700/BUH, BD               | MF700/BUH, BD              |
| M1000LE/BUH, BD            | MF1000LE/BUH, BD           |
| M700LE/BUH, BD             | MF700LE/BUH, BD            |
| High pressure sodium lamps | High pressure sodium lamps |
| NH940LX, NH660LX           | NH940FLX, NH660FLX         |
| Mercury lamps              | Mercury lamps              |
| H1000, H700                | HF1000PD, HF700PD          |



## Standard type H573S

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished
- Body
  - Iron steel with polyester coating
- Arm : Fused galvanized steel
- Handle, Angle plate, Metal parts : Stainless steel
- Effective projected area 0.214m<sup>2</sup>
- Weight 8.7 kg

### drawing



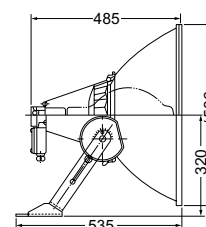
Optical data p.194



## Double corrosion resistance H580SX

- Reflector : Aluminum
  - Inner and outer surface ; ALGLAS finished
  - Outer surface ; Stainless steel & melamine resin coating
- Body
  - Stainless steel with polyester coating
- Arm, Stand : Stainless steel with polyester coating
- Handle, Angle plate, Sight, Metal parts : Stainless steel
- Terminal box
  - Aluminum alloy die-casting with polyester coating
- Adaptable cable diameter φ10.5~12.5 mm
- Effective projected area 0.27m<sup>2</sup>
- Weight 10.8 kg

### drawing



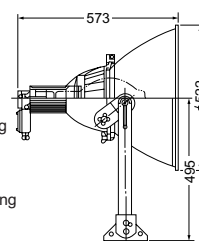
Optical data p.195



## Vibration proof H565SX

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished
- Body : Aluminium extrusion with polyester coating
- Arm, stand : Iron steel with polyester coating
- Handle, Metal parts galvanized steel
- Terminal box
  - Aluminum alloy die-casting with polyester coating
- Adaptable cable diameter φ10.5~12.5 mm
- Effective projected area 0.214m<sup>2</sup>
- Weight 14.6 kg

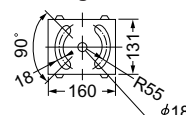
### drawing



### Suitable lamps

| Narrow                | Wide                   |
|-----------------------|------------------------|
| With clear type lamps | With coated type lamps |
| Mercury lamps         | Mercury lamps          |
| H1000                 | HF1000PD               |

### Mounting dimensions



● Please contact us for 700W fixtures.

Optical data p.195

# EYE Floodlight ( D type ) ( without ballast )

## For 1000W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

## General Specification

- Reflector : Aluminum  
ALGLAS finished
- Support frame  
Aluminum alloy die-casting  
with polyester coating
- Front part  
Clear tempered glass
- With filter
- Designed max. velocity of the wind 60m/s
- Effective projected area 0.214m<sup>2</sup>
- Finished colour  
Grey ( Munsell colour system N6 )

## Suitable lamps for H573D

### Medium

With clear type lamps

Metal halide lamps  
M1000B/BUH  
M1000B/BD  
M700/BUH, BD  
M1000LE/BUH, BD  
M700LE/BUH, BD

High pressure sodium lamps

NH940LX  
NH660LX  
Mercury lamps  
H1000  
H700

### Wide

With coated type lamps

Metal halide lamps  
MF1000B/BUH, BD  
MF1000B/BD  
MF700/BUH, BD  
MF1000LE/BUH, BD  
MF700LE/BUH, BD

High pressure sodium lamps

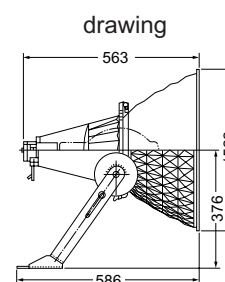
NH940FLX  
NH660FLX  
Mercury lamps  
HF1000PD  
HF700PD



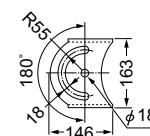
## Standard type

# H573D

- Body Iron steel with polyester coating
- Arm, Stand : Fused galvanized steel
- Handle, Angle plate, Metal parts : Stainless steel
- Weight 8.7 kg



## Mounting dimensions



## Tilt range from the horizontal level



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

Optical data p.195

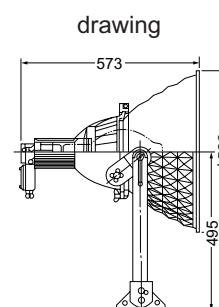


## Vibration proof

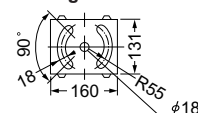
# H565DX

- Body : Aluminium extrusion with polyester coating
- Arm, stand : Iron steel with polyester coating
- Handle, Metal parts : Fused galvanized steel
- Terminal box  
Aluminum alloy die-casting with polyester coating
- Adaptable cable diameter  
φ10.5~12.5 mm
- Weight 14.6 kg

● Please contact us for 700W fixtures.



## Mounting dimensions



## Suitable lamps for H565DX

### Medium

With clear type lamps

Mercury lamps  
H1000

### Wide

With coated type lamps

Mercury lamps  
HF1000PD

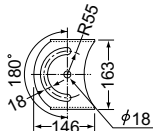
Optical data p.195

# EYE Floodlight ( S type ) ( without ballast)

## For 400W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions



### Tilt range from the horizontal level



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General specification

- Support flame  
Aluminum alloy die-casting with polyester coating
- Front part  
Clear tempered glass
- Body  
Stainless steel with polyester coating
- Handle, Angle plate,  
Metal parts, Sight : Stainless steel
- With filter
- Terminal box  
Aluminum alloy die-casting with polyester coating
- Adaptable cable diameter  
φ10.5~12.5 mm
- Designed max. velocity of the wind 60m/s
- Effective projected area 0.15m<sup>2</sup>
- Finished colour Grey ( Munsell colour system N6 )
- Weight 5.9 kg

### Suitable lamps for H367X and H366SX

#### Narrow

With clear type lamps

Metal halide lamps

M400LE/BUH, BD

M250LE/BUH, BD

High pressure sodium lamps

NH360LX

NH220LX

Mercury lamps

H400

H250

#### Wide

With coated type lamps

Metal halide lamps

MF400LE/BUH, BD

MF250LE/BUH, BD

High pressure sodium lamps

NH360FLX

NH220FLX

Mercury lamps

HF400PD

HF250PD

### Suitable lamps for H367SX/TA

#### Medium

with Twin Arc type lamp  
HNH40/22LF



Narrow



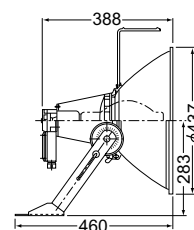
Wide

### Anti-corrosion type

## H367SX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel

### drawing



Optical data p.195



Narrow



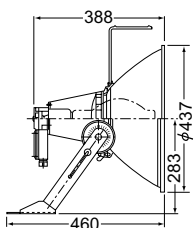
Wide

### Corrosion resistance

## H366SX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished & acrylic coating
- Arm : Stainless steel with polyester coating
- Stand : Stainless steel with polyester coating

### drawing



Optical data p.196



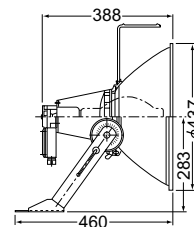
Medium

### Anti-corrosion type

## H367SX/TA

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel

### drawing



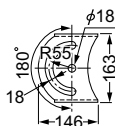
Optical data p.196

# EYE Floodlight ( D type ) ( without ballast )

## For 400W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions



### Tilt range from the horizontal level



Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General Specification

- Support frame
  - Aluminum alloy die-casting with polyester coating
- Front part
  - Clear tempered glass
- Body
  - Stainless steel with polyester coating
- Handle, Angle plate, Metal parts, Sight
  - Stainless steel
- With filter
- With a sight : Stainless steel
- Adaptable cable diameter
  - φ 10.5~12.5 mm
- Terminal box
  - Aluminum alloy die-casting with polyester coating
- Designed max. velocity of the wind 60m/s
- Effective projected area 0.15m<sup>2</sup>
- Finished colour Grey ( Munsell colour system N6 )
- Weight 5.9 kg

### Suitable lamps for H367DX and H366DX

#### Medium

With clear type lamps  
Metal halide lamps  
M400LE/BUH, BD  
M250LE/BUH, BD  
High pressure sodium lamps  
NH360LX  
NH220LX  
Mercury lamps  
H400  
H250

#### Wide

With coated type lamps  
Metal halide lamps  
MF400LE/BUH, BD  
MF250LE/BUH, BD  
High pressure sodium lamps  
NH360FLX  
NH220FLX  
Mercury lamps  
HF400PD  
HF250PD

### Suitable lamps for H367DX/TA

#### Wide

With Twin arc type lamps  
HNH40/22LF

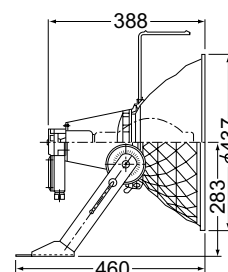


### Anti-corrosion type

## H367DX

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel

### drawing



Optical data p.196

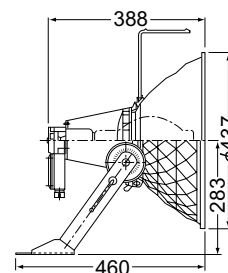


### Corrosion resistance

## H366DX

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished & acrylic coating
- Arm : Stainless steel with polyester coating
- Stand : Stainless steel with polyester coating

### drawing



Optical data p.196

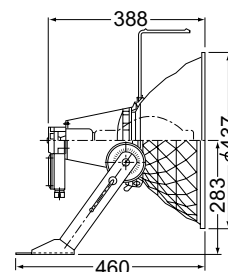


### Corrosion resistance

## H367DX/TA

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished
- Arm : Fused galvanized steel
- Stand : Fused galvanized steel

### drawing



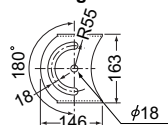
Optical data p.197

# EYE Floodlight ( S type ) ( without ballast)

## For 400W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions for H373S and H380SX



### Tilt range from the horizontal level



For H373S and H380SX

Up to 80 degrees

Down to 60 degrees

Rotation range 180 degrees ( left & right )

### General Specification

- Support flame
  - Aluminum alloy die-casting with polyester coating
- Front part
  - Clear tempered glass
- With filter
- Designed max. velocity of the wind : 60m/s
- Finished colour
  - Grey
  - ( Munsell colour system N6 )

### Suitable lamps for H373S and H380SX

#### Narrow

With clear type lamps

Metal halide lamps

M400LE/BUH, BD

M250LE/BUH, BD

High pressure sodium lamps

NH360LX

NH220LX

Mercury lamps

H400

H250

#### Wide

With coated type lamps

Metal halide lamps

MF400LE/BUH, BD

MF250LE/BUH, BD

High pressure sodium lamps

NH360FLX

NH220FLX

Mercury lamps

HF400PD

HF250PD



Narrow

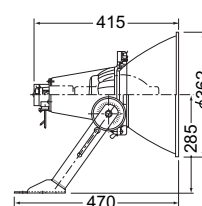
Wide

### Standard type

## H373S

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished
- Body
  - Iron steel with polyester coating
- Arm, Stand : Fused galvanized steel
- Handle, Angle plate,
  - Metal parts : Stainless steel
- Effective projected area 0.1m<sup>2</sup>
- Weight 5.5 kg

### drawing



### Optical data p.197



Narrow

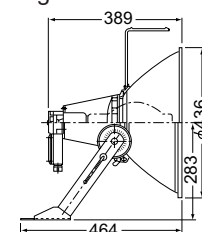
Wide

### Double corrosion resistance

## H380SX

- Reflector : Aluminum
  - Inner and outer surface ; ALGLAS finished
  - Outer surface ; Stainless steel & melamine resin coating
- Body, Arm, Stand :
  - Stainless steel with polyester coating
- Handle, Angle plate, Sight,
  - Metal parts : Stainless steel
- Terminal box
  - Aluminum alloy die-casting with polyester coating
- Adaptable cable diameter
  - φ10.5~12.5 mm
- Effective projected area 0.15m<sup>2</sup>
- Weight 6.6 kg

### drawing



### Optical data p.197



Narrow

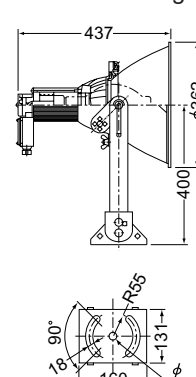
Wide

### Vibration proof

## H365SX

- Reflector : Aluminum
  - Inner surface ; ALGLAS finished
  - Outer surface ; ALGLAS finished
- Body : Aluminium extrusion with polyester coating
- Arm, stand : Iron steel with polyester coating
- Handle, Metal parts : galvanized steel
- Terminal box
  - Aluminum alloy die-casting with polyester coating
- Adaptable cable diameter
  - φ10.5~12.5 mm
- Effective projected area 0.1m<sup>2</sup>
- Weight 8.6 kg

### drawing



### Suitable lamps for H365SX

#### Narrow

With clear type lamps

Mercury lamps

H400

#### Wide

With coated type lamps

Mercury lamps

HF400PD

### Optical data p.197

# EYE Floodlight ( D type ) ( without ballast)

## For 400W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

## General Specification

- Reflector : Aluminum  
ALGLAS finished
- Support frame  
Aluminum alloy die-casting  
with polyester coating
- Front part  
Clear tempered glass
- With filter
- Designed max. velocity of the wind :  
60m/s
- Effective projected area 0.1m<sup>2</sup>
- Finished colour Grey  
( Munsell colour system N6 )

## Suitable lamps for H373D

### Medium

With clear type lamps  
Metal halide lamps  
M400LE/BUH, BD  
M250LE/BUH, BD  
High pressure sodium lamps  
NH360LX  
NH220LX  
Mercury lamps  
H400  
H250

### Wide

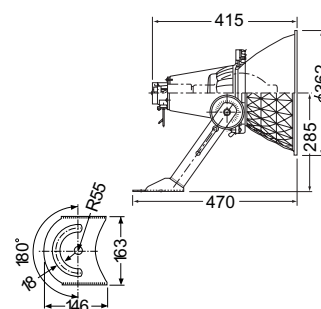
With coated type lamps  
Metal halide lamps  
MF400LE/BUH, BD  
MF250LE/BUH, BD  
High pressure sodium lamps  
NH360FLX  
NH220FLX  
Mercury lamps  
HF400PD  
HF250PD



## Standard type H373D

- Body Iron steel with polyester coating
- Arm, Stand : Fused galvanized steel
- Handle, Angle plate, Metal parts : Stainless steel
- Weight 5.5 kg

## drawing



Tilt range from the horizontal level  
Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees  
( left & right )

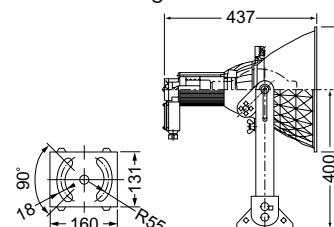
Optical data p.198



## Vibration proof H365DX

- Body : Aluminium extrusion with polyester coating
- Arm, stand : Iron steel with polyester coating
- Handle, Metal parts : Fused galvanized steel
- Terminal box  
Aluminum alloy die-casting  
with polyester coating
- Adaptable cable diameter  
φ10.5~12.5 mm
- Weight 8.6 kg

## drawing



## Suitable lamps for H365DX

### Medium

With clear type lamps  
Mercury lamps  
H400

### Wide

With coated type lamps  
Mercury lamps  
HF400PD

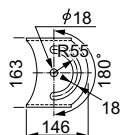
Optical data p.198

# EYE Floodlight ( S 400W, D 400W type ) ( with ballast )

## For 400W lamps

Metal halide lamps, High pressure sodium lamps,  
Mercury lamps

### Mounting dimensions



### General specification

- Reflector : Aluminium,  
ALGLAS finished  
Outer surface ; Acrylic resin coating
- Support frame  
Aluminium alloy die-casting  
with polyester coating
- Front part : Clear tempered glass
- Body : Iron steel with polyester coating
- Arm, Stand : Fused galvanized steel
- Handle : Iron steel
- Angle plate, Metal parts : Stainless steel
- With filter
- Ballast : 400W high power factor reactor  
ballast
- Metal parts for the ballast : Iron steel  
with polyester coating
- Terminal box : Aluminium alloy die-casting  
with polyester coating
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5 \text{mm}$
- Designed max. velocity of the wind : 60m/s
- Effective projected area 0.1m<sup>2</sup>
- Finished colour : Grey  
( Munsell colour system N6 )
- Weight 11.5 kg

### Suitable lamps

- Narrow
- Medium

With clear type lamps

Metal halide lamps

M400LE/BUH, BD

M400LS/U

High pressure sodium lamps

NH360LX

Mercury lamps

H400

- Wide

With coated type lamps

Metal halide lamps

MF400LE/BUH, BD

MF400LS/U

High pressure sodium lamps

NH360FLX

Mercury lamps

HF400PD



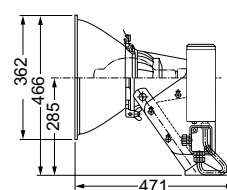
■ Narrow

■ Wide

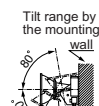
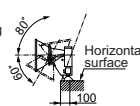
Built-in ballast type (200V type only)

**H373SB4CCA(50Hz)**  
**H373SB4CCB(60Hz)**

drawing



Tilt range by  
the mounting



Rotation range 180 degrees ( left & right )

Optical data p.198



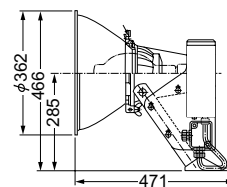
■ Medium

■ Wide

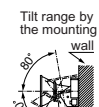
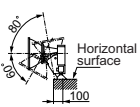
Built-in ballast type (200V type only)

**H373DB4CCA(50Hz)**  
**H373DB4CCB(60Hz)**

drawing



Tilt range by  
the mounting



Rotation range 180 degrees ( left & right )

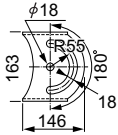
Optical data p.198

# EYE Floodlight ( S250W, D250W type ) ( with ballast)

## For 250W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions



### General specification

- Reflector : Aluminum, ALGLAS finished  
Outer surface ; Acrylic resin coating
- Support frame  
Aluminum alloy die-casting with polyester coating
- Front part  
Clear tempered glass
- Body : Iron steel with polyester coating
- Arm, Stand : Fused galvanized steel
- Handle : Iron steel
- Angle plate, Metal parts : Stainless steel
- With filter
- Ballast : 250W high power factor reactor ballast
- Metal parts for the ballast : Iron steel with polyester coating
- Terminal box : Aluminium alloy die-casting with polyester coating
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5$ mm
- Designed max. velocity of the wind : 60m/s
- Effective projected area 0.1m<sup>2</sup>
- Finished colour : Grey ( Munsell colour system N6 )
- Weight 10.4 kg

### Suitable lamps

- Narrow**
- Medium**
- With clear type lamps
- Metal halide lamps  
M250LE/BUH, BD
- High pressure sodium lamps  
NH220LX
- Mercury lamps  
H250

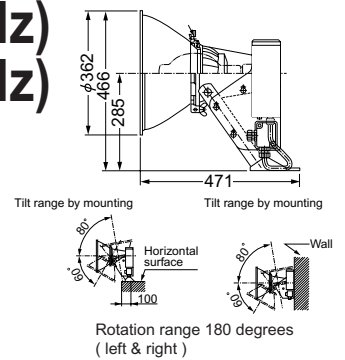
- Wide**
- With coated type lamps
- Metal halide lamps  
MF250LE/BUH, BD
- High pressure sodium lamps  
NH220FLX
- Mercury lamps  
HF250PD



Built-in ballast type (200V type only)

**H373SB2.5CCA(50Hz)**  
**H373SB2.5CCB(60Hz)**

drawing



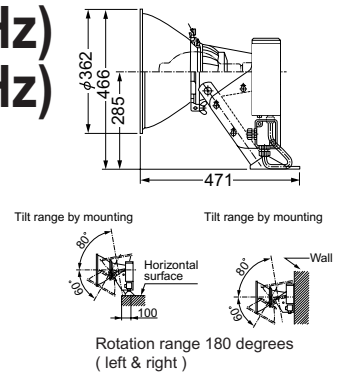
Optical data p.199



Built-in ballast type (200V type only)

**H373DB2.5CCA(50Hz)**  
**H373DB2.5CCB(60Hz)**

drawing



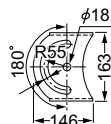
Optical data p.199

# EYE Floodlight M 1000W (1500W) ( without ballast)

## For 1000W, 1500W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps

### Mounting dimensions



### Tilt range from the horizontal level



Tilt range from the horizontal level  
Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General specification

- Support frame  
Aluminum alloy die-casting  
with polyester coating
- Front part  
Clear tempered glass
- Body : Stainless steel  
with polyester coating
- Handle, Angle plate, Sight, Metal parts :  
Stainless steel
- With filter
- Terminal box : Aluminium alloy die-casting  
with polyester coating
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5 \text{ mm}$
- Designed max. velocity of the wind : 60m/s
- Effective projected area  $0.27 \text{ m}^2$
- Finished colour : Grey  
( Munsell colour system N6 )
- Weight 8.8 kg

### Suitable lamps

#### Medium

With clear type lamps

Metal halide lamps

M1500B/BUH  
M1000B/BUH  
M1000B/BD  
M700/BUH, BD  
M1000LE/BUH, BD  
M700LE/BUH, BD

High pressure sodium lamps

NH940LX  
NH660LX

Mercury lamps

H1000  
H700

#### Wide

With coated type lamps

Metal halide lamps

MF1500B/BUH  
MF1000B/BUH  
MF1000B/BD  
MF700/BUH, BD  
MF1000LE/BUH, BD  
MF700LE/BUH, BD

High pressure sodium lamps

NH940FLX  
NH660FLX

Mercury lamps

HF1000PD  
HF700PD

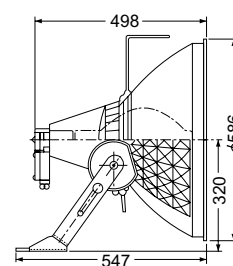


### Anti-corrosion type

## H567MGX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished
- Arm, Stand : Fused galvanized steel

### drawing



Optical data p.199

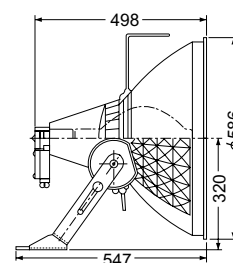


### Corrosion resistance

## H566MGX

- Reflector : Aluminum  
Inner surface ; ALGLAS finished  
Outer surface ; ALGLAS finished  
& melamine resin coating
- Arm, Stand : Stainless steel with polyester coating

### drawing



Optical data p.199

# Guard and Louver for EYE Floodlight



Type No.

**LH3002**  
**LH4002**  
**LH5002**  
**LH6002**

Specification

- Ring : Stainless steel
- Louver : Stainless steel
- Finish : Sand blasted half-tone black coating

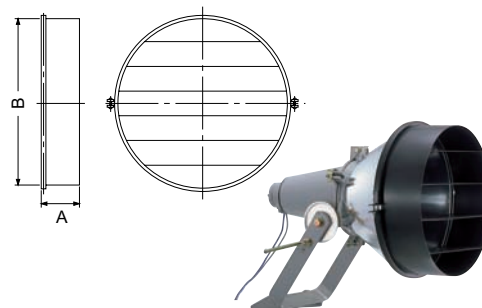
Suitable floodlight

- LH3002 - H373S(D), H365S(D)X
- LH4002 - H366S(D)X, H367S(D)X
- LH5002 - H573S(D), H565S(D)X
- LH6002 - H574S(D)X, H575S(D)X, H566S(D)X, H567S(D)X, H566MGX, H567MGX, JDF1002S(D)X, JDF1003S(D)X

Dimensions

- LH3002 A=116mm, B=φ368mm
- LH4002 A=116mm, B=φ443mm
- LH5002 A=116mm, B=φ529mm
- LH6002 A=116mm, B=φ592mm

drawing



Type No.

**GH3002**  
**GH4002**  
**GH5002**  
**GH6002**

Specification

- Ring : Stainless steel
- Guard : Stainless steel
- Finish : White coating

Suitable floodlight

- GH3002 - H373S(D), H365S(D)X
- GH4002 - H366S(D)X, H367S(D)X
- GH5002 - H573S(D), H565S(D)X
- GH6002 - H574S(D)X, H575S(D)X, H566S(D)X, H567S(D)X, H566MGX, H567MGX, JDF1002S(D)X, JDF1003S(D)X

Dimensions

- GH3002 A=48mm, B=φ369mm
- GH4002 A=48mm, B=φ444mm
- GH5002 A=48mm, B=φ530mm
- GH6002 A=48mm, B=φ593mm

drawing



Type No.

**FHL566**

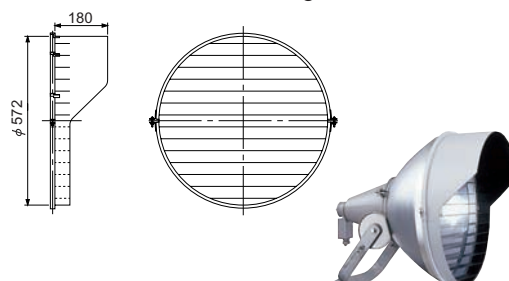
Specification

- Anti-Glare Shield : Stainless steel
- Louver : Stainless steel
- Finish : Inner surface ; Grey  
Outer surface ; Half-tone black
- Suitable floodlight

Suitable floodlight

- H574S(D)X, H575S(D)X, H566S(D)X, H567S(D)X, H566MGX, H567MGX, JDF1002S(D)X, JDF1003S(D)X

drawing



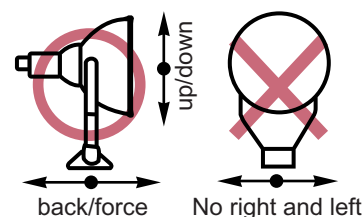
## Steps for floodlight installation and instructions for use

### Floodlight lead wire protection

If you use a floodlight with lead wire, and crows and other birds can do ill on it, protect the lead wire with (tape-finished) spiral tube, etc. For the type with connection box, use the 10.5 mm to 12.5 mm diameter cable.

### Instructions for use of vibrationproof floodlight

- (1) Use the vibration-proof floodlight only where the expected acceleration speed is lower than 2.3 G, vibration amplitude is less than 4 mm and the vibration frequency is below 30 Hz (20 Hz for pendant type).
- (2) For the inclination angle, keep the elevation (upward) angle less than 80 degrees, the depression (downward) angle less than 45 degrees, and the rotation (right and left) angle less than 45 degrees.
- (3) You cannot turn the floodlight of vibration-proof type to right or left as shown on the right picture. The type is resistant to only up/down and back/force or constant vibration, not to left and right vibration.
- (4) By using the holding-down bolts, you can install the fixture in accordance with the intended use as shown on the right picture.



back/force

No right and left



Standard mounting



Ceiling

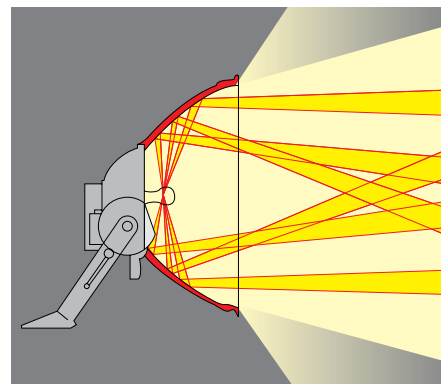
# Double-coil type Halogen lamp Floodlight

## Double-coil type Halogen Lamp Floodlight

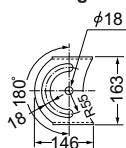
The floodlight for double-coil type halogen lamp features the small light source and any burning position. The floodlight is so designed that you can enjoy the best performance of the double-coiled type halogen lamp. It can be effectively used for combination lighting because the appearance of its reflector is similar to that of EYE Floodlight.

### Features :

- Highly resistant ALGLAS-finished reflector
- Effective and sharp light distribution
- High rigidity and weather resistance
- Rear opening structure to ease lamp replacement



### Mounting dimensions



### Tilt range from the horizontal level



Tilt range from the horizontal level  
Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees (left & right)

### General specification

- Front part  
Tempered glass
- Adaptable cable diameter  
φ10.5~12.5 mm
- Finished colour : Grey  
(Munsell colour system N6)
- Guard : GH6002
- Louver : LH6002
- With filter
- Effective projected area 0.27m<sup>2</sup>
- Weight 9.1 kg

### Suitable lamps

- Super Narrow
- Medium

With clear type lamps  
Double-ended halogen lamps  
JD220V1000W/I  
JD110V1000W/I



### Long distance type

## JDF1003SX

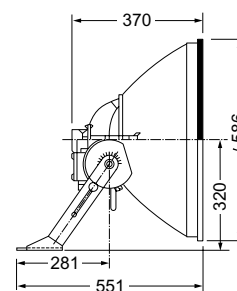
- Reflector : Aluminum  
ALGLAS finished
- Arm, Stand, Body : Coated iron steel

### Long distance type (Corrosion resistance)

## JDF1002SX

- Reflector : Aluminum  
ALGLAS finished  
Coated outside surface
- Arm, Stand, Body :  
Coated stainless steel

### drawing



### Optical data

p.199



### Short distance type

## JDF1003DX

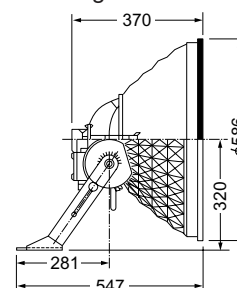
- Reflector : Aluminum  
ALGLAS finished
- Arm, Stand, Body : Coated iron steel

### Short distance type (Corrosion resistance)

## JDF1002DX

- Reflector : Aluminum  
ALGLAS finished  
Coated outside surface
- Arm, Stand, Body :  
Coated stainless steel

### drawing



More than 4 degrees angle

The fixture must install horizontal position.

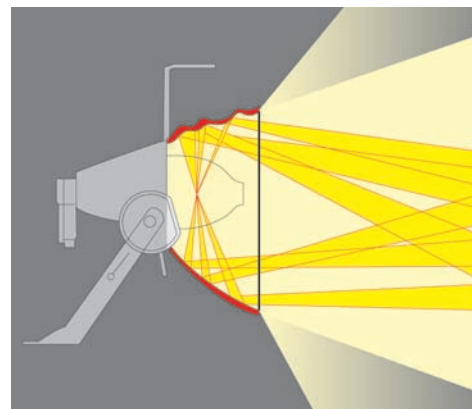
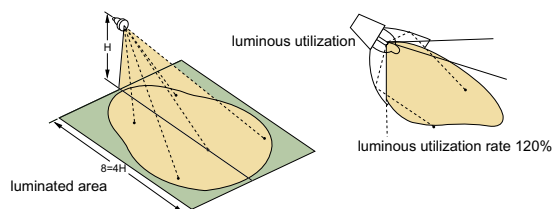
### Optical data

p.200

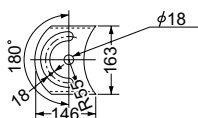
# EYE Multi-Focus Floodlight

## EYE Multi Focus™

The reflector of EYE Multi Focus has multiple illumination points to different angles. Its computer-designed (CAD) unique reflector realizes extremely uniform illuminance by one unit as well as unwasted and effective light distribution without giving off spilled light up into the air. This luminaire with ALGLAS-finished reflector and the filter requires little maintenance.



### Mounting dimensions



### Tilt range from the horizontal level



Tilt range from the horizontal level  
Up to 80 degrees  
Down to 60 degrees  
Rotation range 180 degrees ( left & right )

### General specification

- Support frame and Terminal box : Aluminum alloy die-casting with polyester coating
- Front part : Tempered glass
- Body : Stainless steel with polyester coating
- Handle, Angle plate, Metal parts, Sight : Stainless steel
- With filter
- Terminal box : Aluminium alloy die-casting with polyester coating
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5$  mm
- Designed max. velocity of the wind : 60m/s
- Effective projected area 0.228m<sup>2</sup>
- Finished colour : Grey ( Munsell colour system N6)
- Weight : 9.2kg

### Suitable lamps

#### Medium

With clear type lamps

Metal halide lamps  
M1000LE/BUH, BD  
M700LE/BUH, BD  
M1000B/BUH, BD  
M700B/BUH, BD

High pressure sodium lamps

NH940LX  
NH660LX  
Mercury lamps  
H1000  
H700

#### Wide

With coated type lamps

Metal halide lamps  
MF1000B/BUH, BD  
MF700/BUH, BD  
MF1000LE/BUH, BD  
MF700LE/BUH, BD

High pressure sodium lamps

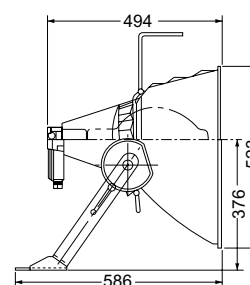
NH940FLX  
NH660FLX  
Mercury lamps  
HF1000PD  
HF700PD



## Anti-corrosion type H571DX

- Reflector : Aluminum ALGLAS finished
- Arm, Stand, Body : Galvanized iron steel

### drawing



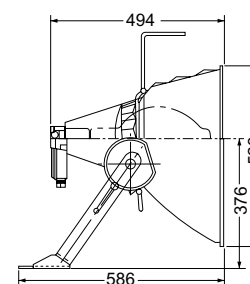
Optical data p.200



## Corrosion resistance H570DX

- Reflector : Aluminum ALGLAS finished, Coated outside surface
- Arm, Stand, : Stainless steel with polyester coating

### drawing

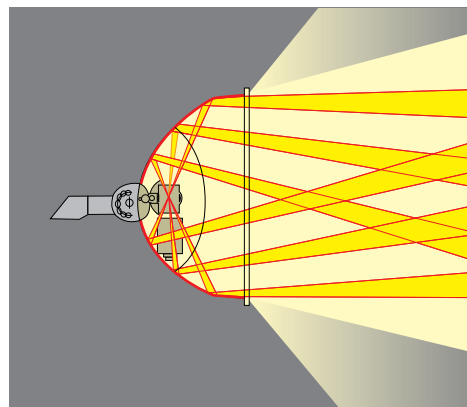


Optical data p.200

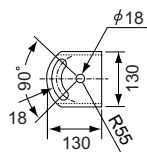
# EYE Multi-Space Floodlight 2000W (1500W)

## EYE Multi Space™

In EYE Multi Space, the three dimensional combination of the V-shaped facet reflector and the special reflection surface controls the light in parallel to the lamp that has been difficult in conventional luminaries. It allows effective use of light without giving spilled light up into the air or aside. It also realizes an ideal square illuminance distribution from side wall by increasing the vertical illuminance. Comparing with the pendant luminare, the side wall lighting eases your maintenance work including the lamp replacement and inspection, as well as the wiring work. It also includes the self-cleaning filter and the ALGLAS reflector that remains clean and undeteriorated for years.



### Mounting dimensions



### Tilt range from the horizontal level



Down to 60 degrees

### General specification

- Front part : Tempered glass
- Holder : Aluminium alloy die-casting
- With filter
- Terminal box : Aluminium alloy die-casting with polyester coating
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5$  mm
- Designed max. velocity of the wind : 60m/s
- Effective projected area  $0.30\text{m}^2$
- Finished colour : Grey (Munsell colour system N6)
- Weight : 8.8 kg

### Suitable lamps

Medium

With clear type lamps

Metal halide lamps  
MT2000B/BH  
MT1500B/BH



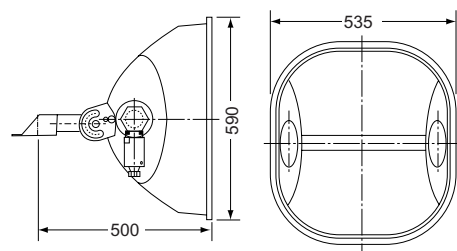
Medium

### Standard type

## HOF211X

- Reflector : Aluminum ALGLAS finished
- Arm, Stand : Coated iron steel

### drawing



Optical data p.200



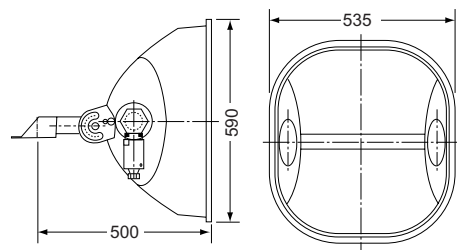
Medium

### Anti-corrosion type

## HOF212X

- Reflector : Aluminum ALGLAS finished Heatproof coating on the outside surface
- Arm, Stand : Stainless steel with polyester coating

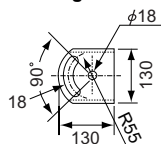
### drawing



Optical data p.200

# EYE Multi-Space Floodlight 2000W (1500W)

## Mounting dimensions



## Tilt range from the horizontal level



## General Specification

- Front part : Tempered glass
- Holder : Aluminium alloy die-casting
- With filter
- Terminal box : Aluminium alloy die-casting
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5$  mm
- Designed max. velocity of the wind : 60m/s
- Effective projected area : 0.30m<sup>2</sup>
- Finished colour : Grey (Munsell colour system N6)
- Weight : 8.8 kg

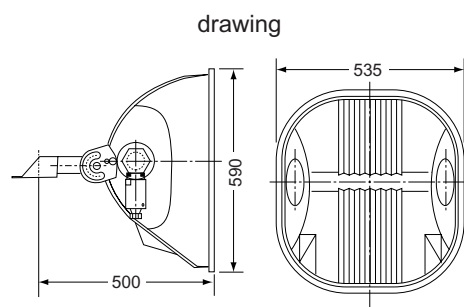
## Suitable lamps

- Wide
- With clear type lamps
- Metal halide lamps
- MT2000B/BH
- MT1500B/BH



## Standard type HOF201X

- Reflector : Aluminum ALGLAS finished
- Arm, Stand : Coated iron steel

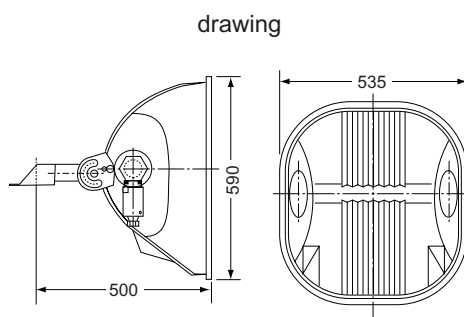


Optical data p.201



## Anti-corrosion type HOF202X

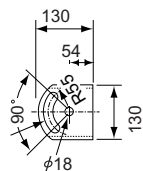
- Reflector : Aluminum ALGLAS finished Heatproof coating on the outside surface
- Arm, Stand : Stainless steel with polyester coating



Optical data p.201

# EYE Multi-Space Floodlight 1500W / 1000W (1500W), 1000W / 1000W (1500W)

## Mounting dimensions



## Tilt range from the horizontal level



For HOF104X, 103X  
Up to 60 degrees  
Down to 60 degrees



For HOF122X, 121X  
Up to 60 degrees  
Down to 60 degrees

## General Specification

- Front part : Tempered glass
- Holder : Aluminium alloy die-casting
- With filter
- Designed max. velocity of the wind : 60m/s
- Effective projected area : 0.28m<sup>2</sup>
- Finished colour : Grey  
(Munsell colour system N6)
- For HOF122X, HOF104X
- Terminal box : Aluminium alloy die-casting
- Adaptable cable diameter :  $\phi$ 10.5~12.5 mm
- For HOF121X, HOF103X
- Arm, Stand : Coated iron steel

## Suitable lamps for HOF104X, HOF103X

- Wide**
- With clear and coated type lamps
- Metal halide lamps**
- MT1500A-D/BH
  - M(F)1000LE/BUH
  - M(F)700LE/BUH
  - M(F)1000B/BUH
  - M(F)700/BUH
  - MT1500B/BH
  - MT1000B/BH
- High pressure sodium lamps**
- NH940(F)LX
  - NH660(F)LX
- Mercury lamps**
- H(F)1000(PD)
  - H(F)700(PD)

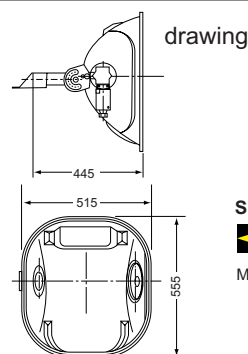


Medium

## Standard type HOF122X

- Reflector : Aluminum ALGLAS finished
- Weight 8 kg

Optical data p.201



## Suitable lamps

- Medium**
- Metal halide lamps
- Quartz Arc
  - MT1500A-D/BH

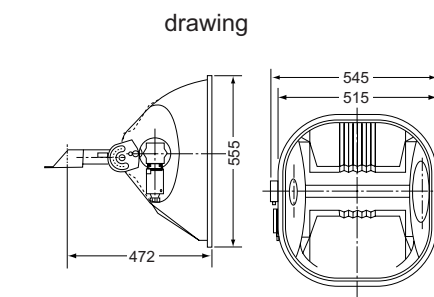


Wide

## Anti-corrosion type HOF104X

- Reflector : Aluminum ALGLAS finished Heatproof coating on the outside surface
- Arm, Stand : Stainless steel with polyester coating
- Weight 8.4 kg

Optical data p.201

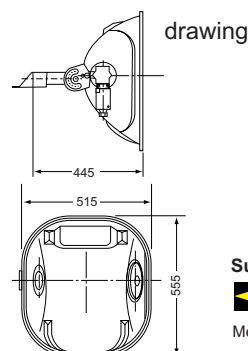


Medium

## Standard type HOF121X

- Reflector : Aluminum ALGLAS finished
- Weight 8 kg

Optical data p.201



## Suitable lamps

- Medium**
- Metal halide lamps
- MT1000B/BH

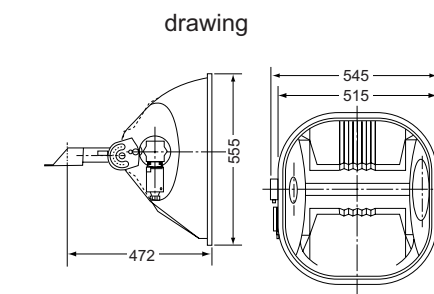


Wide

## Anti-corrosion type HOF103X

- Reflector : Aluminum ALGLAS finished
- Terminal box : Aluminium alloy die-casting
- Adaptable cable diameter  $\phi$ 10.5~12.5 mm
- Weight 8.4 kg

Optical data p.202



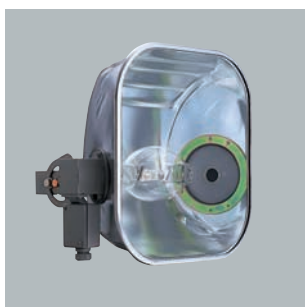
# EYE Multi-Space Floodlight 400W

## General Specification

- Front part : Tempered glass
- Holder : Aluminium alloy die-casting
- With filter
- Terminal box : Aluminium alloy die-casting with coating
- Adaptable cable diameter :  $\phi 10.5 \sim 12.5$  mm
- Designed max. velocity of the wind : 60m/s
- Effective projected area 0.17m<sup>2</sup>
- Finished colour : Grey  
(Munsell colour system N6)

## Suitable lamps

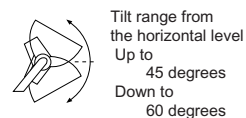
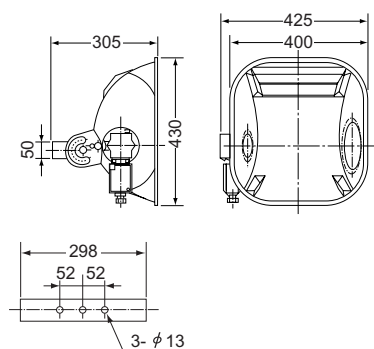
- Wide**
- With clear and coated type lamps
- Metal halide lamps  
M(F)400LS/U  
M(F)400LE/BUH  
M(F)250LE/BUH
- High pressure sodium lamps  
NH360(F)LX  
NH220(F)LX
- Mercury lamps  
H(F)400(PD)  
H(F)250(PD)



## Standard type HOF401X

- Reflector : Aluminum ALGLAS finished
- Arm : Iron steel
- Weight 5.5 kg

## drawing



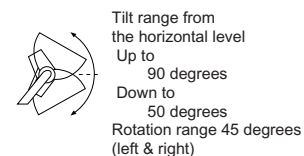
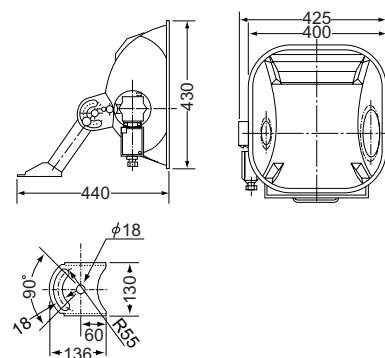
Optical data p.202



## Anti-corrosion type HOF402X

- Reflector : Aluminum ALGLAS finished  
Coating on the outside surface
- Arm, Stand, : Stainless steel
- Weight 6.5 kg

## drawing



Optical data p.202

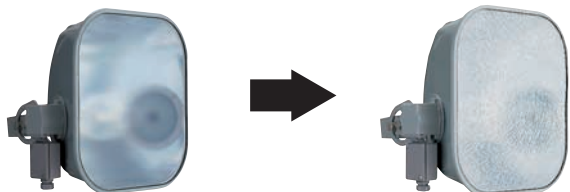
# EYE Multi-Space Floodlight / Application for a swimming pool

## EYE Multi Space™ / Luminary for Pool

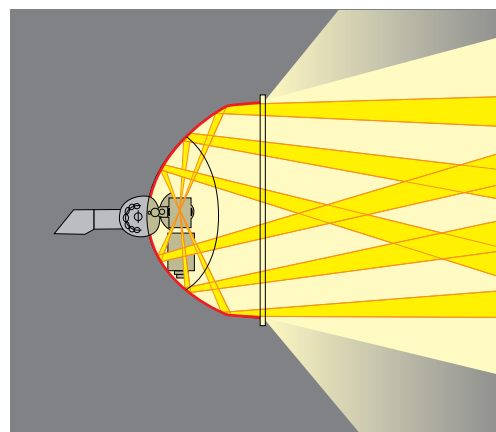
The Teflon coating film on the front glass prevents the glass pieces from scattering even when the front glass is broken. This luminaire is especially recommended for lighting pools where glass pieces should not scatter. It is also good for indoor pools because its anti-corrosion performance is higher comparing to that of ordinary luminaries and of course, because it is safe.

HPF402PX (With Teflon coated)

Damaged of the front glass



Teflon® is a resistered trademark of Dupont.



### General specification

- Reflector : Aluminum  
ALGLAS finished  
and urethane coating  
on the outside surface
- Support ring : Stainless steel
- Front part : Tempered glass  
with Teflon® coated
- Holder : Aluminium alloy die-casting
- Arm : Stainless steel
- With filter
- Terminal box : Aluminium alloy  
die-casting
- Adaptable cable diameter :  
φ10.5~12.5 mm
- Finished colour : Dark blue  
(Munsell colour system 7.5BG7/2)

### Suitable lamps for HPF104PX



Wide

With clear and coated type lamps

- Metal halide lamps
  - M(F)1000LE/BUH
  - M(F)700LE/BUH
  - M(F)1000B/BUH
  - M(F)700/BUH
  - MT1000B/BH
- High pressure sodium lamps
  - NH940(F)LX
  - NH660(F)LX
- Mercury lamps
  - H(F)1000(PD)
  - H(F)700(PD)

### Suitable lamps for HPF 402PX



Wide

With clear and coated type lamps

- Metal halide lamps
  - M(F)400LS/U
  - M(F)400LE/BUH
  - M(F)250LE/BUH
- High pressure sodium lamps
  - NH360(F)LX
  - NH220(F)LX
- Mercury lamps
  - H(F)400(PD)
  - H(F)250(PD)

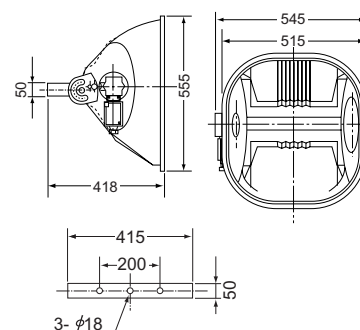


Wide

## Indoor anti-corrosion type HPF104PX

■ Weight : 7.5 kg

### drawing



Tilt range from  
the horizontal level  
Up to  
60 degrees  
Down to  
60 degrees

Optical data p.202

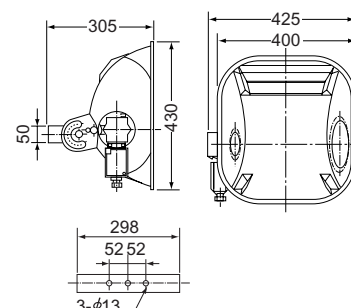


Wide

## Indoor anti-corrosion type HPF402PX

■ Weight : 5.5 kg

### drawing



Tilt range from  
the horizontal level  
Up to  
45 degrees  
Down to  
60 degrees

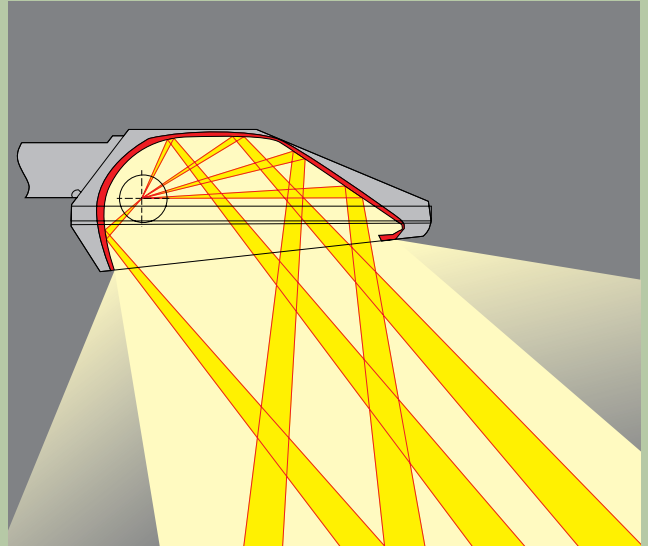
Optical data p.202

# EYE TENNISTER<sup>®</sup>

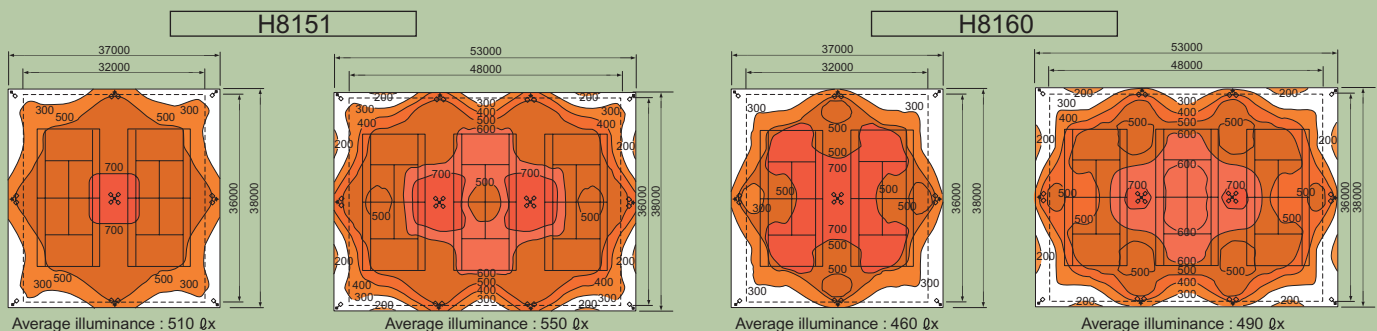
When providing lighting for tennis courts in built-up urban areas, maximum illumination is required over a limited area. It is therefore important to make a clear differentiation between the boundaries of the area in use. For this purpose, Iwasaki provides the EYE TENNISTER lighting system, a system specifically designed for urban tennis courts that includes functions useful for tennis plays. There are two types, one with a separate ballast and another of a built-in ballast type.

## Features

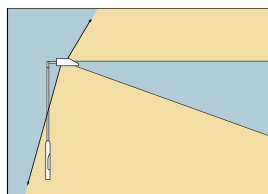
- Preventing glare that can impede play.  
The lighting appliances are designed to limit the dazzling effect of lighting glare, which can hamper play, without affecting the availability of lighting.
- Focussing lighting on the surface of the court.  
The peak light axis is set at 55°. This ensures that the lighting on the surface of the court is evenly balanced, with efficient overall illumination. This takes into account the level of light that is emitted to areas not required to be illuminated, thereby improving the overall atmosphere of the tennis court.
- Dealing with the problem of insufficient lighting in the center of a two-field court  
When the area to be illuminated covers a wide area, there is the possibility that certain spots may be insufficiently lit. This is where small lights strategically placed can provide the extra lighting required. We can provide complete tennis court layout designs with the most efficient and economical fixtures.
- Using high-performance EYE Multi metal halide lights  
These metal halide lights have an output of 1,000 W (MT1000B/BH). They can achieve a high level of colour rendering. With a strong and well-balanced lighting output, they are ideal for illuminating night-time tennis matches.
- Two types of lighting are available  
EYE TENNISTER is offered in two versions. There are light-weight, smart and stable units for use between playing fields and stable high-performance lighting units to provide adequate lighting across the entire plane. This insures good illumination of say ball lobbies and good illumination at over the entire ground level.



Illuminance distribution (Fixture height : 7.1m, Installation angle : 2.5°, Maintenance factor : 0.66)



# EYE TENNISTER®



Another type of the fixture is available  
It is good illumination for lob balls.

## General specification

- Galvanized iron steel

## Suitable lamps

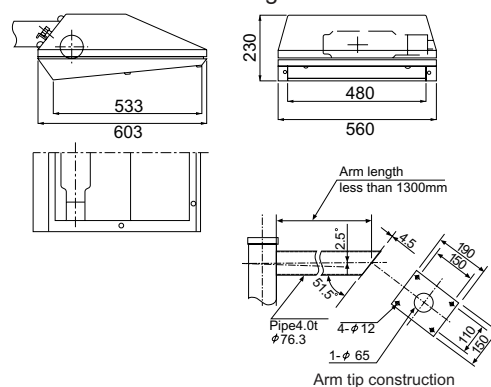
- With clear type lamps
- Metal halide lamps
- MT1000B/BH



## H8160

- Body : Polyester coating
- Front part : Tempered glass
- Reflector : Aluminum
- Finished colour : Body - Green  
Flame - White
- Weight about 15kg
- Effective projected area : 0.110m<sup>2</sup>

## drawing



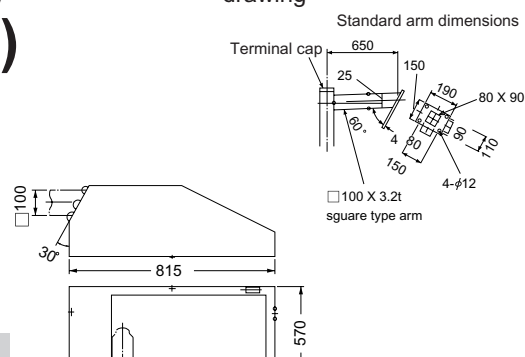
Optical data p.203



## Built-in ballast type (200V) H8151A(B)

- Body : Melamine coating
- Front part : Tempered glass
- Finished colour : Dark Grey  
(Munsell colour system N3)
- Ballast : DM10BCWP2A(B)
- Effective projected area 0.195m<sup>2</sup>

## drawing



Optical data p.203

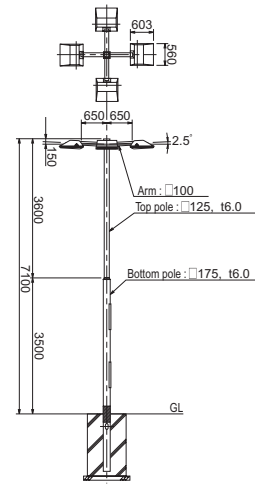
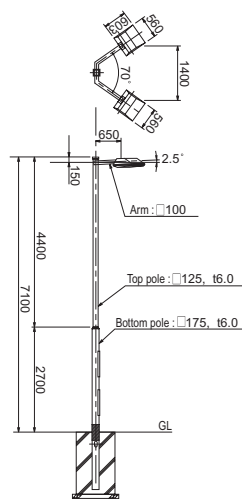
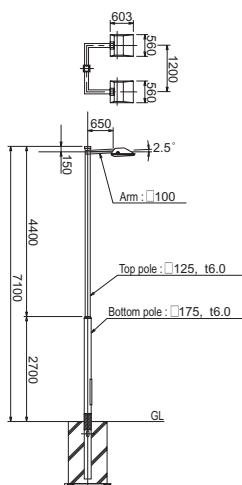
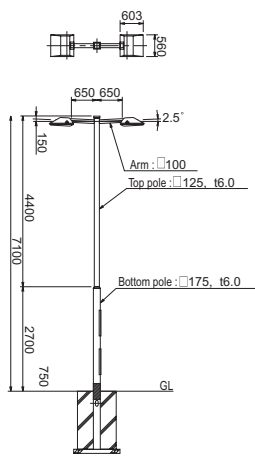
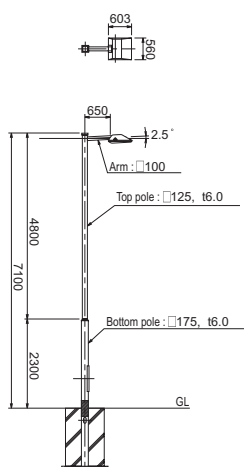
1 fixture

2 fixtures

2 fixtures

2 fixtures

4 fixtures



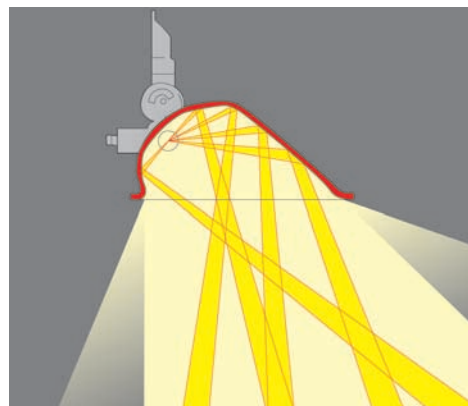
# EYE AREA STAR Floodlight

## AREA STAR

In recent years, there has been some tightening up on light pollution from car parks and public parks and outdoor sports arenas, etc. The AREA STAR lighting system is designed to overcome this problem of lighting pollution, with functions both to counteract spilled light and glare.

### Features :

- A maximum axis candela of 50° from the vertical
- The excellent uniformity ratio of illuminance towards the right and left of the area being illuminated.
- A major reduction in glare in the area of light axis.
- A major reduction in spilled light upward.
- An improvement in utilization factor.
- Optimal direct lighting at any indoor sports arena attained by increased vertical illuminance by side illumination.



### General specification for H8420, H8421-0

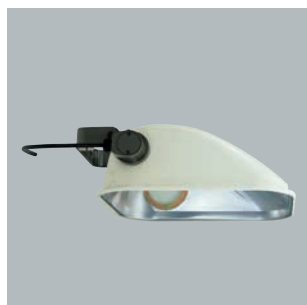
- Reflector : Aluminum  
ALGLAS finished  
Coating on the outside surface
- Front part : Tempered clear glass
- Tilt range : Up to 30 degrees  
from the front glass face
- Finished colour : Ivory
- Weight : 5.0 kg
- Designed max. velocity  
of the wind : 60m/s
- Effective projected area : 0.078m<sup>2</sup>

### Suitable lamps for H8420, H8421-0

Metal halide lamps  
MT400LS/BH

### Suitable lamps for H8120

Metal halide lamps  
MT1000B/BH

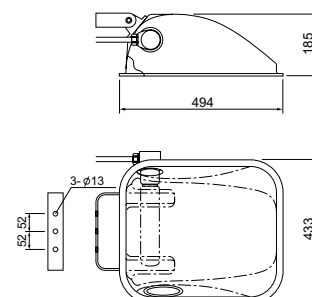


## H8420

- Reflector : Aluminum  
ALGLAS finished
- Arm, Stand, Body :  
Galvanized iron steel

Optical data p.203

### drawing



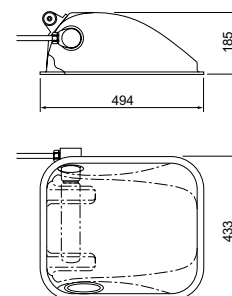
### For pole top only

## H8421-0

- The fittings will be required for the installation.

Optical data p.203

### drawing

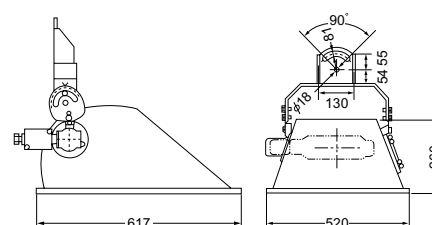


## H8120

- Reflector : Aluminum  
ALGLAS finished  
Coating on the outside surface
- Front flame : Stainless steel with coating
- Arm : Fused galvanized sheet iron
- With filter
- Tilt range : Up to 20 degrees  
from the front glass face
- Weight about 13 kg
- Effective projected area 0.141m<sup>2</sup>

Optical data p.203

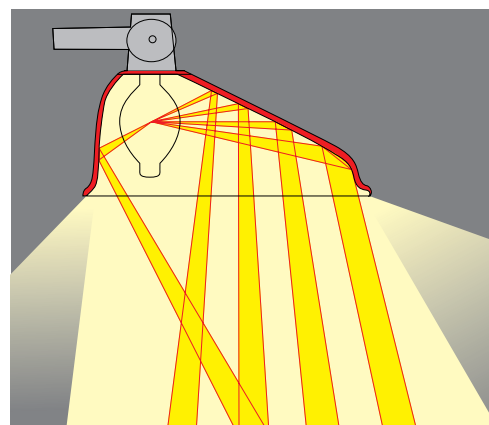
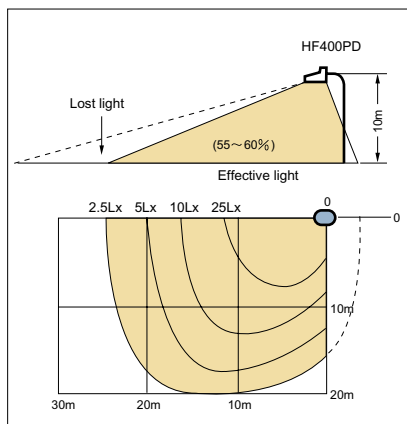
### drawing



# EYE AREA Light 1000W

## EYE AREA Light

The computer-designed special curved surface and the facet (multi-faced) reflector of EYE AREA Light allow the wide light distribution by directing more than 60% of light forward. By EYE AREA Light, most of the light is effectively reached to a desired area with little light loss as glare. From the type of fixture with ballast for factories, glass protector type, and others, select the one just for your purpose.

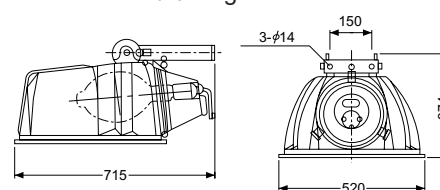


With glass protector, flexible arm

## H8104

- Flexible arm
- Reflector : Aluminum  
ALGLAS finished  
Coating on the outside surface
- Arm, holder : Iron with coating
- Front part : Tempered clear glass
- Designed max. velocity of the wind : 40m/s
- Finished colour : Brown
- Outside of reflector - Clean
- Weight : 9.5 kg
- Effective projected area : 0.191m<sup>2</sup>

drawing



### Suitable lamps

- Metal halide lamps
  - M(F)1000B/BUH
  - M(F)700/BUH
  - M(F)1000LE/BUH
  - M(F)700LE/BUH
- High pressure sodium lamps
  - NH940(F)LX
  - NH660(F)LX
- Mercury lamps
  - H(F)1000(PD)
  - H(F)700(PD)

Optical data p.204

# EYE AREA Light 400W

## General Specification

- Reflector : Aluminum, ALGLAS finished with outer surface coating
- Arm : Iron with coating
- Holder : Aluminium alloy die-casting with coating
- For H801, H802, H803, H804
- Finished colour : Brown
- Outside of reflector - Clean
- Joint for arm : JR13063

## Suitable lamps

- Metal halide lamps
- M(F)400LS/U,
- M(F)400LE/BUH,
- M(F)250LE/BUH,
- High pressure sodium lamps
- NH360(F)LX
- NH220(F)LX
- Mercury lamps
- H(F)400(PD)
- H(F)250(PD)



### Fixed arm type

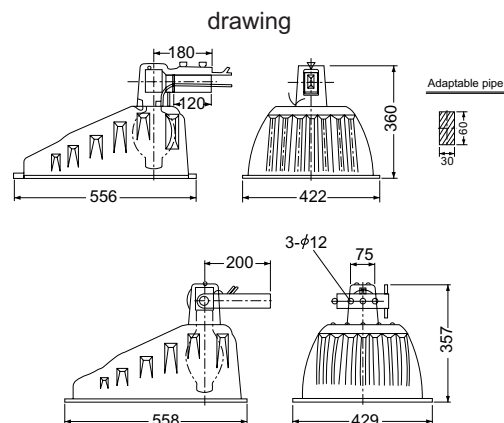
## H801

- Arm : 30mmX60mm square pipe
- Insert length - 120mm
- Weight : 2.5 kg
- Effective projected area : 0.126m<sup>2</sup>

### Flexible arm type

## H802

- Arm : Flexible arm
- Weight : 3.1 kg
- Effective projected area : 0.122m<sup>2</sup>



Optical data p.204



### With glass protector, Fixed arm

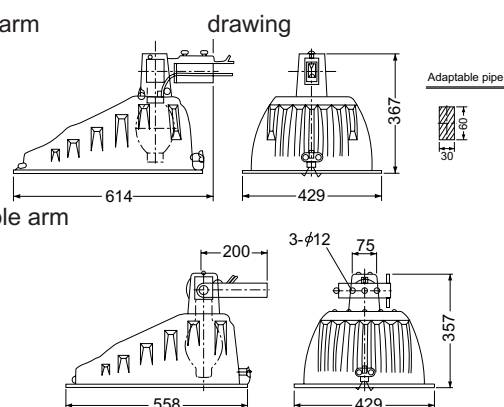
## H803

- Front part : Tempered clear glass
- Arm : 30mmX60mm square pipe
- Insert length - 120mm
- Weight : 5.3 kg

### With glass protector, Flexible arm

## H804

- Front part : Tempered clear glass
- Weight : 5.8 kg
- Effective projected area : 0.122m<sup>2</sup>

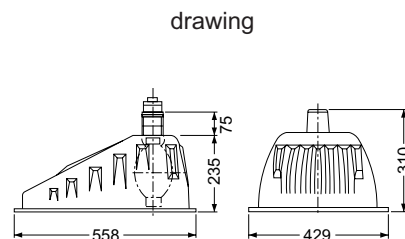


Optical data p.204



## SAH811

- Suitable holder : O39, Y39
- Aluminum, ALGLAS finished
- Finished colour : Grey (Munsell No7)
- Suitable guard : AR3401, AR5401
- Weight : 1.5 kg



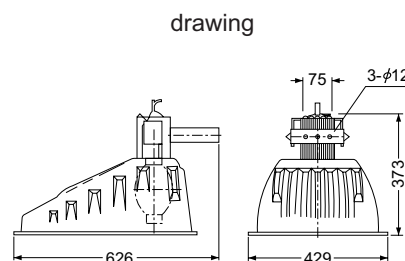
Optical data p.205



### Fixed arm type

## H805

- Reflector : Aluminum, ALGLAS finished with outer surface coating
- Holder : Aluminium
- Open fixture
- Finished colour : Grey (Munsell No6)
- Weight : 3.0 kg

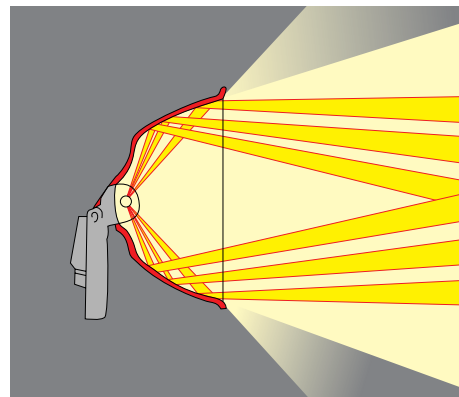


Optical data p.205

# EYE Halogen Lamp Floodlight

## Halogen Lamp Floodlight for outdoor use

The compact floodlight can be used for lighting sports arenas, building structures and in many other ways. Its fan-shaped light distribution allows small number of lamps to light a wide range. Its die-cast aluminum part and aluminum body integrated, and the ALGLAS-finished reflector have extra corrosion resistance and maintenance-free feature. The front tempered glass protects the product from quick heating and cooling.



Tilt range from the horizontal level  
Up to 80 degrees  
Down to 30 degrees

### General specification

- Reflector : Aluminum  
ALGLAS finished  
Coating on the outside surface
- Front part : Tempered clear glass
- Arm : Iron with coating
- Terminal box : Aluminium alloy die-casting  
and stainless steel with coating
- Adaptable cable diameter :  $\phi 10.5\sim 12.5\text{mm}$
- Finished colour : Matt black  
( Munsell colour system N1)

### Suitable lamps for JF1001M

Double-ended halogen lamps  
J110V1000W  
J220V1000W

### Suitable lamps for JF0501M

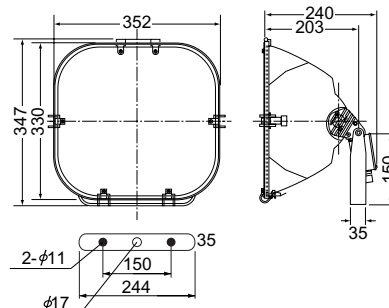
Double-ended halogen lamps  
J110V150W~500W  
J220V500W



## JF1001M

- Effective projected area :  $0.12\text{m}^2$
- Weight : 3.3 kg

drawing



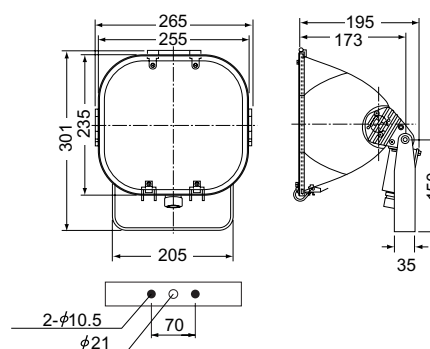
Optical data p.205



## JF0501M

- Effective projected area :  $0.06\text{m}^2$
- Weight : 2.4 kg

drawing



Optical data p.205



## Caution

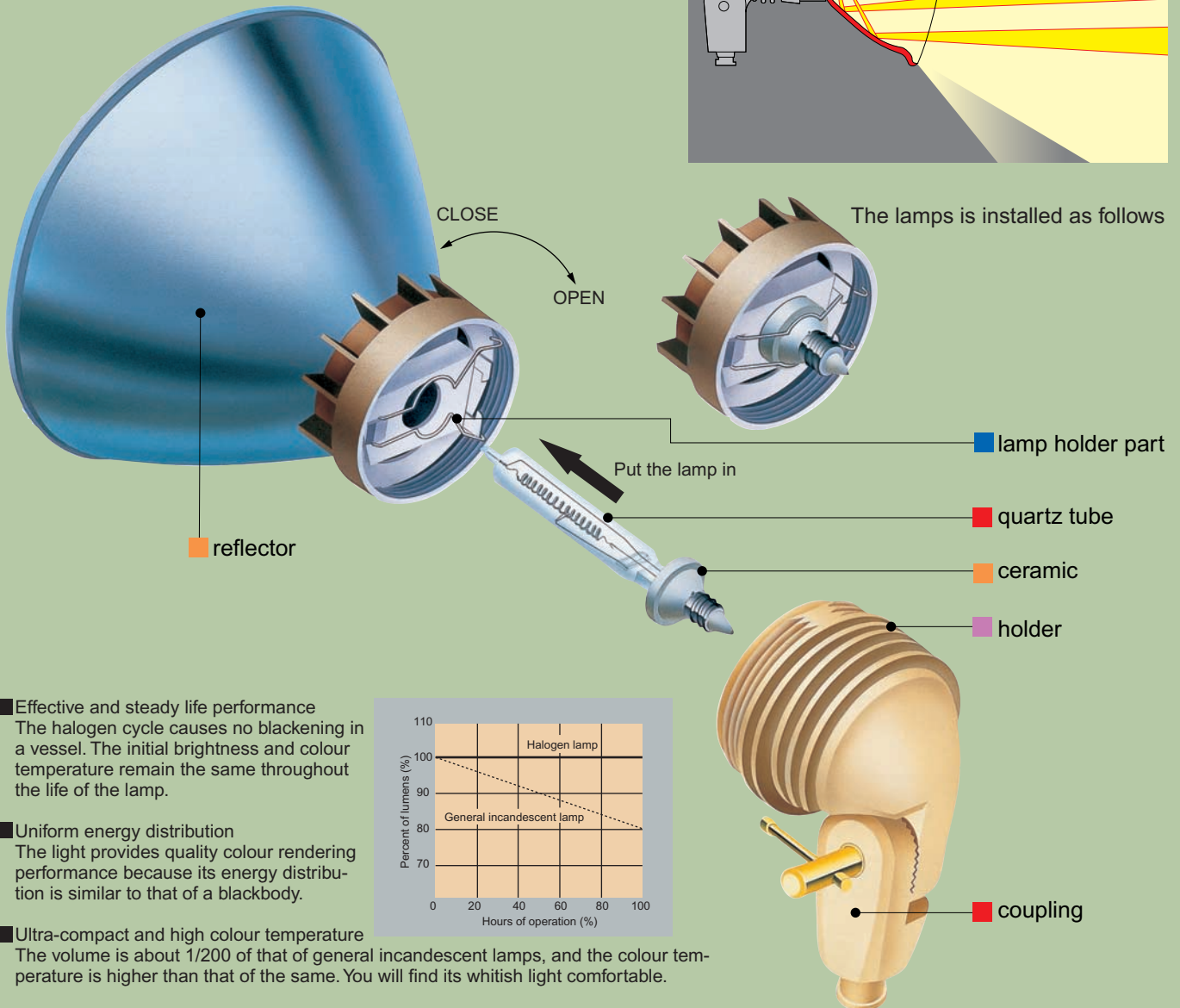
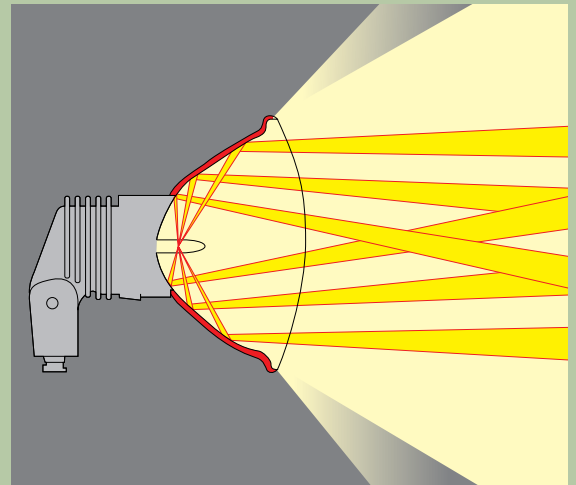
- Do not install the fixture to the directions other than those specified. Overheating, water leakage or break in glass may occur to cause a fire, electric shock, or an injury.
- Do not install the fixture indoors or where the air cooling effect by wind, etc. is not expected. This may cause a fire or burn.



Install the fixture in horizontal position at an angle not more than 4 degrees from the horizontal.  
Do not install the fixture with up side down.

# EYE Halogen Light

With the compact floodlight, EYE Halogen Light, you can enjoy the best performance of the halogen lamp with single ended base. It is designed for use for sports arenas, sky scrapers, advertising displays, show windows, etc. Select a combination of front glass and reflector to have an appropriate light distribution from super-narrow angle (JAN), narrow angle (JAM) and wide angle (JAW).



## Effective and steady life performance

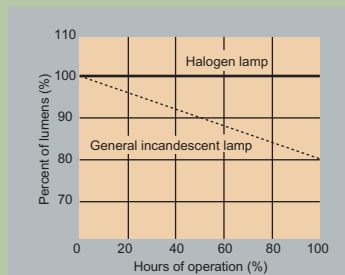
The halogen cycle causes no blackening in a vessel. The initial brightness and colour temperature remain the same throughout the life of the lamp.

## Uniform energy distribution

The light provides quality colour rendering performance because its energy distribution is similar to that of a blackbody.

## Ultra-compact and high colour temperature

The volume is about 1/200 of that of general incandescent lamps, and the colour temperature is higher than that of the same. You will find its whitish light comfortable.



## Instructions for Use

- Do not touch the lamp while lit or right after switched off, as it is very hot.
- Do not put combustible materials including cloth and paper near the halogen lamp, nor use the lamp where people can touch it because the lit lamp is very hot.
- Use the rated voltage and the current specified, otherwise the life of the lamp will be shortened.
- Do not touch the halogen lamp with bare hands. Wear clean gloves when you handle it. Clean it with cloth soaked with alcohol as required. Fouling on the lamp may devitrify it and shorten its life.
- Make sure to install the halogen lamp in a correct direction if it is specified.
- Carefully and slowly socket the halogen lamp with pins not to deform or crack the pins.
- Never vibrate or impact the lit lamp, as the wire may be cut. The coil in lit lamp is extremely hot and easily cut or deformed by an impact.

## Caution

Mount the fixture only in a position specified, or water may enter to cause electric leakage or shock.

# EYE HALOGEN Light (500A series) 500W

## General specification

- Effective projected area : 0.04m<sup>2</sup>
- Finished colour : Ivory
- Tightening ring - Brown
- Weight : 1.25 kg
- Flange : FP5

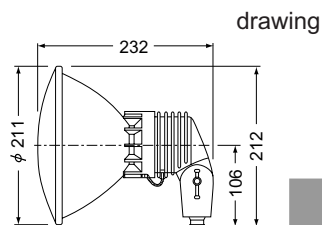
## Suitable lamps

- EYE Halogen lamps
- JD110V250W/M
- JD220V250W/M
- JD110V500W/M
- JD220V500W/M

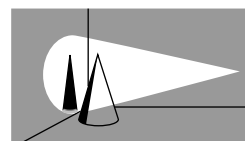


## JAN0

- Reflector : Aluminum, mirror finished
- Front part : Clear hard glass



drawing

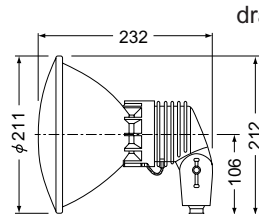


Optical data p.206

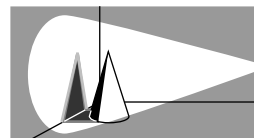


## JAM0

- Reflector : Aluminum, mirror finished
- Front part : Sand blast hard glass



drawing

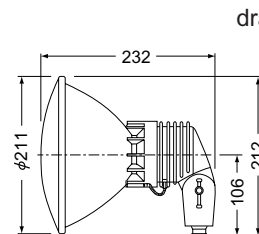


Optical data p.206

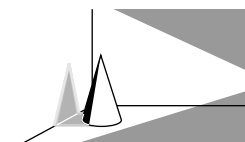


## JAW0

- Reflector : Aluminum, mirror finished
- Front part : Sand blast hard glass

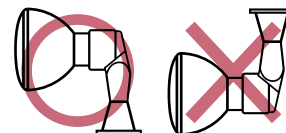


drawing



Optical data p.206

The fixture should be fixed as the following.  
( Burning position )



# EYE HALOGEN Light (250B, 150C series)

## General specification

- Body : Aluminium alloy die-casting
- Reflector : Aluminum,
- Front part : Sand blast hard glass
- Finished colour : Ivory
- Effective projected area : 0.02m<sup>2</sup>

## Suitable lamps for JB0

EYE Halogen lamps  
JD110V50W/M  
JD110V75W/M  
JD110V100W/M  
JD110V150W/M  
JD110V(220V)250W/M

## Suitable lamps for JC0

EYE Halogen lamps  
JD110V50W/M  
JD110V75W/M  
JD110V100W/M  
JD110V150W/M

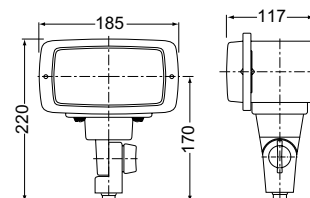


### JB0

Weight : 1.1 kg

Optical data p.206

drawing

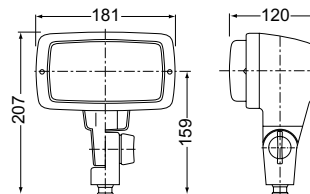


### JC0

Weight : 1.35 kg

Optical data p.206

drawing



## Exclusive fittings



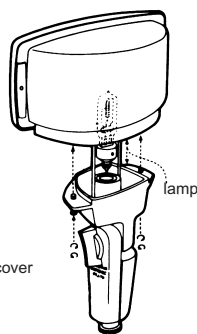
FP5  
Bottom wiring construction



FP6  
Side wiring construction

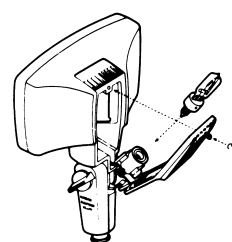
## Lamp replacement

**JB0**



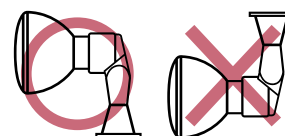
1. release the bottom cover by screw.
2. unscrew the lamp.

**JC0**



1. release the back cover by screw.
2. unscrew the lamp.

The fixture should be fixed as the following.  
( Burning position )



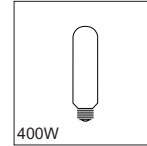
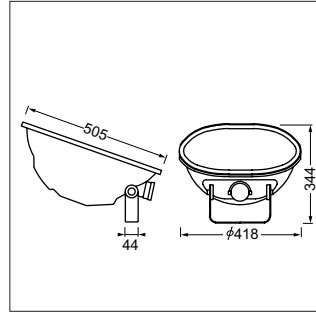
# Floodlight for signboard lighting (without ballast)

## Urban View EPO

Two types light distruction are available (Wide type and Front type)

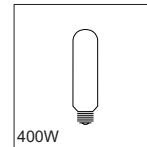
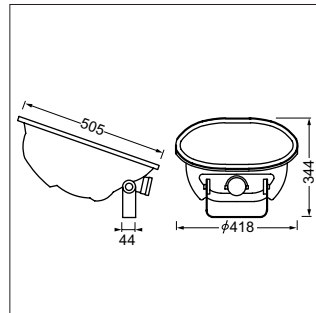
### HCF455

- Light distruction : Front type
- Lamp : MT400LS/BH
- Body,Reflector : Aluminium outside coating
- Front glass : Tempered glass, mist treatment
- Colour : Grey
- Fixed position : Up to 10-20 degrees down to 10-20 degrees from the horizontal level
- Windage : 0.073m<sup>2</sup>
- Weight : 4.5kg



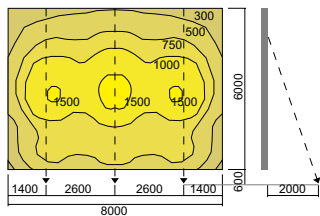
### HCF458

- Light distruction : Wide type
- Lamp : MT400LS/BH
- Body,Reflector : Aluminium outside coating
- Front glass : Tempered glass, mist treatment
- Colour : Grey
- Fixed position : Up to 10-20 degrees down to 10-20 degrees from the horizontal level
- Windage : 0.076m<sup>2</sup>
- Weight : 4.5kg



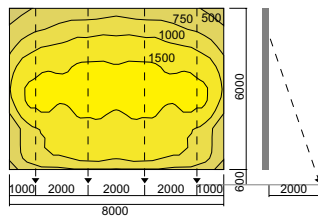
## Illuminance distruction

Signboard for 6m x 8m  
With HCF455 x 3pcs.  
(Front type)



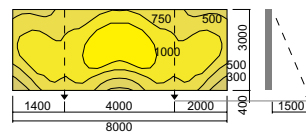
Average illiminance : 886 lx

Signboard for 6m x 8m  
With HCF455 x 4pcs.  
(Front type)



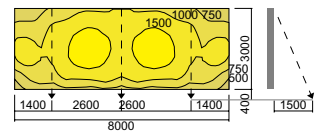
Average illiminance : 1160 lx

Signboard for 3m x 8m  
With HCF458 x 2pcs.  
(Wide type)



Average illiminance : 777 lx

Signboard for 3m x 8m  
With HCF458 x 2pcs.  
(Wide type)

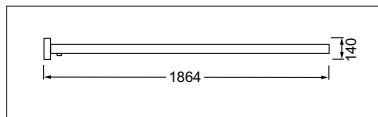


Average illiminance : 1127 lx

## Arm for Urban EPO

### FA16

- Material : Iron with plyester coating
- Colour : Grey



# Floodlight for signboard lighting (without ballast)

## Urban View Direct

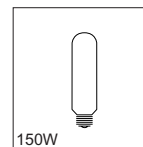
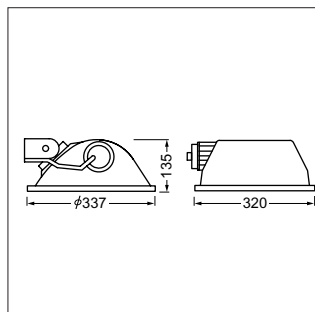
Two types of light distribution are available (Wide type and Front type)

### Urban View Direct

## HCF1553

- Lamp : MT150(F)SW, MT150(F)D
- Body, Reflector : Aluminium outside coating
- Front glass : Tempered glass, clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.091m<sup>2</sup>
- Up facing : Up to 5 degrees and down to 90 degrees from the horizontal level
- Down facing : Up to 5 degrees and down to 90 degrees from the horizontal level

■ Weight : 2.5kg



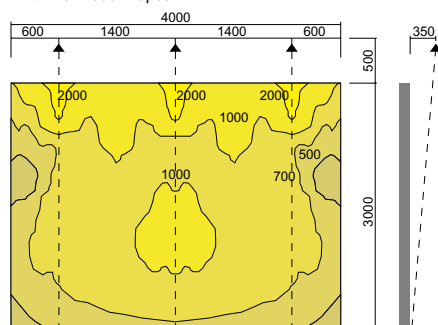
## Application examples

| Situation                               | Lamps     |          |           |         |
|-----------------------------------------|-----------|----------|-----------|---------|
|                                         | MT150SW   | MT150FSW | MT150D    | MT150FD |
| Fixture projecting length from the wall | 300~350mm | 350mm    | 300~350mm | 350mm   |
| White signboard                         | △         | ○        | ○         | ○       |
| Coloured signboard                      | ◎         | ○        | ◎         | ○       |

◎ : Best application  
○ : Good application  
△ : Not recommendable

## Illuminance distribution

Signboard for 3m X 4m  
With HCF1553 X 3pcs.



Lamp : MT150SW  
Maintenance factor : 1.0  
Average illuminance : 890 lx

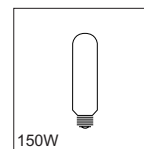
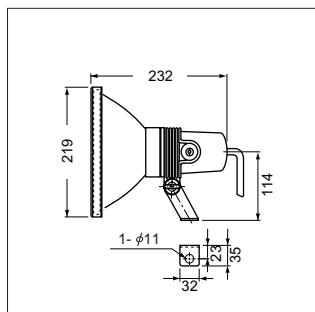
# Floodlight for signboard lighting (without ballast)

## Urban Act

### HCF1502

#### Super narrow light distribution

- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating
- Reflector : Mirror surface, ALGLAS coated
- Front glass : Tempered glass, Clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.03m<sup>2</sup>
- Fixed position : Universal
- Weight : 1.3kg



|      |        |      |
|------|--------|------|
| 5    | 7656   | 1.58 |
| 4    | 11962  | 1.27 |
| 3    | 21265  | 0.95 |
| 2    | 47847  | 0.63 |
| 1    | 191389 | 0.32 |
| h(m) | E(lx)  | D(m) |

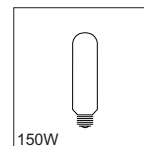
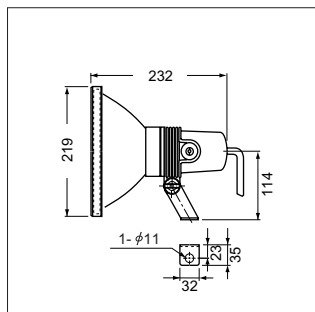
|         |       |      |
|---------|-------|------|
| MT150SW |       |      |
| 5       | 2517  | 2.49 |
| 4       | 3934  | 1.99 |
| 3       | 6993  | 1.50 |
| 2       | 15734 | 1.00 |
| 1       | 62937 | 0.50 |
| h(m)    | E(lx) | D(m) |

MT150FSW

### HCF1503

#### Narrow light distribution

- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating
- Reflector : Faceted surface, ALGLAS coated
- Front glass : Tempered glass, Clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.03m<sup>2</sup>
- Fixed position : Universal
- Weight : 1.3kg



|      |       |      |
|------|-------|------|
| 5    | 3629  | 2.13 |
| 4    | 5671  | 1.70 |
| 3    | 10081 | 1.28 |
| 2    | 22682 | 0.85 |
| 1    | 90728 | 0.43 |
| h(m) | E(lx) | D(m) |

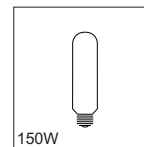
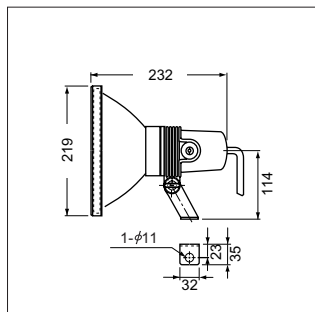
|         |       |      |
|---------|-------|------|
| MT150SW |       |      |
| 5       | 2064  | 2.87 |
| 4       | 3225  | 2.29 |
| 3       | 5733  | 1.72 |
| 2       | 12899 | 1.15 |
| 1       | 51597 | 0.57 |
| h(m)    | E(lx) | D(m) |

MT150FSW

### HCF1504

#### Medium light distribution

- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating
- Reflector : Dimpled surface, ALGLAS coated
- Front glass : Tempered glass, Clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.03m<sup>2</sup>
- Fixed position : Universal
- Weight : 1.3kg



|      |       |       |
|------|-------|-------|
| 5    | 514   | 10.36 |
| 4    | 804   | 8.28  |
| 3    | 1429  | 6.21  |
| 2    | 3215  | 4.14  |
| 1    | 12859 | 2.07  |
| h(m) | E(lx) | D(m)  |

|         |       |       |
|---------|-------|-------|
| MT150SW |       |       |
| 5       | 359   | 11.92 |
| 4       | 560   | 9.53  |
| 3       | 996   | 7.15  |
| 2       | 2242  | 4.77  |
| 1       | 8967  | 2.38  |
| h(m)    | E(lx) | D(m)  |

MT150FSW

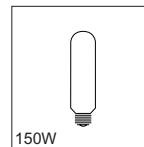
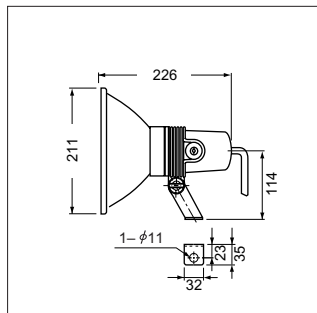
# Floodlight for signboard lighting (without ballast)

## Urban Act

### HCF1505

#### Super narrow light distribution

- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating
- Reflector : Mirror surface, ALGLAS coated
- Front glass : Tempered glass, Clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.03m<sup>2</sup>
- Fixed position : Universal
- Weight : 1.3kg



|      |        |      |
|------|--------|------|
| 5    | 7656   | 1.58 |
| 4    | 11962  | 1.27 |
| 3    | 21265  | 0.95 |
| 2    | 47847  | 0.63 |
| 1    | 191389 | 0.32 |
| h(m) | E(lx)  | D(m) |

#### MT150SW

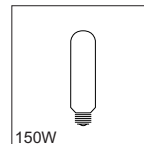
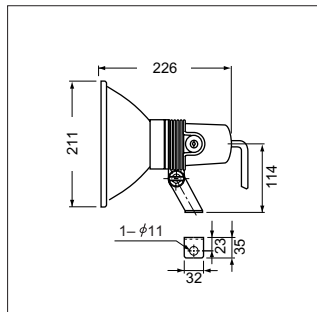
|      |       |      |
|------|-------|------|
| 5    | 2517  | 2.49 |
| 4    | 3934  | 1.99 |
| 3    | 6993  | 1.50 |
| 2    | 15734 | 1.00 |
| 1    | 62937 | 0.50 |
| h(m) | E(lx) | D(m) |

#### MT150FSW

### HCF1506

#### Narrow light distribution

- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating
- Reflector : Faceted surface, ALGLAS coated
- Front glass : Tempered glass, Clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.03m<sup>2</sup>
- Fixed position : Universal
- Weight : 1.3kg



|      |       |      |
|------|-------|------|
| 5    | 3629  | 2.13 |
| 4    | 5671  | 1.70 |
| 3    | 10081 | 1.28 |
| 2    | 22682 | 0.85 |
| 1    | 90728 | 0.43 |
| h(m) | E(lx) | D(m) |

#### MT150SW

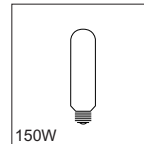
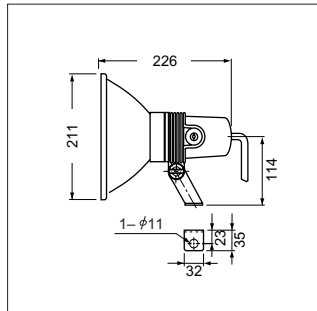
|      |       |      |
|------|-------|------|
| 5    | 2064  | 2.87 |
| 4    | 3225  | 2.29 |
| 3    | 5733  | 1.72 |
| 2    | 12899 | 1.15 |
| 1    | 51597 | 0.57 |
| h(m) | E(lx) | D(m) |

#### MT150FSW

### HCF1507

#### Medium light distribution

- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating
- Reflector : Dimpled surface, ALGLAS coated
- Front glass : Tempered glass, Clear
- Colour : Dark grey (Munsell N3)
- Windage : 0.03m<sup>2</sup>
- Fixed position : Universal
- Weight : 1.3kg



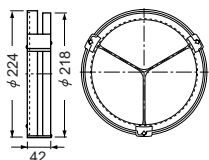
|      |       |       |
|------|-------|-------|
| 5    | 514   | 10.36 |
| 4    | 804   | 8.28  |
| 3    | 1429  | 6.21  |
| 2    | 3215  | 4.14  |
| 1    | 12859 | 2.07  |
| h(m) | E(lx) | D(m)  |

#### MT150SW

|      |       |       |
|------|-------|-------|
| 5    | 359   | 11.92 |
| 4    | 560   | 9.53  |
| 3    | 996   | 7.15  |
| 2    | 2242  | 4.77  |
| 1    | 8967  | 2.38  |
| h(m) | E(lx) | D(m)  |

#### MT150FSW

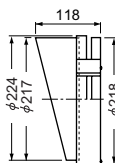
## Urban Act Accessories



### Guard GHCF501

- Adaptable fixture  
HCF1502, HCF1503, HCF1504,  
HCF1505, HCF1506, HCF1507
- Material  
Front frame : Baked melamine resin  
Guard : Stainless steel, baked melamine resin coating
- Colour  
Front frame : Black  
Guard : Orange
- Weight : 260g (front frame & guard)
- Note : Front frame and Guard are one product.

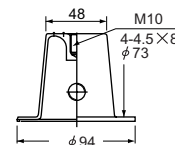
Installation example



### Anti-Glare Shield FHCF501

- Adaptable fixture  
HCF1502, HCF1503, HCF1504,  
HCF1505, HCF1506, HCF1507
- Material  
Front frame : Baked melamine resin  
Guard : Stainless steel, baked melamine resin coating
- Colour  
Front frame : Black  
Anti-Glare Shield : Black
- Weight : 670g (front frame & Shield)
- Note : Front frame and Shield are one product.

Installation example



### Junction Box FA1

- Adaptable fixture  
HCF1502, HCF1503, HCF1504,  
HCF1505, HCF1506, HCF1507, HCF1551
- Material  
Aluminium die cast Baked melamine resin coating  
Colour : Dark grey (Munsell N3)
- Installation : Attached to the fixture  
by stainless steel M10 bolt.  
Conduit knock outs are also  
provided in the Junction Box.
- Weight : 150g

Installation example



## Urban Act Accessories

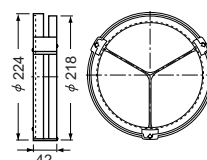


Installation example



### KHCF501/R KHCF501/BL KHCF501/GN

- Adaptable fixture : HCF1502, HCF1503, HCF1504, HCF1505, HCF1506, HCF1507
- Material  
Front frame : Baked melamine resin / Coloured Glass filters : Tempered glass  
Colour : Front frame - Black / Coloured Glass filters - R : Red, GN : Green, BL : Blue
- Weight : 580g (front frame & glass filter)
- Note : 1. Installation angle is up to 80 degree.  
2. Front frame and Coloured glass filter are one product.



## Outreach Arm

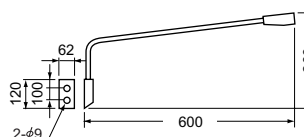


Installation : The fixture can be attached not only upward but also downward.



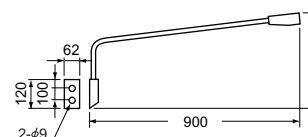
### 600 mm type FA2

- Adaptable fixture  
HCF1502, HCF1503, HCF1504, HCF1505, HCF1506, HCF1507, HCF1551
- Material and Finish  
Terminal box : Aluminium die cast  
Dark grey (Munsell N3)  
Baked melamine resin coating
- Pipe : Carbon steel  
Baked melamine resin coating
- Weight : 2.0kg
- Installation : Attached to the fixture  
by attached stainless steel M10 bolt at top of Outreach Arm.



### 900 mm type FA3

- Weight : 2.3kg

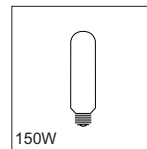
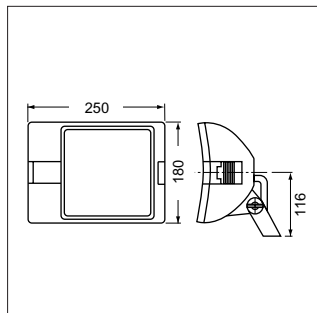


# Floodlight for signboard lighting (without ballast)

## Urban Act

### HCF1551

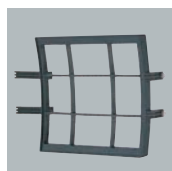
- Lamps : NHT150(F)SDX, MT150(F)SDW  
MT150(F)SW, MT150(F)D
- Body : Aluminium die cast  
Fluororesin coating  
Front opening and shutting
- Reflector : Spot surface
- Front glass : Tempered glass, Clear,  
a curved form surface
- Colour : Dark grey (Munsell N3)  
baked coating
- Fixed position : Universal
- Weight : 1.9kg



|   | h(m) | E(lx) | D(m) |
|---|------|-------|------|
| 5 | 135  | 22.46 |      |
| 4 | 211  | 17.97 |      |
| 3 | 375  | 13.48 |      |
| 2 | 843  | 8.98  |      |
| 1 | 3371 | 4.49  |      |

MT150SW

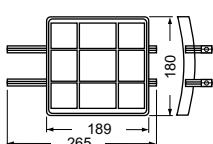
## Accessories for Urban Act square type



Installation example



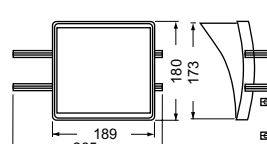
Drawing



Installation example



Drawing



### Guard

### GHCF551

- Adaptable fixture : HCF1551
- Material : Aluminium die cast - Baked melamine resin coating
- Colour : Black
- Weight : 220kg

Note : Front frame and Shield are one product.

### Anti-Glare Shield

### FHCF551

- Adaptable fixture : HCF1551
- Material : Body - baked melamine resin coating  
Anti-Glare Shield - Stainless steel
- Colour : Front frame - Black  
Anti-Glare Shield - Black
- Weight : 360g

Note : Front frame and Shield are one product.

## Coloured Glass filters



Installation example

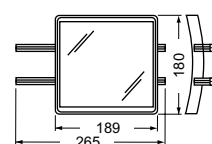


### KHCF551/R KHCF551/BL KHCF551/GN

- Adaptable fixture : HCF1551
- Material : Front frame - Baked melamine resin  
Coloured Glass filters - Tempered glass
- Colour : Front frame - Black  
Coloured Glass filters - R : Red, GN : Green, BL : Blue
- Weight : 400g

Note : 1. Installation angle is up to 80 degree.  
2. Front frame and Coloured glass filter are one product.

Drawing



Installation example



HCF1551 + FA1



HCF1551 + FA3 (FA2)

# Floodlight for lighting up

## HCF1101S

Narrow type  
Wide type

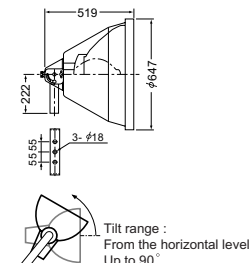
## HCF1101D

Medium type  
Wide type



Lamps  
Narrow type  
■ HCF1101S  
M1000LE/BH,  
M1000LE/BD  
NH940LX, H1000  
Medium type  
■ HCF1101D  
M1000LE, NH940LX,  
H1000  
Wide type  
■ HCF1101S(D)  
MF1000LE/BH,  
MF1000LE/BD  
NH940FLX, HF1000PD

■ Body : Front-Aluminium  
Bottom-Aluminium die cast  
■ Reflector : Aluminium  
■ Reflector support : Stainless steel  
■ Front glass : Clear  
Heat tempered hard glass  
■ Colour : Dark grey,  
Half-polish (Munsell N3)  
■ Weight : 11kg



## HCF403S

Narrow type  
Wide type

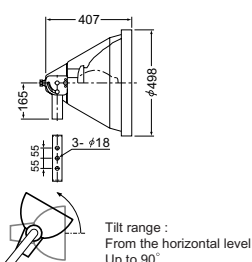
## HCF403D

Medium type  
Wide type



Lamps  
Narrow type  
■ HCF403S  
M400LS/U, NH360LX,  
H400  
Medium type  
■ HCF403D  
M400LS/U, NH360LX,  
H400  
Wide type  
■ HCF403S(D)  
MF400LS/U, NH360FLX,  
HF400PD

■ Body : Front-Aluminium  
Bottom-Aluminium die cast  
■ Reflector : Aluminium  
■ Reflector support : Stainless steel  
■ Front glass : Clear  
Heat tempered hard glass  
■ Colour : Dark grey,  
Half-polish (Munsell N3)  
■ Weight : 7.2kg

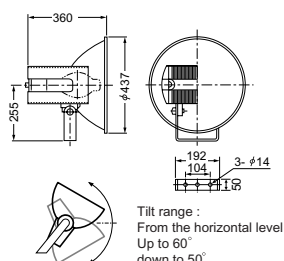


## HCF401



Lamps  
■ HCF401  
M(F)250 LE/BUH  
M(F)400 LE/BUH  
M(F)400 LS/U  
NH220~360(F)LX  
H(F)200~400PD

■ Body : Aluminium die cast,  
Steel plate  
■ Reflector : Aluminium  
ALGLAS coated  
■ Front glass : Clear  
Heat tempered hard glass  
■ Colour : Dark grey,  
Half-polish  
■ Weight : 8.5kg



## HCF401B 2.5CCA

With ballast

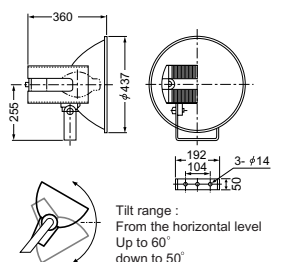
## HCF401B 2.5CCB

With ballast



Lamps  
■ HCF401B2.5CCA  
■ HCF401B2.5CCB  
M(F)250 LE/BUH  
NH220(F)LX  
H(F)250(PD)

■ Body : Aluminium die cast,  
Steel plate  
■ Reflector : Aluminium  
ALGLAS coated  
■ Front glass : Clear  
Heat tempered hard glass  
■ Colour : Dark grey,  
Half-polish  
■ Weight : 11.6kg

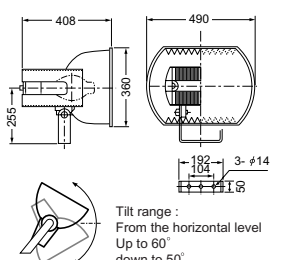


## HCF451



Lamps  
■ HCF451  
M(F)250 LE/BUH  
M(F)400 LE/BUH  
M(F)400 LS/U  
NH220~360(F)LX  
H(F)200~400(PD)

■ Body : Aluminium die cast,  
Steel plate  
■ Reflector : Aluminium  
ALGLAS coated  
■ Front glass : Clear  
Heat tempered hard glass  
■ Colour : Dark grey,  
Half-polish  
■ Weight : 8.9kg



## HCF451B 2.5CCA

With ballast

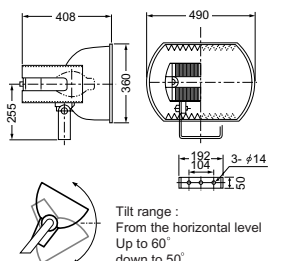
## HCF451B 2.5CCB

With ballast



Lamps  
■ HCF451B2.5CCA  
■ HCF451B2.5CCB  
M(F)250 LE/BUH  
NH220(F)LX  
H(F)250(PD)

■ Body : Aluminium die cast,  
Steel plate  
■ Reflector : Aluminium  
ALGLAS coated  
■ Front glass : Clear  
Heat tempered hard glass  
■ Colour : Dark grey,  
Half-polish  
■ Weight : 12.1kg



# EYE Lampholder

## For signboard application

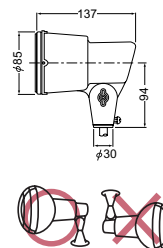
### K0/W

With lead wire (200mm)  
Without lamp, guard



Lamps  
■ Self-ballasted Mercury lamp  
160WSB/R40  
■ Incandescent lamps  
RF(S)90~180WH

■ Holder : Aluminium die cast  
■ Colour : White  
■ Guard : GK4  
■ Weight : 390g



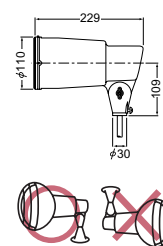
### HS0/W

With lead wire (200mm)  
Without lamp, guard,  
ballast



Lamps  
■ Mercury lamps  
■ HRF200~400PD  
Sunlux Ace lamps  
■ NHR220~360LX

■ Holder : Aluminium die cast  
■ Colour : White  
■ Guard : GHS3  
■ Weight : 850g



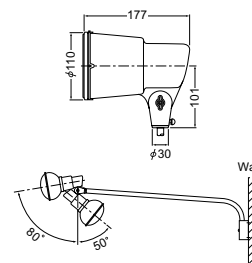
### S0/W-L14

With lead wire (1.8m)  
Without lamp, guard



Lamps  
■ Self-ballasted Mercury lamp  
250WSB~500WSB/R40,44,57  
■ Incandescent lamps  
RF(S)270~450WH

■ Holder : Aluminium die cast  
■ Colour : White  
■ Guard : GS6  
■ Weight : 650g



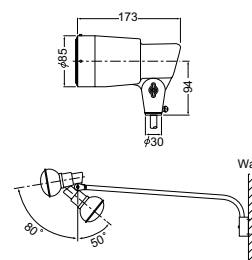
### HK0/W-L14

With lead wire (1.8m)  
Without lamp, guard,  
ballast



Lamps  
■ Mercury lamp  
HRF100PD

■ Holder : Aluminium die cast  
■ Colour : White  
■ Guard : GK4  
■ Weight : 570g



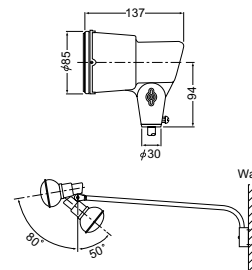
### K0/W-L14

With lead wire (1.8m)  
Without lamp, guard



Lamps  
■ Self-ballasted Mercury lamp  
160WSB/R40  
■ Incandescent lamps  
RF(S)90~180WH

■ Holder : Aluminium die cast  
■ Colour : White  
■ Guard : GK4  
■ Weight : 390g



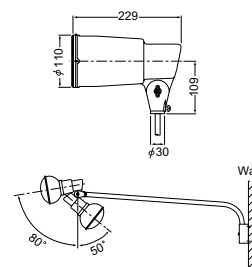
### HS0/W-L14

With lead wire (1.8m)  
Without lamp, guard,  
ballast



Lamps  
■ Mercury lamp  
HRF200~400PD  
HR200~400N  
■ HPS lamps  
NHR220~360LX

■ Holder : Aluminium die cast  
■ Colour : White  
■ Guard : GHS3  
■ Weight : 850g



# EYE Lampholder EYE Halogen lamps (50W~500W)

## For signboard application

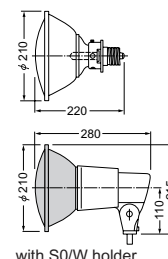
### JDN39

Adaptable holder :  
S0, S0/W, S0-L14,  
S0/W-L14, SS0, SSA-0  
Adaptable guard : GJA01



Super narrow  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Reflector : Aluminium mirror finish  
■ Front part : Clear hard glass



### JDM39

Adaptable holder :  
S0, S0/W, S0-L14,  
S0/W-L14, SS0, SSA-0  
Adaptable guard : GJA01



Narrow  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Reflector : Aluminium mirror finish  
■ Front part : Sand blast hard glass



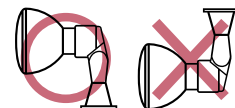
### JDW39

Adaptable holder :  
S0, S0/W, S0-L14,  
S0/W-L14, SS0, SSA-0  
Adaptable guard : GJA01



Wide  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Reflector : Aluminium  
■ Front part : Sand blast hard glass

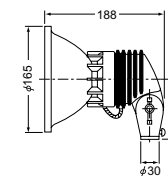


### JCM0



Medium  
■ Lamps  
EYE Halogen lamps  
JD110V50W/M  
JD110V75W/M  
JD110V100W/M  
JD110V150W/M

■ Colour : Holder - red,  
Tightening ring - brown  
■ Weight : 1.3 kg  
■ Lead wire : max. 1.3m



### JCW0



Wide  
■ Lamps  
EYE Halogen lamps  
JD110V50W/M  
JD110V75W/M  
JD110V100W/M  
JD110V150W/M

■ Colour : Holder - red,  
Tightening ring - brown  
■ Weight : 1.3 kg  
■ Lead wire : max. 1.3m

# EYE Lampholder EYE Halogen lamps (50W~500W)

## For signboard application

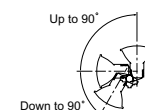
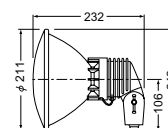
### JAN0 JAN0-L1.3

Adaptable arm :  
FP15A,  
FP16A Sky arm



Super narrow  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Colour : Holder - Ivory,  
Tightening ring - brown  
■ Reflector : Aluminium mirror finish  
■ Front part : Clear hard glass  
■ Weight : 1.25kg  
For JAN0-L1.3  
■ Lead wire : max. 1.3m



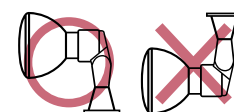
### JAM0 JAM0-L1.3

Adaptable arm :  
FP15A,  
FP16A Sky arm



Narrow  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Colour : Holder - Ivory,  
Tightening ring - brown  
■ Reflector : Aluminium mirror finish  
■ Front part : Sand blast hard glass  
■ Weight : 1.25kg  
For JAM0-L1.3  
■ Lead wire : max. 1.3m



### JAW0 JAW0-L1.3

Adaptable arm :  
FP15A,  
FP16A Sky arm



Wide  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Colour : Holder - Ivory,  
Tightening ring - brown  
■ Reflector : Aluminium  
■ Front part : Sand blast hard glass  
■ Weight : 1.25kg  
For JAW0-L1.3  
■ Lead wire : max. 1.3m

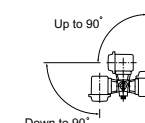
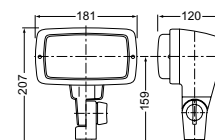
### JB0 JB0-L1.3

FP16A Sky arm



Wide  
■ Lamps  
EYE Halogen lamps  
JD110V250W/M  
JD220V250W/M  
JD110V500W/M  
JD220V500W/M

■ Body : Aluminium die cast  
■ Colour : Ivory,  
■ Reflector : Aluminium  
■ Front part : Sand blast hard glass  
■ Weight : 1.1kg  
For JB0-L1.3  
■ Adaptable arm  
FP15A, FP16A Sky arm  
■ Lead wire : max. 1.3m



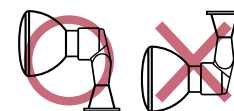
### JC0 JC0-L1.3

FP16A Sky arm



Wide  
■ Lamps  
EYE Halogen lamps  
JD110V50W/M  
JD110V75W/M  
JD110V100W/M  
JD110V150W/M

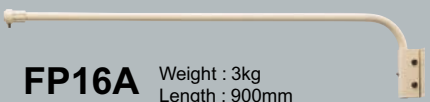
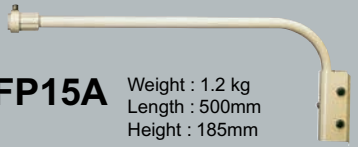
■ Body : Aluminium die cast  
■ Colour : Ivory,  
■ Reflector : Aluminium  
■ Front part : Sand blast hard glass  
■ Weight : 1.3kg  
For JC0-L1.3  
■ Adaptable arm  
FP15A, FP16A Sky arm  
■ Lead wire : max. 1.3m



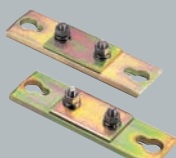
# Accessories for Sighboard floodlight

| <div> <div>Fixtures</div> <div>Adaptable lamps</div> <div>Fittings</div> </div>                                                                                             | <b>JAN0</b><br><b>JAM0</b><br><b>JAW0</b>                                                                                                         | <b>JB0</b>                                                                                                                                         | <b>JC0</b>                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                             |  Halogen lamps<br>JD110V500W/M<br> Halogen lamps<br>JD110V250W/M |  Halogen lamps<br>JD110V250W/M<br> Halogen lamps<br>JD110V150W/M |  Halogen lamps<br>JD110V150W/M<br> Halogen lamps<br>JD110V100W/M |
| <b>FP1</b><br>Weight : 62g<br>Width : $\phi 36$ mm<br>Height : 405mm                       | <b>JAN(M,W)-1</b>                                                                                                                                 | <b>JB-1</b>                                                                                                                                        | <b>JC-1</b>                                                                                                                                         |
| <b>FP2</b><br>Weight : 270g<br>Width : 110mm<br>Height : 88mm                              | <b>JAN(M,W)-2</b>                                                                                                                                 | <b>JB-2</b>                                                                                                                                        | <b>JC-2</b>                                                                                                                                         |
| <b>FP3</b><br>Weight : 500g<br>Height : 134mm                                             | <b>JAN(M,W)-3</b>                                                                                                                                | <b>JB-3</b>                                                                                                                                       | <b>JC-3</b>                                                                                                                                        |
| <b>FP4</b><br>Weight : 330g<br>Width : 120mm<br>Height : 88mm                            | <b>JAN(M,W)-4</b>                                                                                                                               | <b>JB-4</b>                                                                                                                                      | <b>JC-4</b>                                                                                                                                       |
| <b>FP5</b><br>Weight : 90g<br>Width : $\phi 100$ mm<br>Height : 60mm<br>4-4.5 x 8 hole   | <b>JAN(M,W)-5</b>                                                                                                                               | <b>JB-5</b>                                                                                                                                      | <b>JC-5</b>                                                                                                                                       |
| <b>FP6</b><br>Weight : 90g<br>Width : $\phi 100$ mm<br>Height : 60mm<br>4-4.5 x 8 hole   | <b>JAN(M,W)-6</b>                                                                                                                               | <b>JB-6</b>                                                                                                                                      | <b>JC-6</b>                                                                                                                                       |
| <b>FP7</b><br>Weight : 100g<br>Width : $\phi 100$ mm<br>Height : 25mm<br>4-4.5 x 8 hole  | <b>JAN(M,W)-7</b>                                                                                                                               | <b>JB-7</b>                                                                                                                                      | <b>JC-7</b>                                                                                                                                       |

## Sky Arm

|                                                                                                                                                                           |                                                                                                                                                          |                                                                                                                                                    |                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FP8A</b><br>Weight : 420g<br>Width : 85mm<br>Height : 110mm<br>0.4 x $\phi 7$ hole  | <b>FP12</b><br>Weight : 60g<br>Width : $\phi 22$ mm<br>Height : 50mm  | <b>FP16A</b> Weight : 3kg<br>Length : 900mm<br>Height : 185mm  | <b>FP15A</b> Weight : 1.2 kg<br>Length : 500mm<br>Height : 185mm  |
| <b>JAN(M,W)L13-16A</b>                                                                |                                                                                                                                                          |                                                                                                                                                    |                                                                                                                                                        |

# Accessories for Halogen lamp Signboard floodlight

|                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                            |                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                        | <div><b>FP1</b><br/>Weight : 62g<br/>Width : <math>\phi 36</math>mm<br/>Height : 405mm</div> <div></div> | <div><b>FP20</b><br/>Weight : 1.6kg<br/>Length : 500mm<br/>Height : 60mm</div> <div></div>                                                                                                                                                                        | <div><b>FP1</b><br/>Weight : 62g<br/>Width : <math>\phi 36</math>mm<br/>Height : 405mm</div> <div></div> | <div><b>FP21</b><br/>Weight : 3.2kg<br/>Length : 1000mm<br/>Height : 60mm</div> <div></div> |
| <div><b>JP11</b><br/>Adaptable pole : <math>\phi 89.1(3B)</math><br/>Weight : 950g<br/>Width : <math>\phi 101.6</math>mm<br/>Height : 100mm<br/>Top hole : <math>\phi 26.4</math>mm</div> <div></div> | <div>JAN(M,W) x 2 fixtures<br/>JB x 2 fixtures<br/>JC x 2 fixtures</div> <div></div>                     | <div>JAN(M,W) x 2 fixtures<br/>JB x 2 fixtures<br/>JC x 2 fixtures</div> <div></div>                                                                                                                                                                            |                                                                                                                                                                                            |                                                                                                                                                                                |
| <div><b>JP21</b><br/>Adaptable pole : <math>\phi 89.1\sim 139.8(3B-5B)</math><br/>Weight : 1.9kg<br/>Width : 205mm<br/>Height : 58mm<br/>Depth : 109mm</div> <div></div>                              | <div>JAN(M,W) x 2 fixtures<br/>JB x 2 fixtures<br/>JC x 2 fixtures</div> <div></div>                     | <div>JAN(M,W) x 4 fixtures<br/>JB x 4 fixtures<br/>JC x 4 fixtures</div> <div></div>                                                                                                                                                                            |                                                                                                                                                                                            |                                                                                                                                                                                |
| <div><b>JP31</b><br/>Weight : 220g<br/>Width : 120mm<br/>Height : 6mm<br/>Depth : 30mm</div> <div></div>                                                                                             | <div>JAN(M,W) x 2 fixtures<br/>JB x 2 fixtures<br/>JC x 2 fixtures</div> <div></div>                    | <div>JAN(M,W) x 2 fixtures<br/>JB x 2 fixtures<br/>JC x 2 fixtures</div> <div></div> <div>JAN(M,W) x 4 fixtures<br/>JB x 4 fixtures<br/>JC x 4 fixtures</div> <div></div> |                                                                                                                                                                                            |                                                                                                                                                                                |

## Box type fittings

|                                                                                                                                                                                        |                                                                                                                                                    |                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FP9</b><br>Insert length : 83mm<br>Weight : 1.7kg<br>Width : $\phi 106$ mm<br>Height : 155mm<br> | JAN(M,W) x 2 fixtures<br>JB x 2 fixtures<br>JC x 2 fixtures<br> | JAN(M,W) x 4 fixtures<br>JB x 4 fixtures<br>JC x 4 fixtures<br> |
| <b>FP1</b><br>Weight : 62g<br>Width : $\phi 36$ mm<br>Height : 405mm<br>                            |                                                                                                                                                    |                                                                                                                                                      |

## Accessories

Guard  
**GJA01**



Adaptable fixtures :  
 JAN0(-L1,3)  
 JAM0(-L1,3)  
 JAW0(-L1,3)  
 JDN39  
 JDM39  
 JDW39

Weight : 110g  
 Width :  $\phi 210$ mm  
 Depth : 48mm

Installation example



# Accessories of EYE lampholders for signboard lighting

## Adaptor **F7/W** **F7A/W**

Side hole for lead wire  
■ Weight : 60g



Installation example



## Guard **GS6**

■ Adaptable holder :  
S0/W, S0/W-L14  
■ Materials : Iron steel  
■ Colour : White  
■ Weight : 310g



Installation example



## Adaptor **F8/W**

■ Adaptable holder :  
S0/W-L14,  
K0/W-L14,  
HS0/W-L14,  
HK0/W-L14  
■ Weight : 265g



Installation example



## Guard **GK4**

■ Adaptable holder :  
S0/W-L14,  
K0/W-L14,  
HS0/W-L14,  
HK0/W-L14  
■ Materials : Iron steel  
■ Colour : White  
■ Weight : 175g



Installation example



## Arm **F13/W**

■ Adaptable holder :  
S0/W-L14,  
K0/W-L14,  
HS0/W-L14,  
HK0/W-L14  
■ Arm length : 970mm  
■ Colour : White  
■ Weight : 1.6kg



Installation example



## Guard **GHS3**

■ Adaptable holder :  
HS0/W-L14,  
HK0/W-L14  
■ Materials : Iron steel  
■ Colour : White  
■ Weight : 380g



Installation example



## Arm **F14/W**

■ Adaptable holder :  
S0/W-L14,  
K0/W-L14,  
HS0/W-L14,  
HK0/W-L14  
■ Arm length : 980-1480mm  
■ Colour : White  
■ Weight : 2.3kg



Installation example



## Arm **F15/W**

■ Adaptable holder :  
K0/W-L14,  
HK0/W-L14  
■ Arm length : 800mm  
■ Colour : White  
■ Weight : 960g



Installation example



# Accessories of floodlight for signboard lighting

## For Urban Act Spotlight

### Guard

## GHCF501

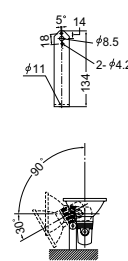
- For HCF1502, 1503, 1504, 1505, 1506, 1507
- Material :  
Front frame -  
Baked melamine resin  
Guard -  
Stainless Steel baked melamine resin coating
- Colour :  
Front frame - Black  
Guard - Orange
- Installation :  
The guard is screw fixed to the front of the fixture
- Weight : 260g



### Arm

## FA5

- For HCF1502, 1503, 1504, 1505, 1506, 1507, 1551
- Colour :  
Dark grey, half polish (Munsell N3)



### Coloured glass filter

## KHCF 501/R

- For HCF1505, 1506, 1507
- Coloured glass filter :  
Tempered glass
- Weight : 580g



### Anti-glare shield

## FHCF501

- For HCF1502, 1503, 1504, 1505, 1506, 1507
- Material :  
Front frame -  
Baked melamine resin  
Anti-glare shield -  
Stainless steel, baked melamine resin coating
- Colour :  
Front frame - Black  
Anti-glare shield - Black
- Installation :  
The anti-glare shield is screw fixed to the front of the fixture
- Weight : 670g



### Coloured glass filter

## KHCF 501/GN

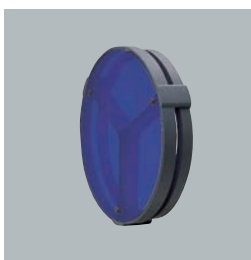
- For HCF1505, 1506, 1507
- Coloured glass filter :  
Tempered glass
- Weight : 580g



### Coloured glass filter

## KHCF 501/BL

- For HCF1505, 1506, 1507
- Coloured glass filter :  
Tempered glass
- Weight : 580g



### Junction box

## FA1

- For HCF1502, 1503, 1504, 1505, 1506, 1507, 1551, HCF1510
- Material :  
Aluminium die cast, baked melamine resin coating
- Colour : Dark grey (Munsell N3)
- Installation :  
Attached to the fixture by stainless steel M10 bolts  
Conduit knock outs are also provided in the Junction box
- Weight : 150g



### Arm

## FA2 600 mm type

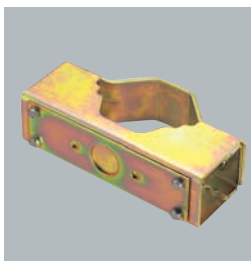
## FA3 900 mm type

- For HCF1502, 1503, 1504, 1505, 1506, 1507, 1551, 1510
- Material : Terminal block - Aluminium die cast, baked melamine resin coating  
Pipe - Carbon steel, baked melamine resin coating
- Installation : By attached stainless steel M10 bolts at the top of arm
- Weight : FA2 - 2.0kg, FA3 - 2.3kg



## JP21

- For HCF1502, 1503, 1504, 1505, 1506, 1507, 1551



# EYE Lampholder

EYE lamps / HID lamps (90W~500W)

## SS0

With lead wire 200mm

Adaptable accessories

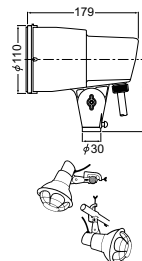
GS6 guard

F3/0, F4/0 adaptor



Lamps  
■ Incandescent lamps  
RF(S)270~450WH

■ Finish : Baked melamine resin coating  
■ Colour : Orange  
■ With lead wire : 200mm  
■ Weight : 900g



## SSA-0

With lead wire 300mm

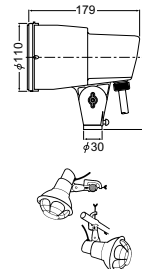
Adaptable accessories

GS6 guard



Lamps  
■ Incandescent lamps  
RF(S)270~450WH

■ Finish : Baked melamine resin coating  
■ Colour : Red  
■ With lead wire : 300mm  
■ Weight : 920g



## S0

With lead wire 200mm

## S0-L14

With lead wire 1.8m

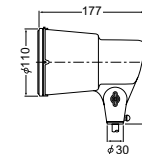
Adaptable accessories

GS6 guard



Lamps  
■ Incandescent lamps  
RF(S)270~450WH

■ Finish : Baked melamine resin coating  
■ Colour : Red  
■ Weight : 650g



## K0

With lead wire 200mm

## K0-L14

With lead wire 1.8m

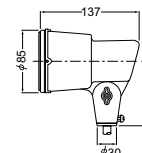
Adaptable accessories

GK4 guard



Lamps  
■ Incandescent lamps  
RF(S)90~180WH  
■ Self-ballasted Mercury lamp  
100WSB~160WSB / PAR38, R38

■ Finish : Baked melamine resin coating  
■ Colour : Red  
■ Weight : 390g



## HS0

With lead wire 200mm

## HS0-L14

With lead wire 1.8m

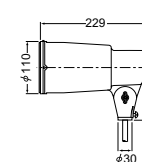
Adaptable accessories

GHS3 guard



Lamps  
■ Mercury lamp  
HRF200~400PD  
■ HR250~400N  
Self-ballasted Mercury lamp  
450WSB~750WSB / R57  
■ Sunlux  
NHR150~400  
■ Sunlux Ace  
NHR220~360LX

■ Finish : Baked melamine resin coating  
■ Colour : Red  
■ Weight : 850g



## HK0

With lead wire 200mm

## HK0-L14

With lead wire 1.8m

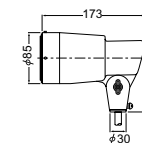
Adaptable accessories

GK4 guard



Lamps  
■ Mercury lamp  
HRF100PD, 125PD  
■ Self-ballasted Mercury lamp  
160WSB~300WSB / R40, R44  
■ Sunlux Ace lamp  
NHR75~110LX

■ Finish : Baked melamine resin coating  
■ Colour : Red  
■ Weight : 570g



# EYE Lampholder

## IK0

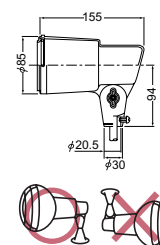
With 200m lead wire

Adaptable accessories  
GIK1 guard



Lamps  
■ Incandescent lamps  
IR125~375W

■ Finish : Baked melamine resin coating  
■ Colour : Red  
■ With lead wire : 200mm  
■ Weight : 530g



## SS45452 SS27452

With 5m lead wire,  
waterproof plug

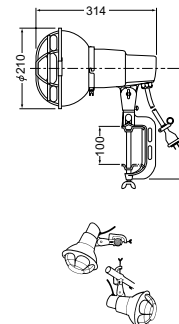
## SS45402 SS27402 SS00402

With 10m lead wire,  
waterproof plug



Lamps  
■ Incandescent lamps  
RF(S)270~450WH

■ With guard, adaptor,  
waterproof plug and lamp  
■ Colour : Orange



## SSB50452

With 5m lead wire,  
waterproof plug

## SSB50402

With 10m lead wire,  
waterproof plug

## SSB00452

With 5m lead wire

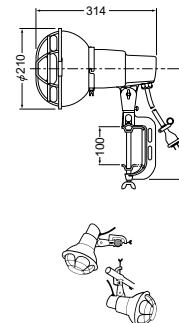
## SSB00402

With 10m lead wire



Lamps  
■ Self-ballasted Mercury lamp  
500W SB/R57

■ With guard, adaptor,  
■ Colour : Orange



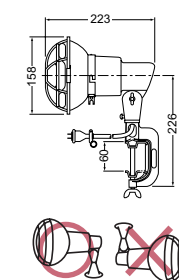
## K18351

With 5m lead wire,  
waterproof plug



Lamps  
■ Incandescent lamps  
RF110V180WH

■ With guard, adaptor, waterproof plug  
■ Colour : Red



# EYE Lampholder

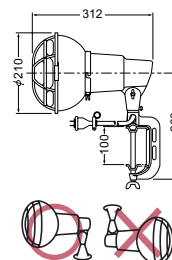
EYE lamps / HID lamps (135W~500W)

## S45451 S27451



Lamps  
 ■ Incandescent lamps  
 RF110V270WH  
 RF110V450WH

- Waterproof plug
- With lead wire 5m
- Colour : Red
- Adaptable accessories :  
S guard, F4 adaptor
- Holder : Aluminium die cast

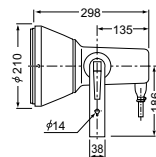


## HSW1



Lamps  
 ■ Mercury lamps  
 HRF700~1000PD  
 ■ Self-ballasted Mercury lamp  
 SB1000W~1250W / R88  
 ■ Sunlux Ace lamps  
 NHR660~940LX

- Body : Aluminium die-cast
- Arm : Iron steel
- Colour : Grey
- Adaptable accessories :  
GHW4 guard, CNHA201, APT141
- With lead wire : 290mm
- Weight : 2.5 kg

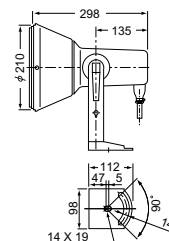


## HSW



Lamps  
 ■ Mercury lamps  
 HRF700~1000PD  
 ■ Self-ballasted Mercury lamp  
 SB1000W~1250W / R88

- Body : Aluminium die-cast
- Colour : Grey
- Adaptable accessories :  
GHW4 guard
- With lead wire 290mm
- Weight : 3 kg

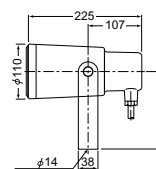


## HSB1



Lamps  
 ■ Self-ballasted Mercury lamp  
 SB750W / R60

- Body : Aluminium die-cast
- Arm : Iron steel
- Colour : Grey
- Adaptable accessories :  
GHB1 guard, CNHA201, APT141
- With lead wire : 230mm
- Weight : 1.7 kg

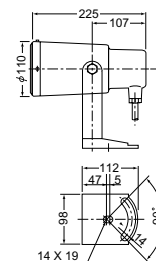


## HSB



Lamps  
 ■ Self-ballasted Mercury lamp  
 SB750W / R60

- Body : Aluminium die-cast
- Arm : Iron steel
- Colour : Red
- Adaptable accessories :  
GHB1 guard
- With lead wire : 230mm
- Weight : 2.4 kg

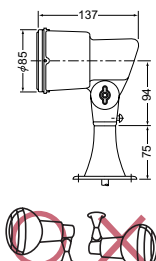


## K155/CH K155/IV



Lamps  
 ■ Incandescent lamps  
 RF110V135WH

- Colour : Red  
For K155 / CH - Brown  
For K155 / IV - Ivory



# EYE Lampholder, hand lamp

## ALT451

With 45cm arm

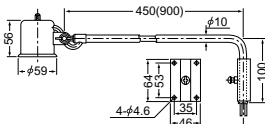
## ALT901

With 90cm arm



- Lamps
- Infrared incandescent lamps  
RF100(110)V60~270W

- Body : Iron steel
- Arm : Iron pipe
- Colour : Black (Nickel plated)
- With lead wire : 170mm

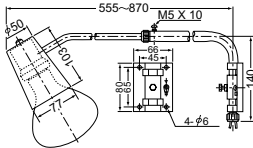


## ALK945



- Lamps
- Incandescent lamps  
RS90~135WH

- Arm length : 555~870mm
- Colour : Green
- Weight : 1.0 kg
- With lead wire : 150mm



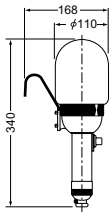
Hand lamp

## HL101S

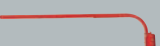


- Lamps
- Incandescent lamps  
LW100V57W

- Rated primary voltage : 100V
- With cabtire cable
- Globe : Polycarbonate
- With switch
- Weight : 450g



# Accessories of EYE lampholder

| Accessories                                                                                                                                                                                                | Lamps  | Incandescent lamps<br>RF(S)90~180WH                                                                                                                      | Incandescent lamps<br>RF(S)270~450WH                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                            | Holder | <b>K0 G</b> with guard<br><b>K0</b>                                     | <b>S0 G</b> with guard<br><b>S0</b>                                     |
|                                                                                                                                                                                                            | Guard  | <b>GK4</b><br>Material : Iron steel<br>Colour : White<br>Weight : 175g  | <b>GS6</b><br>Material : Iron steel<br>Colour : White<br>Weight : 310g  |
|                                                                                                                                                                                                            |        |                                                                                                                                                          |                                                                                                                                                            |
| <b>F1</b> Weight : 55g<br>                                                                                                |        | <b>K 1G (with guard)</b><br><b>K 1</b>                                  | <b>S 1G (with guard)</b><br><b>S 1</b>                                  |
| <b>F2</b> Weight : 100g<br>                                                                                               |        | <b>K 2G (with guard)</b><br><b>K 2</b>                                  | <b>S 2G (with guard)</b><br><b>S 2</b>                                  |
| <b>F3</b> Colour : Red<br><b>F3/O</b> Colour : Orange<br><b>F3/W</b> Colour : White<br>Weight : 170g<br>                  |        | <b>K 3G (with guard)</b><br><b>K 3</b>                                  | <b>S 3G (with guard)</b><br><b>S 3</b>                                  |
| <b>F4</b> Colour : Red<br><b>F4/O</b> Colour : Orange<br><b>F4/W</b> Colour : White<br>Weight : 260g<br>                 |        | <b>K 4G (with guard)</b><br><b>K 4</b>                                 | <b>S 4G (with guard)</b><br><b>S 4</b>                                 |
| <b>F5</b> Colour : Red<br><b>F5/W</b> Colour : White<br>Weight : 55g<br><b>F5A</b> with side hole for the lead wire<br> |        | <b>K 5G (with guard)</b><br><b>K 5</b>                                | <b>S 5G (with guard)</b><br><b>S 5</b>                                |
| <b>F6</b> Colour : Red<br><b>F6/W</b> Colour : White<br>Weight : 100g<br>                                               |        | <b>K 6G (with guard)</b><br><b>K 6</b>                                | <b>S 6G (with guard)</b><br><b>S 6</b>                                |
| <b>F7</b> Colour : Red<br><b>F7/W</b> Colour : White<br>Weight : 60g<br><b>F7A</b> with side hole for the lead wire<br> |        | <b>K 7G (with guard)</b><br><b>K 7</b>                                | <b>S 7G (with guard)</b><br><b>S 7</b>                                |
| <b>F8</b> Colour : Red<br><b>F8/W</b> Colour : White<br>Weight : 260g<br>                                               |        | <b>K 8G (with guard)</b><br><b>K 8</b>                                | <b>S 8G (with guard)</b><br><b>S 8</b>                                |
| <b>F9</b><br>Weight : 950g<br>                                                                                          |        | <b>K 9G (with guard)</b><br><b>K 9</b>                                | <b>S 9G (with guard)</b><br><b>S 9</b>                                |
| <b>F10</b><br>Weight : 620g<br>                                                                                         |        | <b>K 10G (with guard)</b><br><b>K 10</b>                              | <b>S 10G (with guard)</b><br><b>S 10</b>                              |
| <b>F11</b><br>Weight : 500g<br>                                                                                         |        | <b>K 11G (with guard)</b><br><b>K 11</b>                              | <b>S 11G (with guard)</b><br><b>S 11</b>                              |
| <b>F13</b> Weight : 1.6kg<br><b>F13/W</b> Arm length : 97cm<br>Adaptable holder :<br>S0, K0, HS0, HK0 (-L14)<br>        |        | <b>K 13G (with guard)</b><br><b>K 13</b>                             | <b>S 13G (with guard)</b><br><b>S 13</b>                              |
| <b>F15</b> Weight : 960g<br><b>F15/W</b> Arm length : 80cm<br>Adaptable holder :<br>K0, HK0, IK0 (-L14)<br>             |        |                                                                                                                                                          |                                                                                                                                                            |
| <b>F14</b> Weight : 2.3 kg<br><b>F14/W</b> Arm length : 98~148cm<br>Adaptable holder :<br>S0, K0, HS0, HK0 (-L14)<br>   |        | <b>K 14G (with guard)</b><br><b>K 14</b>                             | <b>S 14G (with guard)</b><br><b>S 14</b>                              |

/W : White colour finished

# Accessories of EYE lampholder

|                                                                                                                                                             |                                                                                                                                                             |                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Incandescent lamps<br>IR125W, 250W, 375WRH                                                                                                                  | Mercury lamps<br>HRF100PD, HRF125PD                                                                                                                         | Mercury lamps<br>HRF250~400PD                                                                                                                                  |
| <b>IK0 G</b> with guard<br><b>IK0</b><br>                                  | <b>HK0 G</b> with guard<br><b>HK0</b><br>                                  | <b>HS0 G</b> with guard<br><b>HS0</b><br>                                   |
| <b>GK1</b><br>Material : Iron steel<br>Colour : White<br>Weight : 240g<br> | <b>GK4</b><br>Material : Iron steel<br>Colour : White<br>Weight : 175g<br> | <b>GHS3</b><br>Material : Iron steel<br>Colour : White<br>Weight : 380g<br> |
| IK 1G (with guard)<br>IK 1<br>                                             | HK 1G (with guard)<br>HK 1<br>                                             | HS 1G (with guard)<br>HS 1<br>                                              |
| IK 2G (with guard)<br>IK 2<br>                                             | HK 2G (with guard)<br>HK 2<br>                                             | HS 2G (with guard)<br>HS 2<br>                                              |
| IK 3G (with guard)<br>IK 3<br>                                             | HK 3G (with guard)<br>HK 3<br>                                             | HS 3G (with guard)<br>HS 3<br>                                              |
| IK 4G (with guard)<br>IK 4<br>                                             | HK 4G (with guard)<br>HK 4<br>                                             | HS 4G (with guard)<br>HS 4<br>                                              |
| IK 5G (with guard)<br>IK 5<br>                                           | HK 5G (with guard)<br>HK 5<br>                                           | HS 5G (with guard)<br>HS 5<br>                                            |
| IK 6G (with guard)<br>IK 6<br>                                           | HK 6G (with guard)<br>HK 6<br>                                           | HS 6G (with guard)<br>HS 6<br>                                            |
| IK 7G (with guard)<br>IK 7<br>                                           | HK 7G (with guard)<br>HK 7<br>                                           | HS 7G (with guard)<br>HS 7<br>                                            |
|                                                                          | HK 8G (with guard)<br>HK 8<br>                                           | HS 8G (with guard)<br>HS 8<br>                                            |
| IK 9G (with guard)<br>IK 9<br>                                           | HK 9G (with guard)<br>HK 9<br>                                           | HS 9G (with guard)<br>HS 9<br>                                            |
| IK 10G (with guard)<br>IK 10<br>                                         | HK 10G (with guard)<br>HK 10<br>                                         | HS 10G (with guard)<br>HS 10<br>                                          |
| IK 11G (with guard)<br>IK 11<br>                                         | HK 11G (with guard)<br>HK 11<br>                                         | HS 11G (with guard)<br>HS 11<br>                                          |
|                                                                          | HK 13G (with guard)<br>HK 13<br>                                         | HS 13G (with guard)<br>HS 13<br>                                          |
|                                                                          | HK 14G (with guard)<br>HK 14<br>                                         | HS 14G (with guard)<br>HS 14<br>                                          |

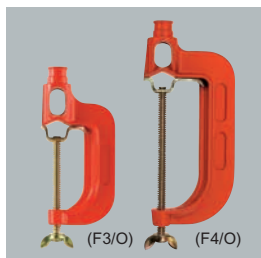
# Accessories of EYE lampholders

## Adaptor F3/O

■ Colour : Orange  
■ Weight : 170g

## Adaptor F4/O

■ Colour : Orange  
■ Weight : 260g



Installation example



## Guard GHB1

■ Adaptable holder :  
HSB1, HSB  
■ Materials : Iron steel  
■ Colour : White  
■ Weight : 500g



Installation example



## Guard GS6

■ Adaptable holder :  
SS0, SSA-0, S0  
■ Materials : Iron steel  
■ Colour : White  
■ Weight : 310g



Installation example



## Clamp CNHA201

■ Adaptable holder :  
HSW1, HSB1  
■ Materials : Iron steel



Installation example



## Adaptor JH2004

For 2B pole

## Adaptor JH3004

For 3B pole

■ Adaptable holder :  
SSA-0, S0, HK0, K0,  
IK0, HS0



Installation example



## Pole top fittings APT141

■ Adaptable holder :  
HSW1, HSB1  
■ Adaptable pol :  
φ42.7- φ48.6mm  
insert length - 85mm  
■ Body : Steel pipe  
■ Colour : Grey  
■ Weight : 550g



Installation example



## Adaptor JC2010

For 2B pole

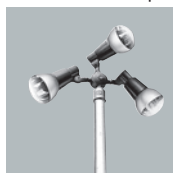
## Adaptor JC3010

For 3B pole

■ Adaptable holder :  
SSA-0, S0, HK0, K0,  
IK0, HS0



Installation example



## Stand LWT1

■ Adaptable holder :  
K type, S type,  
HK type, HS type  
■ Weight : 2.4 kg



Installation example



## Adaptor CB1004

■ Adaptable holder :  
S-1, HS-1, K-1, HK-1  
SSA-0, S0, HK0, K0, IK0,  
HS0



Installation example

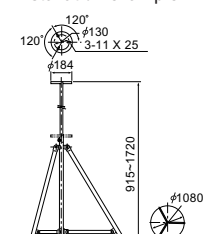


## Stand RLS-1

■ Adaptable height :  
915-1720mm



Installation example



## Guard GHW4

■ Adaptable holder :  
HSW1, HSW  
■ Materials :  
Galvanized iron steel  
■ Weight : 900g



Installation example



# Hybrid solar system

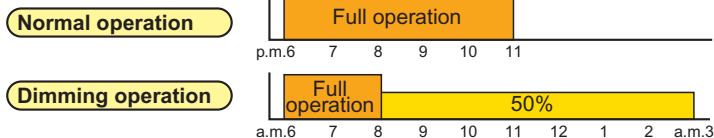
- **Used natural energy (wind force and sunlight) effectively**  
Generated power by wind force and sunlight is stored in a battery for night illumination. It is an eco-friendly lighting system.

- **The lamp operates for five rainy and calm days.**  
A fully stored battery can light the lamp for five cloudy or rainy calm days.

- **Two types of lamp can be selected for each purpose.**  
Select 35W High Pressure Sodium lamp for long life, high luminous efficacy and low insect attraction or 18W compact fluorescent lamp for long operation time.

- **With dimming function**  
100% lighting or 50% dimming operation can be selected.  
When 50% dimming operation is selected with 35W High Pressure Sodium lamp, the lamp operation time will be longer.

## ● Example



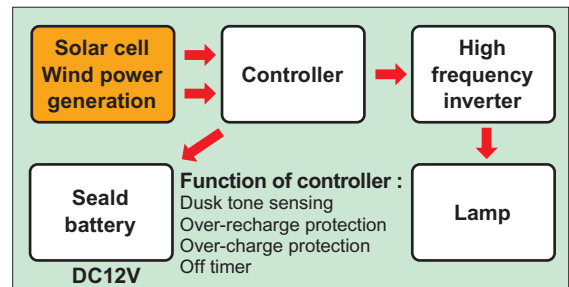
- **No wiring and underground cable work required.**  
No commercial power and wiring work required make the installation cost for this system low. Its running cost is low due to no commercial electricity expense incurred.

- **Safe in strong wind**  
Automatic variable upward rotor tilt function according to the wind velocity. (exceeding 15m/sec)  
Also the blade(propeller) speed is reduced by the controller when gust or gales blow reduce the wind resistance for ensure safety.  
Wind generator : With speed control function  
Controller : Over-current protection circuit, over-voltage protection circuit

- **Maintenance-free battery**  
The totally sealed battery is maintenance free for more than 7 years.

- **Emergency power**  
An emergency power (for AC power) is optionally available.  
Equipment for 12V DC power can be also selected.

## Basic system for Hybrid solar system



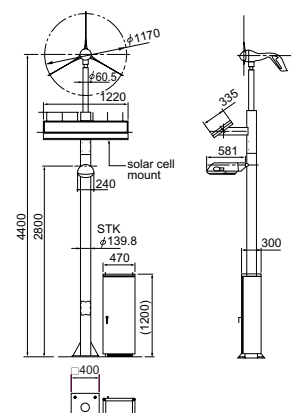
## For 35W High Pressure Sodium lamp system

**HTNH3511**  
**HTNH3541**  
**HTNH3512**  
**HTNH3542**



### Common specifications

- Fixture : Aluminium die cast, Acrylic globe  
Dark brown colour finish
- Wind power generator : Aluminium die cast
- Battery capacity : For 5 days operation
- HTNH3511
- Mount, Box : Steel plate
- Pole : Steel pipe with rust-proof coating and painting
- Operation time : 6 hrs. / day
- HTNH3541
- Mount, Box : Stainless steel
- Pole : Galvanized steel pipe with painting
- Operation time : 6 hrs. / day
- HTNH3512
- Mount, Box : Steel plate
- Pole : Steel pipe with rust-proof coating and painting
- Operation time : 7 hrs. / day
- HTNH3542
- Mount, Box : Stainless steel
- Pole : Galvanized steel pipe with painting
- Operation time : 7 hrs. / day



# Hybrid solar system

## Common specification

Fixture : Aluminium die cast, Acrylic globe, Dark brown color finish

Wind power generator : Aluminium die cast

Battery capacity : For 5~7 days operation (HPS lamp)  
For 12 days operation (Compact FL)

## HTF1812 HTF1842



### Lamps

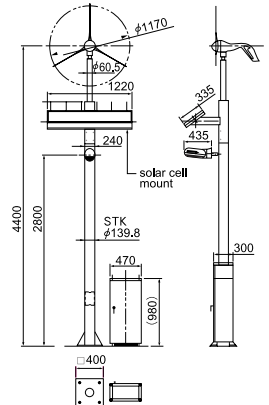
- Compact fluorescent lamp  
18W

### HTF1812

- Mount, box : Steel plate
- Pole : Steel pipe with rust-proof coating and painting
- Operation time : 12 hrs. / day at wind velocity 4m/sec

### HTF1842

- Mount, Box : Stainless steel
- Pole : Galvanized steel pipe with painting
- Operation time : 12 hrs. / day at wind velocity 4m/sec



## HTNH3511B2 without lamp

## HTNH3541B2 without lamp

## HTNH3512B2 without lamp

## HTNH3542B2 without lamp



### Lamps

- High pressure Sodium lamp  
35W

### HTNH3511B2

- Mount, box : Steel plate
- Pole : Steel pipe with rust-proof coating and painting
- Operation time : 6 hrs. / day at wind velocity 4m/sec

### HTNH3541B2

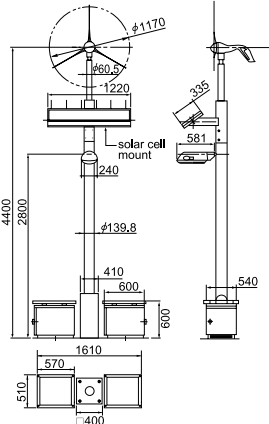
- Mount, Box : Stainless steel
- Pole : Galvanized steel pipe with painting
- Operation time : 6 hrs. / day at wind velocity 4m/sec

### HTNH3512B2

- Mount, box : Steel plate
- Pole : Steel pipe with rust-proof coating and painting
- Operation time : 7 hrs. / day at wind velocity 4m/sec

### HTNH3542B2

- Mount, Box : Stainless steel
- Pole : Galvanized steel pipe with painting
- Operation time : 7 hrs. / day at wind velocity 4m/sec



## HTF1812B2 HTF1842B2



### Lamps

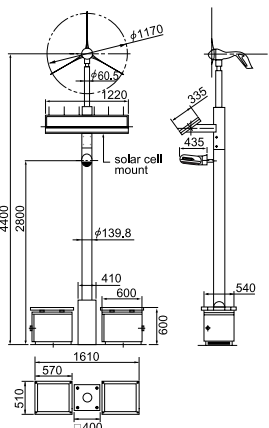
- Compact fluorescent lamp  
18W

### HTF1812B2

- Mount, box : Steel plate
- Pole : Steel pipe with rust-proof coating and painting
- Operation time : 12 hrs. / day at wind velocity 4m/sec

### HTF1842B2

- Mount, Box : Stainless steel
- Pole : Galvanized steel pipe with painting
- Operation time : 12 hrs. / day at wind velocity 4m/sec



# PAZU (without ballast)

Semi-cutoff type

## H7707 H7708

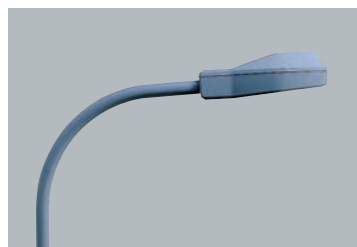
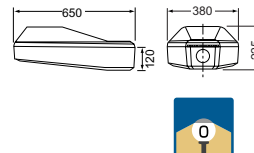
Straight pole type  
and arm pole type



Lamps

- H7707 : NHT360LX
- H7708 : MF250~400LS/U  
HF250~400PD

- Body : Aluminium die cast
- Glove : Tempered glass
- Reflector : Aluminium
- Adaptable pole :  
φ 60.5 X 120 mm
- Colour : Medium grey
- Weight : 9.7 kg



Adaptable for the arm type

Semi-cutoff type

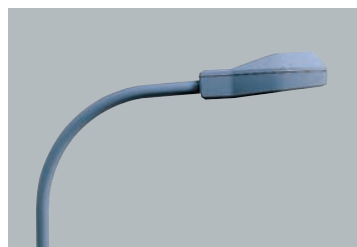
## H7706

Straight pole type  
and arm pole type



Lamps

- H7706 : NHT220LX



Adaptable for the arm type

Semi-cutoff type

## H7712 H7713

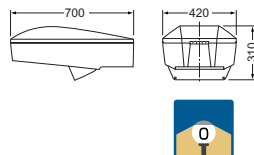
Straight pole type and  
arm pole type



Lamps

- H7712, 7713 :  
MT400LS/BH  
NHT360LX

- Body : Aluminium die cast
- Glove : Tempered glass
- Reflector : Aluminium
- Adaptable pole :  
φ 60.5 X 120 mm
- Weight : 15.5 kg
- Colour  
H7712 : Grey (Munsell N7)  
H7713 : Dark brown  
H7709 : Grey (Munsell N7)  
H7710 : Dark brown



Semi-cutoff type

## H7709 H7710

Straight pole type



Lamps

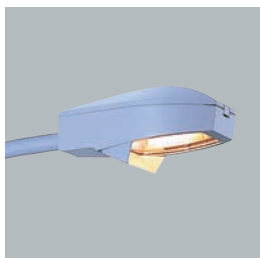
- H7709, 7710 :  
MT250/BH, NHT220LX



Semi-cutoff type

## H7112 H7113

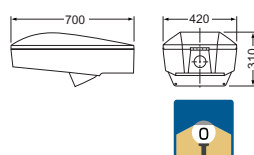
arm pole type



Lamps

- H7712, H7113 :  
MT400SX/HOR, NHT360LX

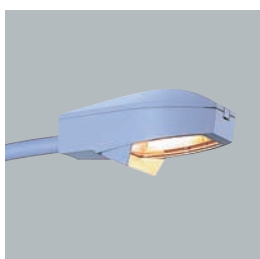
- Body : Aluminium die cast
- Glove : Tempered glass
- Reflector : Aluminium
- Adaptable pole :  
φ 60.5 X 120 mm
- Weight : 15.5 kg
- Colour  
H7112 : Grey (Munsell N7)  
H7113 : Dark brown  
H7109 : Grey (Munsell N7)  
H7110 : Dark brown



Semi-cutoff type

## H7109 H7110

arm pole type



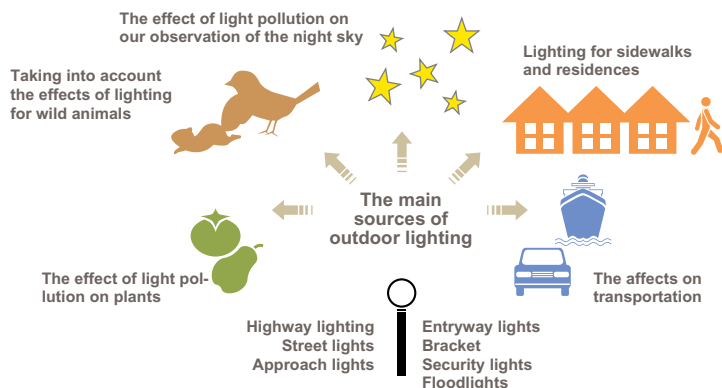
Lamps

- H7109, H7110:  
MT250/BH, NHT220LX



# MITIS

The key feature of the "mitis" lighting system is its ability to limit excessive lighting beyond the area intended to be illuminated and also to prevent glare. The resulting lighting conditions are therefore always easy on the eye. The system is also very effective for the illumination of plants or in situations where animals are involved. The "mitis" system takes "light pollution" into account, which means spilled light in areas other than those intended to be illuminated. Three kinds of light distribution are employed to minimize the spilled light. The luminaire designed so that any excess light is simply reflected back. It is possible to create ground-level lighting to suite every installation environment and application objective.



The term "light pollution" is used to define light from lighting equipment that strays beyond the area that it is intended to illuminate.

The sources of this phenomenon are diverse, ranging from streetlights to floodlights.

This can have various adverse affects, including a detrimental effect on the normal life cycle of flora and fauna. Japan's Environmental Agency has set forth guidelines outlining measures to deal with, and defining what constitutes, light pollution.

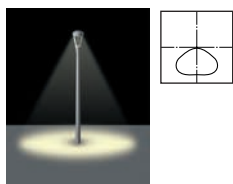
The principal effects of light pollution are outlined in the table below.

## Anti-light-pollution guideline

| Lighting environment model                                                  | Lighting environment 'Safety'                                                | Lighting environment 'Relief'                                                               | Lighting environment 'Ease'                                                                                                               | Lighting environment 'Joy'                                                                                                                |
|-----------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Objective image</b>                                                      | Natural park, field, farmland                                                | Country area                                                                                | Local city, metropolitan area, residential district                                                                                       | City center, downtown, shopping area                                                                                                      |
| <b>Area designated by CIE</b><br>(International Commission on Illumination) | Area that includes dark spots                                                | Area where periphery is dark                                                                | Area where periphery has medium illuminance                                                                                               | Area where periphery is bright                                                                                                            |
| <b>Area</b>                                                                 | Park<br>Farmland<br>Roadway                                                  | Residential district<br>Parks and other public square<br>Roadway<br>Periphery of farmland   | Business district<br>Parks and other public square<br>Residential district<br>Residential district and business district mixed<br>Roadway | Business district<br>Parks and other public square<br>Residential district<br>Residential district and business district mixed<br>Roadway |
| <b>Space image</b>                                                          | Effectively controls the light downward keeping harmony with the environment | Controls the light downward to minimize spilled light and glare, and creates a light space. | Appropriately lights downward and periphery to create an extended easy space                                                              | Appropriately lights downward and periphery to create a lively space                                                                      |
| <b>MITIS</b>                                                                | <b>MITIS D</b>                                                               | <b>MITIS C</b>                                                                              | <b>MITIS R</b>                                                                                                                            | <b>MITIS P</b>                                                                                                                            |
| Light form                                                                  | 0 direct downward light                                                      | 5 direct downward light diffuse light                                                       | 15 direct downward light                                                                                                                  | 15 direct downward light diffuse light                                                                                                    |
| Light distribution                                                          | Omnidirectional                                                              |                                                                                             |                                                                                                                                           |                                                                                                                                           |
|                                                                             | Wide                                                                         |                                                                                             |                                                                                                                                           |                                                                                                                                           |
|                                                                             | Front                                                                        |                                                                                             |                                                                                                                                           |                                                                                                                                           |

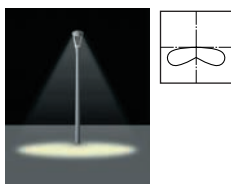


In 1999, "mitis" was authorized as one of the best landscape products by the Urban-Landscape Material Association.



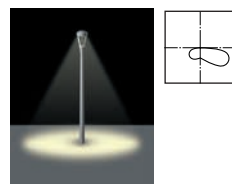
### Omnidirectional type

Effectively lights wide areas of public space including an entrance of building and patio



### Wide type

Lights along a footpath including an approach

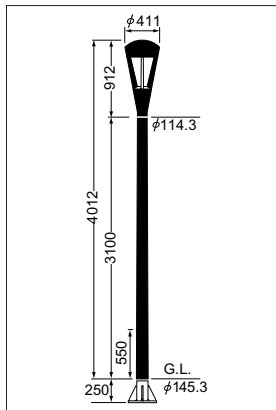


### Front type

Lights a parking lot or outside of an urban facility where the light should not leak backward.

# MITIS D

Upward light spillage is effectively minimized and downward light spillage is controlled by the reflector. The highly functional and energy-saving model is especially effective for the facilities near residential districts where spilled light should be minimized. Depending on the area requiring illumination, three types of light distribution patterns are possible.



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## Distribution Pattern

### Omnidirectional

#### H5821

(White, ≡Munsell 5Y8.8/1)

#### H5822

(Black, ≡Munsell N2)

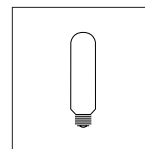
##### Lamps

Color Arc & SDX : 70~150W

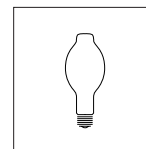
Mercury lamps : 80, 100W

##### Finish

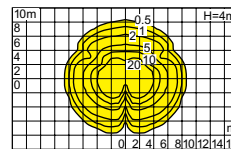
- Globe : Clear, Heat tempered glass
- Body : Aluminium die cast
- Canopy : Stainless steel
- Windage : 0.17m<sup>2</sup>
- Spigot : φ 89.1 x 130mm
- Weight : 9.7kg



Color Arc & SDX  
70~150W



Mercury lamps  
80, 100W



NHT100SDX

### Wide

#### H5823

(White, ≡Munsell 5Y8.8/1)

#### H5824

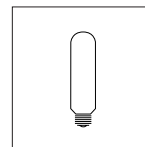
(Black, ≡Munsell N2)

##### Lamps

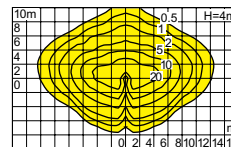
Color Arc & SDX : 70~150W

##### Finish

- Globe : Clear, Heat tempered glass
- Body : Aluminium die cast
- Canopy : Stainless steel
- Windage : 0.17m<sup>2</sup>
- Spigot : φ 89.1 x 130mm
- Weight : 9.7kg



Color Arc & SDX  
70~150W



NHT100SDX

### Front

#### H5825

(White, ≡Munsell 5Y8.8/1)

#### H5826

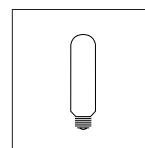
(Black, ≡Munsell N2)

##### Lamps

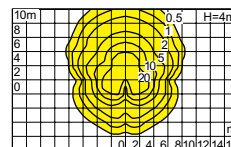
Color Arc & SDX : 70~150W

##### Finish

- Globe : Clear, Heat tempered glass
- Body : Aluminium die cast
- Canopy : Stainless steel
- Windage : 0.17m<sup>2</sup>
- Spigot : φ 89.1 x 130mm
- Weight : 9.7kg



Color Arc & SDX  
70~150W

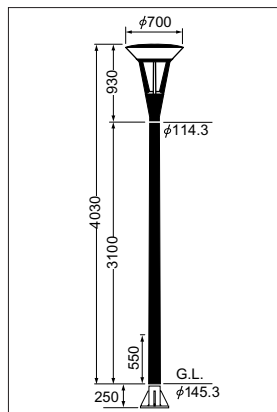


NHT100SDX

# MITIS C

Upward light spillage is effectively minimized and downward light spillage is controlled by the reflector. This pole top features a milky white globe thereby softly illuminating the night scene with high efficacy light.

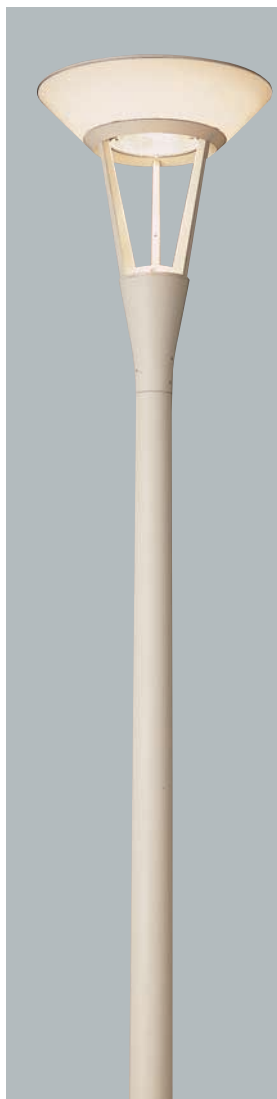
Depending on the area requiring illumination, three types of light distribution patterns are possible. The pole light top has a unique conical form and is lightweight.



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Distribution Pattern

## Omnidirectional

### H5827

(White, ≡ Munsell 5Y8.8/1)

### H5828

(Black, ≡ Munsell N2)

#### Lamps

Color Arc & SDX : 70~150W

Mercury lamps : 80, 100W

#### Finish

■ Globe : Clear, Heat tempered glass

■ Milk-white - Acrylic resin

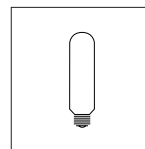
■ Body : Aluminium die cast

■ Canopy : Stainless steel

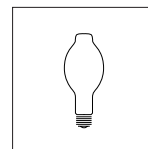
■ Windage : 0.21m<sup>2</sup>

■ Spigot : φ89.1 x 130mm

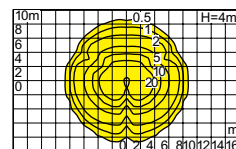
■ Weight : 12.2kg



Color Arc & SDX  
70~150W



Mercury lamps  
80~100W



NHT100SDX

## Wide

### H5829

(White, ≡ Munsell 5Y8.8/1)

### H5830

(Black, ≡ Munsell N2)

#### Lamps

Color Arc & SDX : 70~150W

#### Finish

■ Globe : Clear, Heat tempered glass

■ Milk-white - Acrylic resin

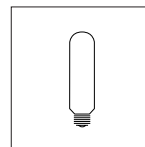
■ Body : Aluminium die cast

■ Canopy : Stainless steel

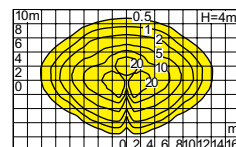
■ Windage : 0.21m<sup>2</sup>

■ Spigot : φ89.1 x 130mm

■ Weight : 12.2kg



Color Arc & SDX  
70~150W



NHT100SDX

## Front

### H5831

(White, ≡ Munsell Y8.8/1)

### H5832

(Black, ≡ Munsell N2)

#### Lamps

Color Arc & SDX : 70~150W

#### Finish

■ Globe : Clear, Heat tempered glass

■ Milk-white - Acrylic resin

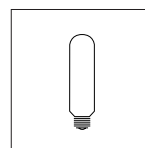
■ Body : Aluminium die cast

■ Canopy : Stainless steel

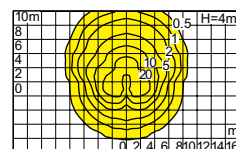
■ Windage : 0.21m<sup>2</sup>

■ Spigot : φ89.1 x 130mm

■ Weight : 12.2kg



Color Arc & SDX  
70~150W



NHT100SDX

# MITIS R

Softly reflected light from the disk headpiece provides pleasant illumination which is not obtrusive upon human eyes.

The light is reflected not directly but rather off the disk headpiece, the soft light does not appear bright even though the height of the pole top light is close to one's eyes.



Distribution Pattern

**Omnidirectional**

## H5833

(White, ÷ Munsell 5Y8.8/1)

## H5834

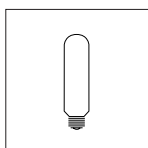
(Black, ÷ Munsell N2)

### Lamps

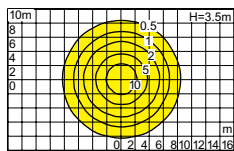
Color Arc & SDX : 70~100W

### Finish

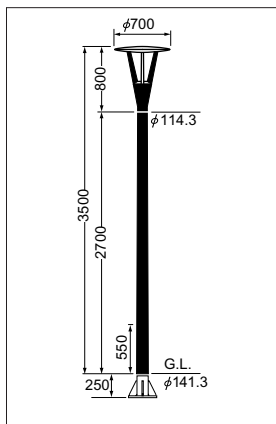
- Globe : Clear Heat tempered glass
- Body : Aluminium die cast
- Canopy : Stainless steel
- Windage : 0.15m<sup>2</sup>
- Spigot : φ89.1 x 130mm
- Weight : 10.2kg



Color Arc & SDX  
70~100W



NHT70SDX



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# MITIS P

This pole top light controls glare by soft illuminating areas with vertical light.

The simple cylindrical shape acts like a signal in the surrounding environment and the top pole light's sharp form creates a rhythm between its shape and its illumination characteristics.



Distribution Pattern

**Omnidirectional**

## H5843

(White, ÷ Munsell 5Y8.8/1)

## H5844

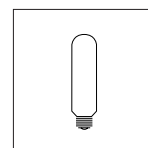
(Black, ÷ Munsell N2)

### Lamps

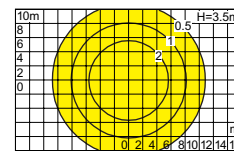
Color Arc & SDX : 70W

### Finish

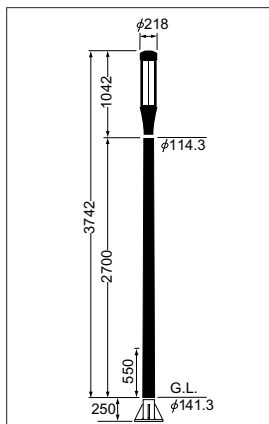
- Globe : Prism acrylic cover
- Body : Aluminium die cast
- Windage : 0.21m<sup>2</sup>
- Spigot : φ89.1 x 130mm
- Weight : 5.6kg



Color Arc & SDX  
70W



NHT70SDX



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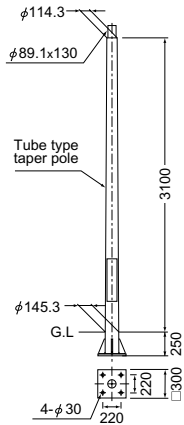
# Adaptable pole for mitis

## Taper pole : 3.1m

Plug-in type (with base plate)

**PN3101BG/A30/W**  
(White)

**PN3101BG/A30/BK**  
(Black)

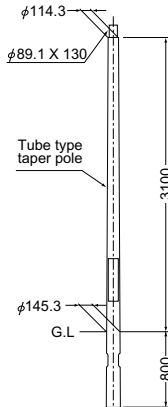


## 3.1m

Plug-in type

**PN3101G/A30/W**  
(White)

**PN3101G/A30/BK**  
(Black)

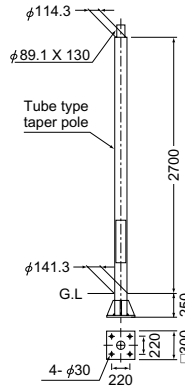


## 2.7m

Plug-in type (with base plate)

**PN2701BG/A30/W**  
(White)

**PN2701BG/A30/BK**  
(Black)

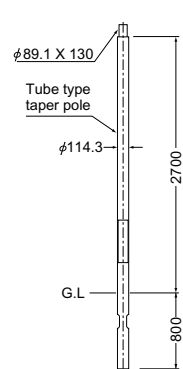


## 2.7m

Plug-in type

**PN2701G/A30/W**  
(White)

**PN2701G/A30/BK**  
(Black)

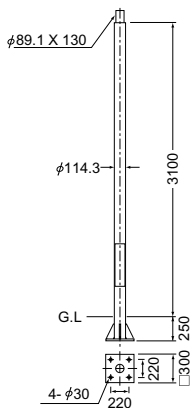


## Strate pole : 3.1m

Plug-in type (with base plate)

**PM40-3101BG/A30/W**  
(White)

**PM40-3101BG/A30/BK**  
(Black)

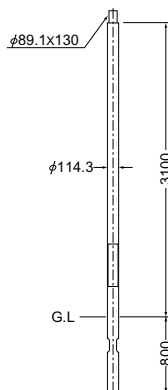


## 3.1m

Plug-in type

**PM40-3101G/A30/W**  
(White)

**PM40-3101G/A30/BK**  
(Black)

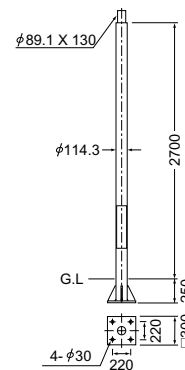


## 2.7m

Plug-in type (with base plate)

**PM40-2701BG/A30/W**  
(White)

**PM40-2701BG/A30/BK**  
(Black)

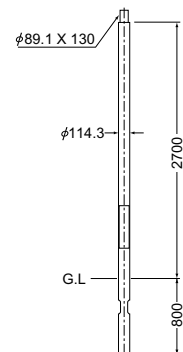


## 2.7m

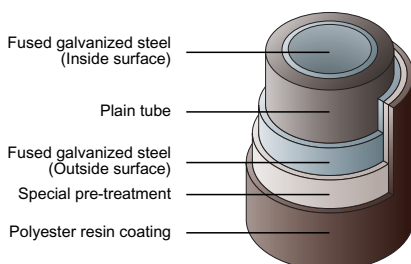
Plug-in type

**PM40-2701G/A30/W**  
(White)

**PM40-2701G/A30/BK**  
(Black)



- Materials : Steel tube
- Finish : Fused galvanized steel with polyester resin coating
- Colour : Black, ≒ Munsell N2  
White, ≒ Munsell 5Y8.8/1



The galvanized steel tapered pole is coated with the polyester resin powder to have a higher coating performance and corrosion resistance. Its beautiful appearance is kept for a long time.

### Beautiful finish

The highly automated static powder spraying system provides consistent coating performance and beautiful finish. The base plate and the rib plate of the recessed base plate type are buried in the ground not to impair scenery and for safety of walkers around the fixture.

### Superior weather proof

The plating and the coating film dually protect the pole from corrosion. The plating layer is tightly adhered to the bare pole so that enough corrosion resistance is maintained for underground parts. Its life is longer than that of other poles with plating only.

### Endures the wind velocity of 60 m/sec

The pole in combination with mitis has enough strength to endure the wind velocity of 60 m/sec.

### Simple construction

The required construction period is short because no painting work is necessary. For the underground type, two cable holes facilitate the installation of the feed wire.

### Eco-friendly

The high endurance and long life save energy and the coating without using the solvent prevents pollution.

\*Please note that the pole surface may not be smooth due to the dripping of plating for corrosion resistance.

# Daylight switch

## Daylight switch

### Bimetal relay



| Type \ Item | Voltage (V) | Frequency (Hz) | Load current (A) | Power consumption (W) |                | Operating illuminance (lx) |               | Weight (g) |
|-------------|-------------|----------------|------------------|-----------------------|----------------|----------------------------|---------------|------------|
|             |             |                |                  | On at night           | Off during day | On                         | Off           |            |
| PBL1103     | 110         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2203     | 220         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2303     | 230         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2403     | 240         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2206     | 220         | 50/60          | 6                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2306     | 230         | 50/60          | 6                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2406     | 240         | 50/60          | 6                | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2210     | 220         | 50/60          | 10               | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2310     | 230         | 50/60          | 10               | 0                     | 2              | 10~80                      | Less than 400 | 90         |
| PBL2410     | 240         | 50/60          | 10               | 0                     | 2              | 10~80                      | Less than 400 | 90         |

### Electromagnetic relay



| Type \ Item | Voltage (V) | Frequency (Hz) | Load current (A) | Power consumption (W) |                | Operating illuminance (lx) |               | Weight (g) |
|-------------|-------------|----------------|------------------|-----------------------|----------------|----------------------------|---------------|------------|
|             |             |                |                  | On at night           | Off during day | On                         | Off           |            |
| PBL2210     | 220         | 50/60          | 10               | 1                     | 2              | 10~80                      | Less than 400 | 250        |
| PBL2310     | 230         | 50/60          | 10               | 1                     | 2              | 10~80                      | Less than 400 | 250        |
| PBL2410     | 240         | 50/60          | 10               | 1                     | 2              | 10~80                      | Less than 400 | 250        |
| PBL2215     | 220         | 50/60          | 15               | 1                     | 2              | 10~80                      | Less than 400 | 300        |
| PBL2315     | 230         | 50/60          | 15               | 1                     | 2              | 10~80                      | Less than 400 | 300        |
| PBL2415     | 240         | 50/60          | 15               | 1                     | 2              | 10~80                      | Less than 400 | 300        |
| PBL2220     | 220         | 50/60          | 20               | 1                     | 2              | 10~80                      | Less than 400 | 300        |
| PBL2320     | 230         | 50/60          | 20               | 1                     | 2              | 10~80                      | Less than 400 | 300        |
| PBL2420     | 240         | 50/60          | 20               | 1                     | 2              | 10~80                      | Less than 400 | 300        |

## Daylight switch, Plug-in type

### Bimetal relay



| Type \ Item   | Voltage (V) | Frequency (Hz) | Load current (A) | Power consumption (W) |                | Operating illuminance (lx) |               | Weight (g) |
|---------------|-------------|----------------|------------------|-----------------------|----------------|----------------------------|---------------|------------|
|               |             |                |                  | On at night           | Off during day | On                         | Off           |            |
| PBM2203C or B | 220         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2303C or B | 230         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2403C or B | 240         | 50/60          | 3                | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2206C or B | 220         | 50/60          | 6                | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2306C or B | 230         | 50/60          | 6                | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2406C or B | 240         | 50/60          | 6                | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2210C or B | 220         | 50/60          | 10               | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2310C or B | 230         | 50/60          | 10               | 0                     | 2              | 10~80                      | Less than 400 | 270        |
| PBM2410C or B | 240         | 50/60          | 10               | 0                     | 2              | 10~80                      | Less than 400 | 270        |

### Electromagnetic relay



| Type \ Item     | Voltage (V) | Frequency (Hz) | Load current (A) | Power consumption (W) |                | Operating illuminance (lx) |                         | Weight (g) |
|-----------------|-------------|----------------|------------------|-----------------------|----------------|----------------------------|-------------------------|------------|
|                 |             |                |                  | On at night           | Off during day | On                         | Off                     |            |
| PHM2210-2C or B | 220         | 50/60          | 10               | 1                     | 2              | 50~100                     | Less than turn on level | 350        |
| PHM2310-2C or B | 230         | 50/60          | 10               | 1                     | 2              | 50~100                     |                         | 350        |
| PHM2410-2C or B | 240         | 50/60          | 10               | 1                     | 2              | 50~100                     |                         | 350        |



CM15

Base for C type of PBM and PHM



BCM15

Base for B type PBM or PHM

# Daylight switch

Automatic Turn-On, Automatic Turn-Off.

The EYE Photoelectric Daylight Switch features a highly sensitive Cds (Cadmium Sulphide) bimetal relay for PBL & PBM models and an electric circuit / electromagnetic type relay for PR & PHM models that efficiently reacts to changes in illumination levels.

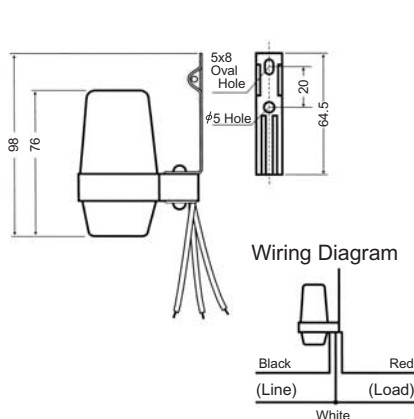
EYE Daylight Switches automatically switch off luminaires at sunrise and automatically switch on luminaires at sunset.

Additionally, should the level of illumination fall below the desired value during daylight hours because of bad weather, the EYE Daylight Switch will automatically react to the conditions to switch on the luminaires.

## Dimension & wiring Diagram

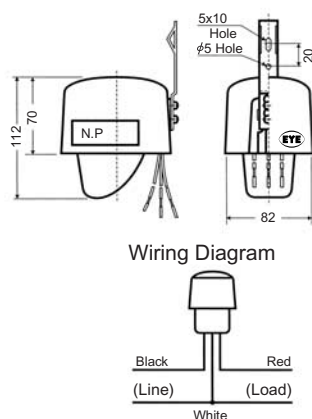
### 1.PBL Type

3A, 6A, 10A (Bimetal relay)



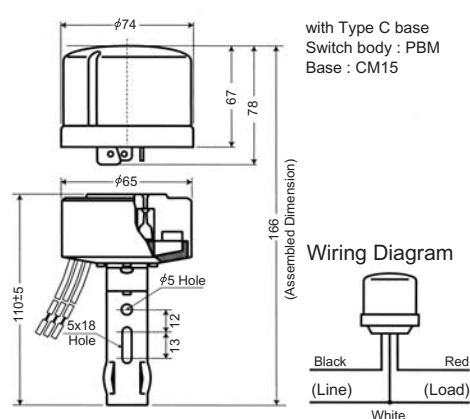
### 2.PR Type

10A, 15A, 20A (Electromagnetic relay)



### 3.PBM Type

3A, 6A, 10A (Bimetal relay)

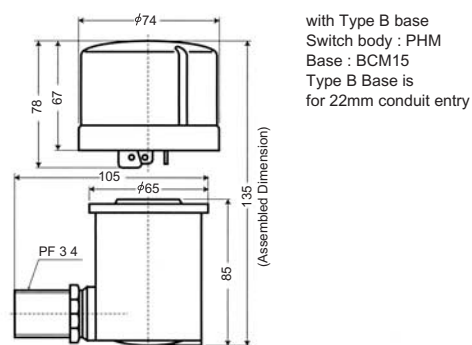


## Description of Symbol

| P                                | B | M | 22 | 03 | -2 | B                                                  |
|----------------------------------|---|---|----|----|----|----------------------------------------------------|
| Type of base (Plug-in type only) |   |   |    |    |    |                                                    |
| C                                |   |   |    |    |    | Pole Mount Type                                    |
| B                                |   |   |    |    |    | Pipe Entry                                         |
| Operating illuminance (Turn On)  |   |   |    |    |    |                                                    |
| No mark                          |   |   |    |    |    | Type 1(10~80 lx)                                   |
| 2                                |   |   |    |    |    | Type 2(50~100 lx)                                  |
| 3                                |   |   |    |    |    | Type 3(5~20 lx)                                    |
| Rated load current               |   |   |    |    |    |                                                    |
| 03                               |   |   |    |    |    | 3A                                                 |
| 06                               |   |   |    |    |    | 6A                                                 |
| 10                               |   |   |    |    |    | 10A                                                |
| 15                               |   |   |    |    |    | 15A                                                |
| 20                               |   |   |    |    |    | 20A                                                |
| Rated voltage                    |   |   |    |    |    |                                                    |
| 11                               |   |   |    |    |    | 110V                                               |
| 22                               |   |   |    |    |    | 220V                                               |
| 23                               |   |   |    |    |    | 230V                                               |
| 24                               |   |   |    |    |    | 240V                                               |
| Structure                        |   |   |    |    |    |                                                    |
| No mark, L                       |   |   |    |    |    | One piece type                                     |
| M                                |   |   |    |    |    | Plug-in type with photo sensor dia. less than 70mm |
| Operating Mode                   |   |   |    |    |    |                                                    |
| B                                |   |   |    |    |    | Bimetal relay                                      |
| R, H                             |   |   |    |    |    | Electromagnetic relay                              |
| Daylight Switch                  |   |   |    |    |    |                                                    |

### 4.PHM Type

10A (Electromagnetic relay)



# Gas stations lighting

## Quick-Mente fixture

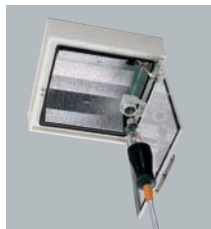
No more work at high place or a rolling tower.

Quick Maintenance : Simple lamp replacement by only one gas station staff.

### Lamp replacement steps :



Press the unlock bar to open the front cover.



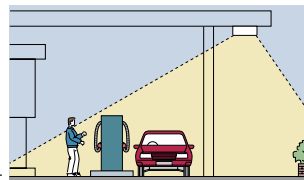
Remove the lamp with the lamp exchanger, then replace a new one.



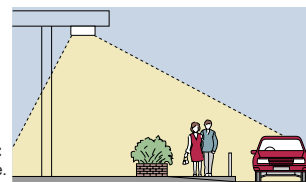
Push up the frame with the exchanger to set the cover at original position.

### Asymmetric light distribution :

**Example 1 :**  
No light spilled outside.



**Example 2 :**  
Light spilled outside.



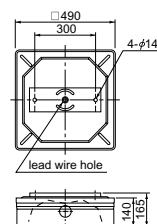
## HSTD402

Without ballast  
Symmetrical light distribution



Lamps  
■ MT400SX/HOR  
■ MT250, 400DL  
■ NHT220, 360LX

■ Body : Aluminium die cast  
■ Reflector : Aluminium in hammer tone finish  
■ Cover : Heat tempered glass  
■ Finish : Semi-white  
■ Weight : 9.5kg



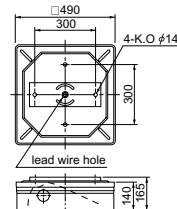
## HSTD401

Without ballast  
Asymmetrical light distribution



Lamps  
■ MT400SX/HOR  
■ MT250, 400DL  
■ NHT220, 360LX

■ Body : Aluminium die cast  
■ Reflector : Aluminium in hammer tone finish  
■ Cover : Heat tempered glass  
■ Finish : Semi-white  
■ Weight : 9.5kg



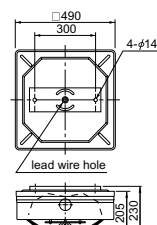
## HSTD404

Without ballast  
Symmetrical light distribution



Lamps  
■ MT400SX/HOR  
■ MT250, 400DL  
■ NHT220, 360LX

■ Body : Aluminium die cast  
■ Reflector : Aluminium in hammer tone finish  
■ Cover : Hard glass  
■ Finish : Semi-white  
■ Weight : 11.8kg



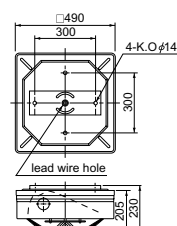
## HSTD403

Without ballast  
Asymmetrical light distribution



Lamps  
■ MT400SX/HOR  
■ MT250, 400DL  
■ NHT220, 360LX

■ Body : Aluminium die cast  
■ Reflector : Aluminium in hammer tone finish  
■ Cover : Hard glass  
■ Finish : Semi-white  
■ Weight : 11.8kg



Surface type

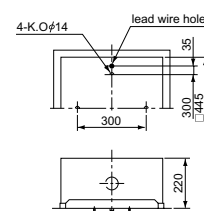
## HSTE402

Without ballast  
Symmetrical light distribution



Lamps  
■ MT400SX/HOR  
■ MT250, 400DL  
■ NHT220, 360LX

■ Body : Galvanized steel  
■ Reflector : Aluminium in hammer tone finish  
■ Cover : Heat tempered glass  
■ Finish : White  
■ Weight : 10.5g



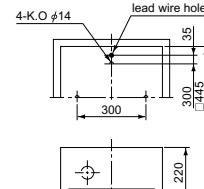
## HSTE401

Without ballast  
Asymmetrical light distribution



Lamps  
■ MT400SX/HOR  
■ MT250, 400DL  
■ NHT220, 360LX

■ Body : Galvanized steel  
■ Reflector : Aluminium in hammer tone finish  
■ Cover : Heat tempered glass  
■ Finish : White  
■ Weight : 10.5g



**Caution :** Do not use the luminaire where it is exposed to the rain.

# Inground uplight luminaires for HID lamps Built-in ballast type

## For 200W type Mercury lamps

**HCW201B-2TA**  
(100V50Hz)

**HCW201B-2TB**  
(100V60Hz)

**HCW201B-2CA**  
(200V50Hz)

**HCW201B-2CB**  
(200V60Hz)

### Upper light distribution

Lamps : HF200PD

Finish

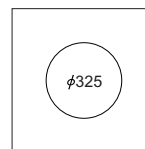
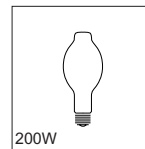
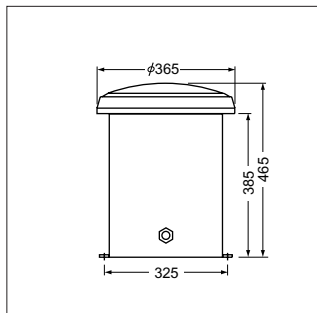
■ Body : Stainless steel, Black

■ Front glass : Clear, Heat tempered glass

■ Reflector : Aluminum mirror finish, Tilt~17°

■ Built-in ballast : HCW201B-2TA(B) : 100V TC ballast  
HCW201B-2CA(B) : 200V reactor

■ Weight : 12.2kg



|      | 5    | 135  | 13.76 |
|------|------|------|-------|
|      | 4    | 212  | 11.01 |
|      | 3    | 376  | 8.26  |
|      | 2    | 846  | 5.51  |
|      | 1    | 3386 | 2.75  |
| h(m) | E lx | D(m) |       |

HF200PD  
1/10 beam angle

## For 100W type Mercury lamps

**HCW101B-1TA**  
(100V50Hz)

**HCW101B-1TB**  
(100V60Hz)

**HCW101B-1CA**  
(200V50Hz)

**HCW101B-1CB**  
(200V60Hz)

### Upper light distribution

Lamps : HF100PD

Finish

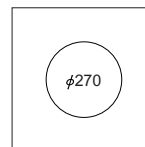
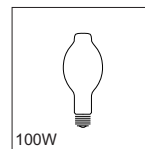
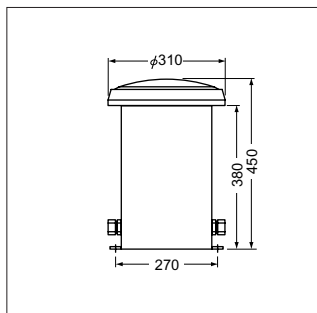
■ Body : Stainless steel, Black

■ Front glass : Clear, Heat tempered glass

■ Reflector : Aluminum mirror finish

■ Built-in ballast : HCW101B-1TA(B) : 100V TC ballast  
HCW101B-1CA(B) : 200V reactor

■ Weight : 7.6kg



|      | 5    | 74   | 10.72 |
|------|------|------|-------|
|      | 4    | 116  | 8.58  |
|      | 3    | 206  | 6.43  |
|      | 2    | 464  | 4.29  |
|      | 1    | 1856 | 2.14  |
| h(m) | E lx | D(m) |       |

HF100PD  
1/10 beam angle

**HCW131B-1TA**  
(100V50Hz)

**HCW131B-1TB**  
(100V60Hz)

**HCW131B-1CA**  
(200V50Hz)

**HCW131B-1CB**  
(200V60Hz)

### Wall washer Upper light distribution

Lamps : HF100PD

Finish

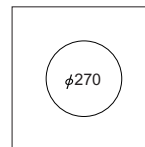
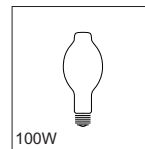
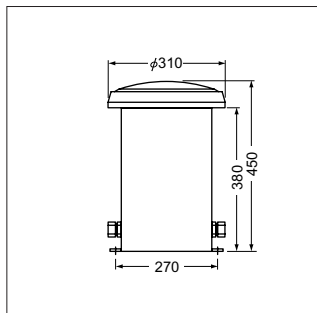
■ Body : Stainless steel, Black

■ Front glass : Clear, Heat tempered glass

■ Reflector : Aluminum mirror finish

■ Built-in ballast : HCW131B-1TA(B) : 100V TC ballast  
HCW131B-1CA(B) : 200V reactor

■ Weight : 7.6kg



|      | 5    | 73   | 10.72 |
|------|------|------|-------|
|      | 4    | 113  | 8.58  |
|      | 3    | 202  | 6.43  |
|      | 2    | 454  | 4.29  |
|      | 1    | 1814 | 2.14  |
| h(m) | E lx | D(m) |       |

HF100PD  
1/10 beam angle

# Inground uplight luminaires for HID lamps Built-in ballast type

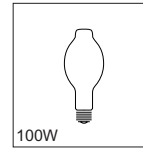
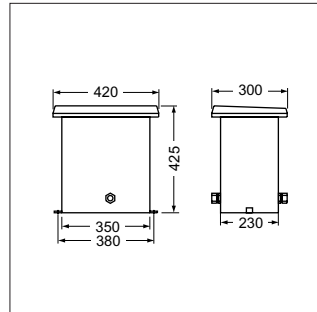
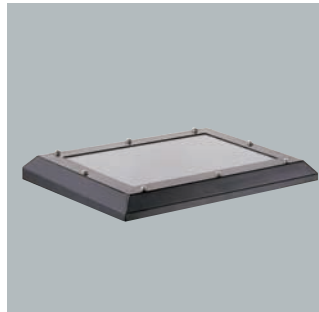
**For 100W type Mercury lamps**

**HCW181B-1TA**  
(100V50Hz)

**HCW181B-1TB**  
(100V60Hz)

**HCW181B-1CA**  
(200V50Hz)

**HCW181B-1CB**  
(200V60Hz)



|      |       |       |
|------|-------|-------|
| 5    | 31    | 15.40 |
| 4    | 48    | 12.32 |
| 3    | 85    | 9.24  |
| 2    | 192   | 6.16  |
| 1    | 768   | 3.08  |
| h(m) | E(lx) | D(m)  |

HRF100PD  
1/10 beam angle

## Upper light distribution

- Lamps : HRF100PD
- Body : Stainless steel, Black
- Front glass : Clear, Heat tempered glass
- Light distribution : Tilt 0~30°
- Built-in ballast : HCW181B-1TA(B) : 100V TC ballast  
HCW181B-1CA(B) : 200V reactor
- Weight : 11.5kg

# Inground uplight luminaires for JD Halogen lamps

**For JD110V250W**

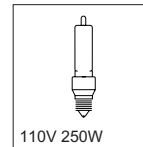
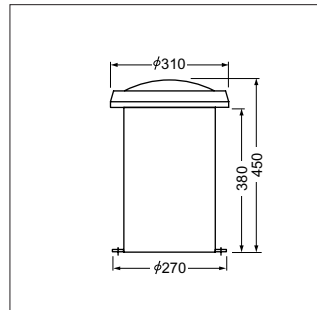
**JCW401**

## Upper light distribution

**JCW431**

## Wall washer light distribution

- Lamps : JD110V250W/M
- Body : Stainless steel, Black
- Front glass : Clear, Heat tempered glass
- Reflector : Aluminium aventurine finish, Tilt ~12°
- Socket : E11
- Weight : 5.3kg



|      |       |      |
|------|-------|------|
| 5    | 242   | 4.88 |
| 4    | 378   | 3.90 |
| 3    | 672   | 2.93 |
| 2    | 1511  | 1.95 |
| 1    | 6044  | 0.98 |
| h(m) | E(lx) | D(m) |

|      |       |      |
|------|-------|------|
| 5    | 506   | 3.25 |
| 4    | 791   | 2.60 |
| 3    | 1406  | 1.95 |
| 2    | 3164  | 1.30 |
| 1    | 12654 | 0.65 |
| h(m) | E(lx) | D(m) |

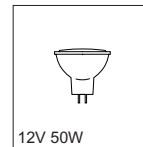
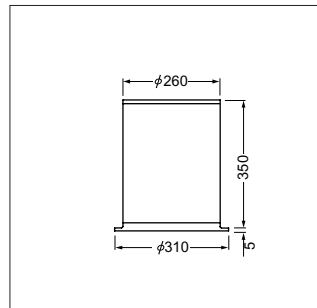
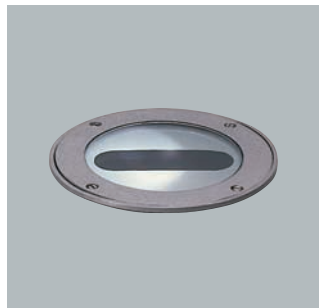
JCW431  
JD110V250W/M  
1/10 beam angle

# Inground uplight luminaires for JR Halogen lamps

**For JR lamps**

**JCW101**

- Lamps : JR12V50WUV/MK5
- Body : Stainless steel, Black
- Front glass : Clear, Heat tempered glass
- Reflector : Aluminium die cast, Silver colour finish
- Socket : GU5.3
- Weight : 6.3kg

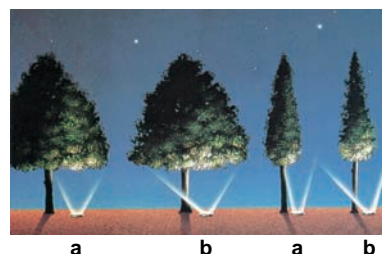


|      |       |      |
|------|-------|------|
| 5    | 66    | 5.10 |
| 4    | 103   | 4.08 |
| 3    | 184   | 3.06 |
| 2    | 414   | 2.04 |
| 1    | 1654  | 1.02 |
| h(m) | E(lx) | D(m) |

JR12V50W  
1/10 beam angle

## Upper light distribution and Wall washer light distribution

- **Upper light distribution(a)**  
Direct ray upward from the recessed position
- **Wall washer light distribution (b)**  
Diagonal ray upward through the built-in reflector to evenly light objects

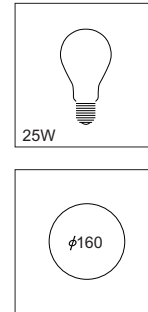
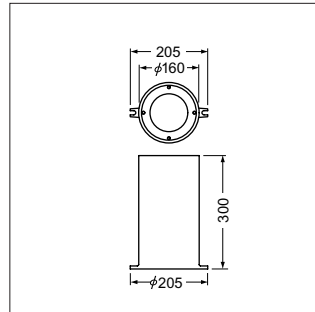


# Inground uplight luminaires

**For incandescent lamps 25W**

## CW101

- Lamp : LM100V25W/F
- Body : Stainless steel
- Flame : Aluminium die-cast silver grey colour
- Base : E17
- Weight : 4.4kg

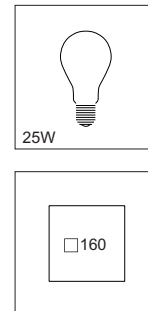
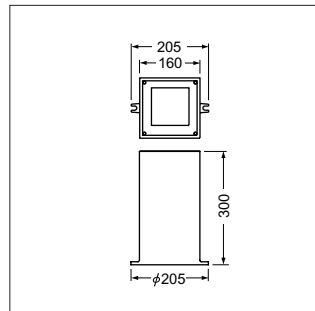
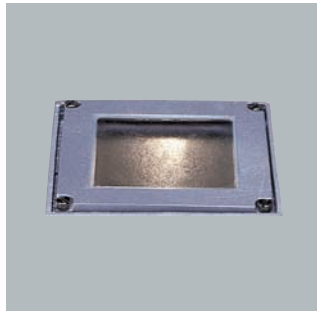


| 3    | 4     | 18.47 |
|------|-------|-------|
| 2    | 10    | 12.31 |
| 1    | 39    | 6.16  |
| h(m) | E(lx) | D(m)  |

LM100V25W/F  
1/10 beam angle

## CW151

- Lamp : LM100V25W/F
- Body : Stainless steel
- Flame : Aluminium die-cast silver grey colour
- Base : E17
- Weight : 5.7kg



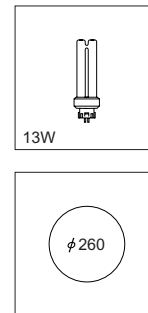
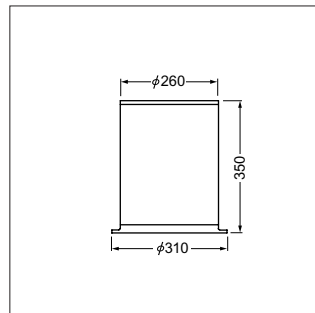
| 3    | 4     | 24.06 |
|------|-------|-------|
| 2    | 8     | 16.04 |
| 1    | 33    | 8.02  |
| h(m) | E(lx) | D(m)  |

LM100V25W/F  
1/10 beam angle

**For compact fluorescent lamps 13W**

## FCW101GL15 (100V50Hz) FCW101GL16 (100V60Hz)

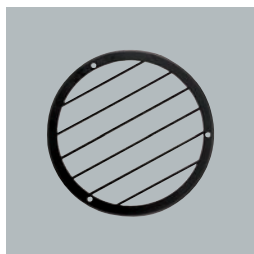
- Lamp : FDL13EX-L
- Body : Stainless steel Black colour
- Flame : Aluminium die-cast silver colour
- Base : GX10q-2
- Weight : 5.7kg



| 3    | 31    | 11.78 |
|------|-------|-------|
| 2    | 70    | 7.85  |
| 1    | 282   | 3.93  |
| h(m) | E(lx) | D(m)  |

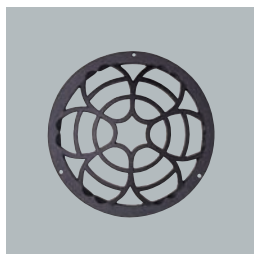
FDL13EX-L  
1/10 beam angle

## Accessories



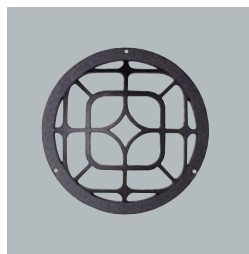
### MG01

- Adaptable fixtures : HCW101B, HCW131B, JCW401, JCW431
- Materials : Stainless steel
- Colour : Black
- Dimensions :  $\phi$  290



### MG05

- Adaptable fixtures : HCW101B, HCW131B, JCW401, JCW431
- Materials : Iron die-casting
- Colour : Black
- Dimensions :  $\phi$  290



### MG04

- Adaptable fixtures : HCW101B, HCW131B, JCW401, JCW431
- Materials : Iron die-casting
- Colour : Black
- Dimensions :  $\phi$  290



### KG01

- Adaptable fixtures : HCW181B
- Materials : Stainless steel
- Colour : Black
- Dimensions : H-25mm  
L-280mm  
W-400mm

### MG21

- Adaptable fixtures : HCW201B
- Materials : Stainless steel
- Colour : Black
- Dimensions :  $\phi$  394

### MG25

- Adaptable fixtures : HCW201B
- Materials : Iron die-casting
- Colour : Black
- Dimensions :  $\phi$  345

### MG24

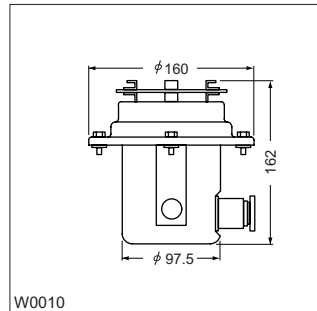
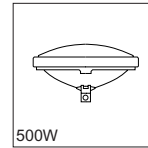
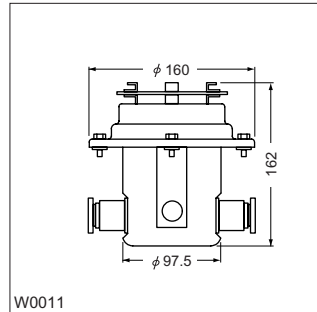
- Adaptable fixtures : HCW201B
- Materials : Iron die-casting
- Colour : Black
- Dimensions :  $\phi$  345

# Pressure watertight luminaires

## W0011 W0010

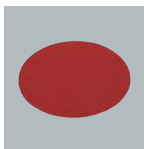
For fresh water only

- Lamp : PAR110V150W  
PAR110V300W, PAR110V500W
- Body, flame : Stainless steel
- Waterproof ring : Silicone rubber
- Protect cover : Acrylic resin (clear)
- Base : Screw type terminal
- Weight : 1.5kg

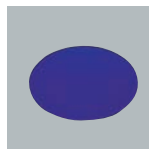


## Accessories for W0011, W0010

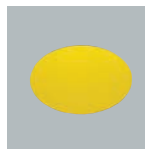
Colour filters



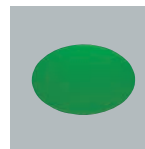
**WF001/R**  
Red



**WF001/BL**  
Blue



**WF001/Y**  
Yellow



**WF001/GN**  
Green

Support

### WA01

- Support length : 200mm



Installation example



Waterproof ring

### WP002

- Material : Silicon rubber
- Colour : White

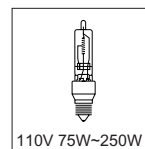
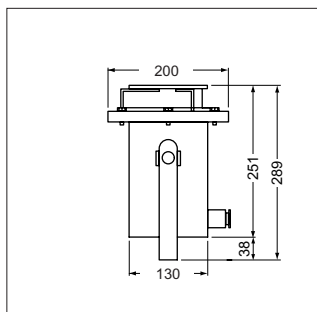


# Pressure watertight luminaires

For fresh water only

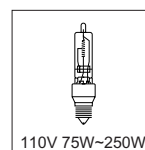
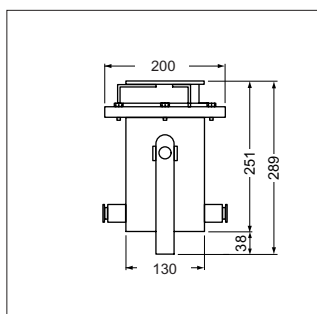
## W1520

- Lamp : EYE halogen lamps  
JD110V75W/M~250W/M
- Body, cover : Stainless steel
- Front glass : Tempered glass
- Guard : GW4 (Stainless steel)
- Reflector : Aluminium mirror finish
- Base : E11
- Weight : 3.1kg
- Installation : Up to 1m under the water



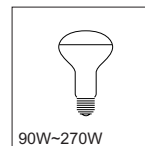
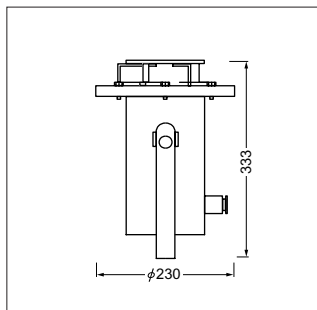
## W1521

- Lamp : EYE halogen lamps  
JD110V75W/M~250W/M
- Body, cover : Stainless steel
- Front glass : Tempered glass
- Guard : GW4 (Stainless steel)
- Reflector : Aluminium mirror finish
- Base : E11
- Weight : 3.2kg
- Installation : Up to 1m under the water



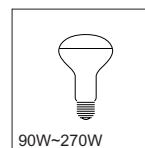
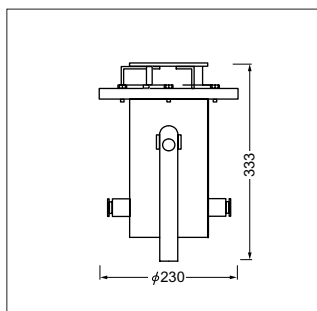
## W1510

- Lamp : Incandescent lamps  
RF100(110)V90W~270W
- Body, cover : Stainless steel
- Front glass : Tempered glass
- Guard : GW3 (Stainless steel)
- Weight : 4.0kg
- With ground ring
  - 20a : hole  $\phi$ 12
  - 20b : hole  $\phi$ 13
  - 20c : hole  $\phi$ 15
- Installation : Up to 1m under the water



## W1511

- Lamp : Incandescent lamps  
RF100(110)V90W~270W
- Body, cover : Stainless steel
- Front glass : Tempered glass
- Guard : GW3 (Stainless steel)
- Weight : 4.1kg
- With ground ring
  - 20b : hole  $\phi$ 13
  - 20c : hole  $\phi$ 15
- Installation : Up to 1m under the water



### Adaptable lead wire

| Ground ring | Lead wire                     |
|-------------|-------------------------------|
| 20a         | 2PNCT 2mm <sup>2</sup> x 3C   |
| 20b         | 2PNCT 3.5mm <sup>2</sup> x 3C |
| 20c         | 2PNCT 5.5mm <sup>2</sup> x 3C |

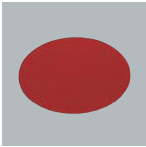
### Type and specification

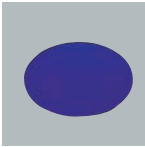
| Ground ring | Ground ring          |
|-------------|----------------------|
| W1510       | 20a : hole $\phi$ 12 |
|             | 20b : hole $\phi$ 13 |
|             | 20c : hole $\phi$ 15 |
| W1511       | 20b : hole $\phi$ 13 |
|             | 20c : hole $\phi$ 15 |
| W1520       | 20a : hole $\phi$ 12 |
|             | 20b : hole $\phi$ 13 |
|             | 20c : hole $\phi$ 15 |
| W1521       | 20b : hole $\phi$ 13 |
|             | 20c : hole $\phi$ 15 |

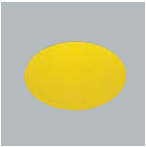
# Pressure watertight luminaires

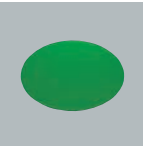
## Accessories for W1520, W1521, W1510, W1511

Colour filters









For W1510, W1511

WF151/R

Red

WF151/BL

Blue

WF151/Y

Yellow

WF151/GN

Green

For W1520, W1521

WF152/R

Red

WF152/BL

Blue

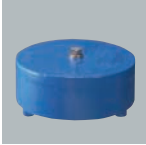
WF152/Y

Yellow

WF152/GN

Green

Weight



WD2

Lamp : Adaptable fixtures : W1510, W1511, W1520, W1521

Body : Iron die cast with melamine resin double coating

Colour : Blue (Munsell 7.5B5/10)

Weight : 12.5kg

### The fountain height and lamp wattage

| Height (m) | Lamps (Reflector type) 90W                                                          | 150W                                                                                | 200W                                                                                | 300W                                                                                |
|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1.5        |  |                                                                                     |                                                                                     |                                                                                     |
| 2          |  |  |  |                                                                                     |
| 3          |  |  |  |  |
| 4          |                                                                                     |                                                                                     |  |  |
| 5          |                                                                                     |                                                                                     |  |  |
| 6          |                                                                                     |                                                                                     |                                                                                     |  |
| 7          |                                                                                     |                                                                                     |                                                                                     |  |
| 8          |                                                                                     |                                                                                     |                                                                                     |  |


IWASAKI

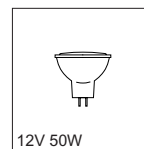
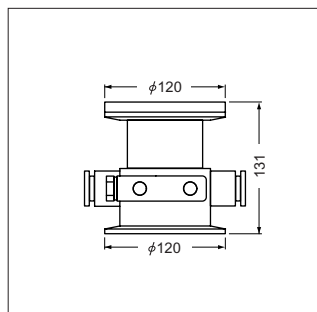
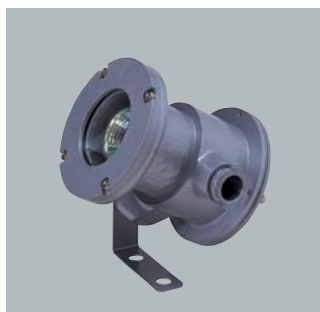
89

# Pressure watertight luminaires for halogen lamps

## W5061

For fresh water only

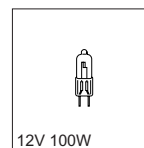
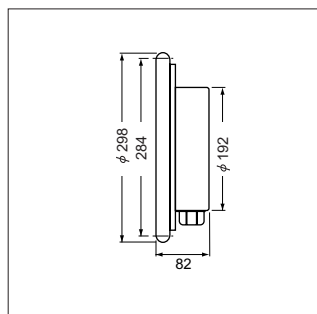
- Lamp : Low voltage halogen lamps  
JR12V50WUV/MK5
- Body, cover : Gun metal (Silver colour)
- Panel : Tempered glass (Clear)
- Arm : Stainless steel (Silver colour)
- Base : GU5.3
- Weight : 3.2kg
- Installation : Up to 1m under the water



## W5050

For fresh water only

- Light distribution : Wide
- Lamp : Low voltage halogen lamps  
J12V100WA (GY6.35) X 2
- Body : Stainless steel (SUS304)
- Panel : Heatproof tempered glass (Clear)
- Flame : Stainless steel (SUS304)
- Screw materials : Titan
- Base : GY6.35
- Weight : 3.2kg
- Installation : Up to 5m under the water



## W5030

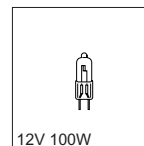
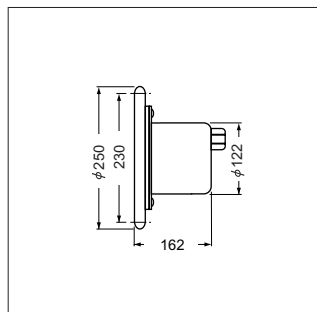
For fresh water only

- Light distribution : Narrow

## W5040

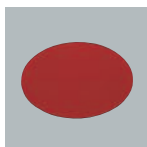
For fresh water only

- Light distribution : Wide
- Lamp : Low voltage halogen lamps  
J12V100WA (GY6.35) X 2
- Body : Stainless steel (SUS304)
- Panel : Heatproof tempered glass (Clear)
- Flame : Stainless steel (SUS304)
- Screw materials : Titan
- Base : GY6.35
- Weight : 2.9kg
- Installation : Up to 5m under the water

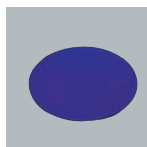


## Accessories for W5050, W5030, W5040

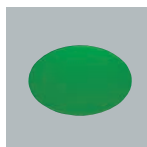
Colour filters



**WF501/R**  
Red



**WF501/BL**  
Blue



**WF501/GN**  
Green

# Characteristics and application for Highbay Reflectors

| Neme                                      | Photo                                                                               | Features                                                                                                                                                                                                                                                                                                    | Applications                                      |
|-------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Highbay Reflector                         |    | Computer-designed reflector that maximizes the reflectance and minimizes the glare. Highly durable and anticorrosive ALGLAS finish. Three light distribution types (wide, medium and narrow). Effective high bay fixture when used with some lamp holder types and EYE Automatic Raising & Lowering Device. | For various purposes                              |
| EYE Lamp Holder                           |    | Lifting tool for EYE Highbay Reflector and EYE AREA Light including the surface mounting type, pipe pendant type, chain pendant type and slope-ceiling type. Simple installation and maintenance for the easy Base E39 type.                                                                                | Simple maintenance                                |
| Highbay Reflector with an emergency light |   | The tungsten halogen lamp inside lights while the quantity of light of HID lamp is not enough, right after it is turned on and for a short time after power recovery. It goes out when the luminosity of the HID lamp reaches a fixed level. This can be used also as an emergency light.                   | Dual purpose type (main light / emergency light ) |
| Built-in ballast type Highbay Reflector   |  | Built-in Ballast Highbay Reflector. Compact and simple construction type. Easily mounted to the ceiling or EYE Automatic Raising & Lowering Device when a shade and a lifting tool is attached.                                                                                                             | Ballast combined                                  |
| Highbay Reflector with charcoal filter    |  | Clean inside, high reflectance and low maintenance kept for a long time by the charcoal filter inserted in the socket holder.                                                                                                                                                                               | Clean inside for long time                        |
| Mixed Light                               |  | Two light sources in one luminaire. Least electric power expense and highest colour rendering by combination of light sources.                                                                                                                                                                              | Power saving                                      |
| Low Bright                                |  | Globe with prism to control the glare without reducing the luminance. ALGLAS reflector featuring high durability and reflectance. Charcoal filter keeping inside of the luminaire clean and making the light maintenance-free for long time.                                                                | Glare control                                     |

| Neme                                                  | Photo                                                                               | Features                                                                                                                                                                                                                                         | Applications                                                     |
|-------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 500G Series Halogen Light                             |    | Best suited as an emergency light if used with the High Intensity Discharge lamp.                                                                                                                                                                | Emergency light or auxiliary light                               |
| Vapour-proof Down light                               |    | Vapour-proof down light with the Teflon-coated front glass. If the glass is broken, it will not scatter in all directions.                                                                                                                       | For pool and pool-side                                           |
| Pressure Water-tight luminaire                        |   | Luminaire for pool attached on pool walls and bottoms. Colour effect by using colour filters.                                                                                                                                                    | For lighting or for colour rendering inside a pool               |
| Automatic Raising & Lowering Device                   |  | Lowers luminaries mounted on a ceiling by a switch operation to allow their safe maintenance work on the floor. Recessed type, direct mounting type and the type for slope-ceiling, and for 3 kg to 25 kg types are available for each location. | For maintenance work of medium or high bay fixtures on the floor |
| Bank lights with Automatic Raising & Lowering Device  |  | Simple maintenance and inspection works for luminaries and fixtures by Automatic Raising & Lowering Device incorporated. Square, round and hexagonal types, and multi-light type for each shape are available.                                   | For simple maintenance/inspection work                           |
| Control panel for Automatic Raising & Lowering Device |  | Controls the electric lift, EYE Automatic Raising & Lowering Device to allow simultaneous lift of multiple luminaries, and automatic stop at a preset level (separate type only). Separate type and all-in-one type are available.               |                                                                  |

# EYE Highbay Reflector



## Simple shade setting

Comparing to conventional types, the lift is more easily mounted to the shade. All you have to do is to hook the shade to the hood, rotate it and fix it with a screw using a screwdriver.

(Simple construction type, Quick installation type)

## Computer-designed reflector

The high-reflectance computer-designed full-facet reflector eliminates useless light that may cause glare.

## ALGLAS finished reflector

The high purity quartz glass chemically coated on the aluminum plate ensures high reflectance for long time along with high durability, corrosion resistance and thermal resistance, and this reduces maintenance work.

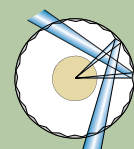
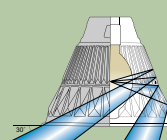
(This technology was developed under the technical cooperation with GE, USA).

For EYE Highbay Reflector in which the shade bottom is open, we recommend the use of the Teflon coated Multi Super Ace (model number ending with BUP.)

The Teflon-coated glass of the external bulb does not fly in all directions if it drops or is hit by a ball, etc. and broken.

\*Teflon is a registered trademark of Du Pont K.K. and Du Pont-Mitsui Fluorochemicals Co., Ltd.

\* On designing the luminaire, please note that the surface temperature of the external bulb should not exceed 260°.



No reflected light is absorbed by the lamp.

## Light Distribution Classification (JIL) and Highbay Reflector table

| Adaptable Fitting  |              |                                     |                  | Adaptable Fitting (O39)     |                                                              |                                             |                                        |                                                           | Adaptable Fitting (O26)                    |                                            |
|--------------------|--------------|-------------------------------------|------------------|-----------------------------|--------------------------------------------------------------|---------------------------------------------|----------------------------------------|-----------------------------------------------------------|--------------------------------------------|--------------------------------------------|
| Wattage            |              |                                     |                  | 1000W                       |                                                              | 400W                                        |                                        |                                                           | 100W                                       |                                            |
| Light Distribution |              |                                     |                  | Wide                        | Narrow                                                       | Wide                                        | Medium                                 | Narrow                                                    | Wide                                       | Narrow                                     |
| Type No.           |              |                                     |                  | SAW712<br>(SAW712G/SAW712N) | SAN712                                                       | SAW412<br>(SAW412G/SAW412N)                 | SAM412                                 | SAN412                                                    | SAW103                                     | SAN101                                     |
| Shade Type         |              |                                     |                  |                             |                                                              |                                             |                                        |                                                           |                                            |                                            |
| JIL Classification |              | Maximum installation interval (S/H) | 1/2 Beam angle   | Adaptable Lamp              |                                                              |                                             |                                        |                                                           |                                            |                                            |
| Sign               | Name         |                                     |                  |                             |                                                              |                                             |                                        |                                                           |                                            |                                            |
| Type 1             | Super Narrow | Under 0.5H                          | Under 14°        |                             | M700, M1000LS/U, NH660, 940LX, NH700, 1000B, H700, 1000      |                                             |                                        | M250, 400LS/BUP, NH220, 360LX, NH250, 400, H200, 250, 400 |                                            | M100LE/BUP, H80, 100, 125                  |
| Type 2             | Narrow       | 0.5 to 0.7H                         | 14° to Under 19° |                             |                                                              |                                             |                                        | MF250LS/BUP, NH220FLX, HF200, 250PD                       |                                            |                                            |
| Type 3             | Medium       | 0.7 to 1.0H                         | 19° to Under 27° |                             | MF700, 1000LS/U, NH660, 940FLX, NH700, 1000BF, HF700, 1000PD |                                             |                                        | MF400LS/BUP, NH360FLS, NH400F, HF400PD                    |                                            | MF100, 125LE/BUP, SB160W, HF80, 100, 125PD |
| Type 4             | Wide         | 1.0 to 1.5H                         | 27° to Under 37° |                             | MF700, 1000LS/U, NH660, 940FLS, NH700, 1000B, HF700, 1000PD  | MF250LS/BUP, NH220FLX, NH250F, HF200, 250PD | MF400LS/BUP, NH360FLX, NH400F, HF400PD |                                                           |                                            |                                            |
| Type 5             | Super Wide   | Over 1.5H                           | Over 37°         |                             |                                                              | MF400LS/BUP, HF400PD                        |                                        |                                                           | MF100, 125LE/BUP, SB160W, HF80, 100, 125PD |                                            |

# Highbay Reflector

## For 660W~1000W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps and Self-Ballasted Mercury lamps

### Suitable lamps

 Metal halide lamps  
M(F)1000LE/BUH, M(F)700LE/BUH

 High pressure sodium lamps  
NH940(F)LX, NH660(F)LX

 Mercury lamps  
H(F)1000(PD), H(F)700(PD)

 Self-Ballasted Mercury lamps  
750WSB/BT46



Wide

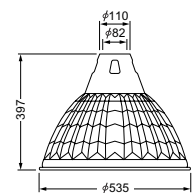
## SAW712

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 980g

Optical data **p.207**

Guard, Louver **p.129**

drawing



Wide

## SAW712G

With glass protector (PSAW71G)

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 4kg

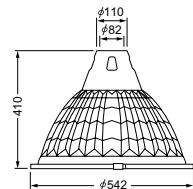
## SAW712N

With net protector (PSAW71N)

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 2.2kg

Optical data **p.207**

drawing



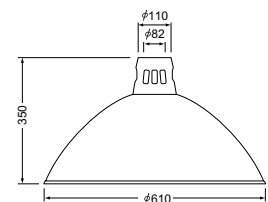
Narrow

## SAN712

- Lamp holder : O39, Y39
- Reflector : Aluminum  
Electropolishing
- Weight : 1.25kg

Optical data **p.207**

drawing



# Highbay Reflector

## For 150W~500W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps and Self-Ballasted Mercury lamps

### Suitable lamps

-  Metal halide lamps  
M(F)250LE/BUH, M(F)250LSH  
M(F)400LE/BUH, M(F)400LSH
-  High pressure sodium lamps  
NH220~360(F)LX, NH150~400(F)
-  Mercury lamps  
H(F)175~400(PD)
-  Self-Ballasted Mercury lamps  
450WSB/BT37, 500WSB/E37



Wide

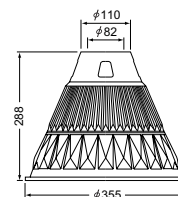
## SAW412

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 430g

Optical data **p.207**

Guard, Louver **p.129**

drawing



Wide

## SAW412G

With glass protector (PSAW41G)

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 1.8kg

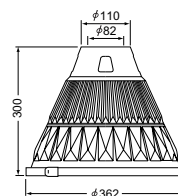
## SAW412N

With net protector (PSAW41N)

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 1.1kg

Optical data **p.208**

drawing



Medium

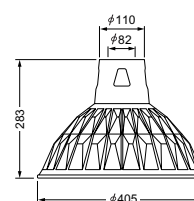
## SAM412

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 570g

Optical data **p.208**

Guard, Louver **p.129**

drawing



Narrow

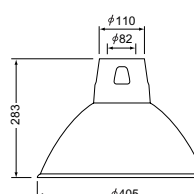
## SAN412

- Lamp holder : O39, Y39
- Reflector : Aluminum  
ALGLAS finished
- Weight : 570g

Optical data **p.208**

Guard, Louver **p.129**

drawing



# Highbay Reflector

## For 80W~160W lamps

Metal halide lamps, High pressure sodium lamps, Mercury lamps and Self-Ballasted Mercury lamps

### Suitable lamps

-  Metal halide lamps  
M(F)100LSH/BU, M(F)125LSH/BU  
M(F)100LE/BU, M(F)125LE/BU
-  Mercury lamps  
H(F)80~125(PD)
-  Self-Ballasted Mercury lamps  
160WSB



Wide

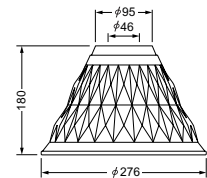
## SAW103

- Lamp holder : O26, Y26
- Reflector : Aluminum  
ALGLAS finished
- Weight : 180g

Optical data **p.208**

Guard, Louver **p.129**

drawing



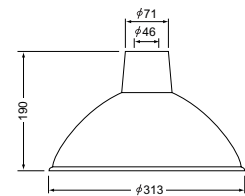
Narrow

## SAN101

- Lamp holder : O26, Y26
- Reflector : Aluminum  
(Electroly polish)
- Weight : 255g

Optical data **p.209**

drawing

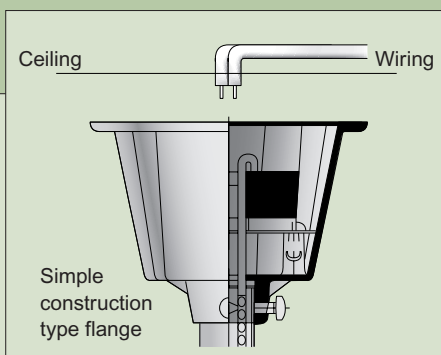
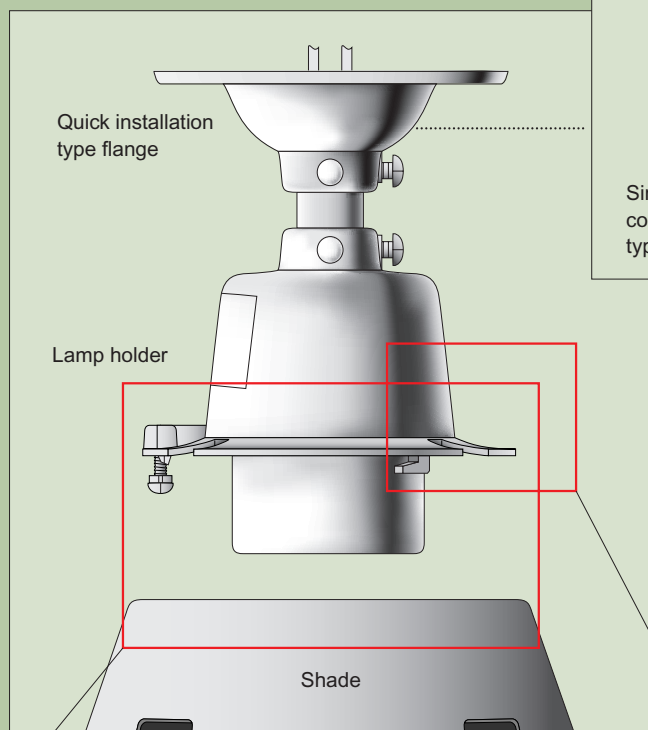


# Lamp Holder for High Bay Fixture (NEW)

## Simple construction type, Quick installation type

Now your construction and installation works are simpler.

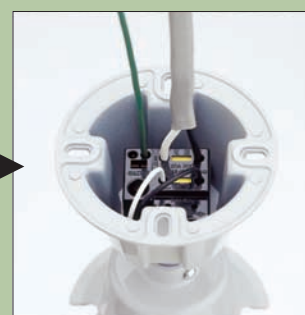
The rigid high bay fixture holders are for use on high ceilings in factories, gymnasiums, auditoriums and theaters.



### Simple contract terminal attached

One-touch wiring by simple contract terminal in the flange

### Simple construction type



### Simple shade installation

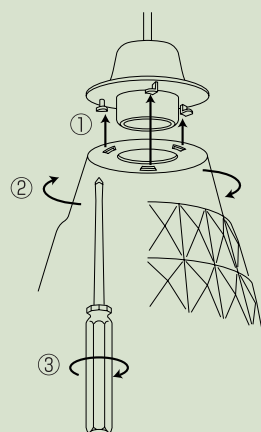
Simple construction type

Quick installation type

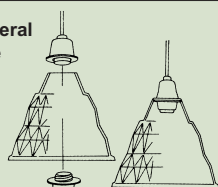
Install the shade to the lifting tool as follows:

- (1) Hook the shade.
- (2) Rotate the shade and temporarily fix it.
- (3) Fix the shade with a screw using a screwdriver.

Your installation work will be simpler comparing to conventional screw-in type.



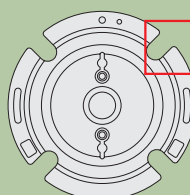
### General type



When installing a general type, you have to use your both hands while turning up, holding the shade with one hand and driving a screw with the other hand.

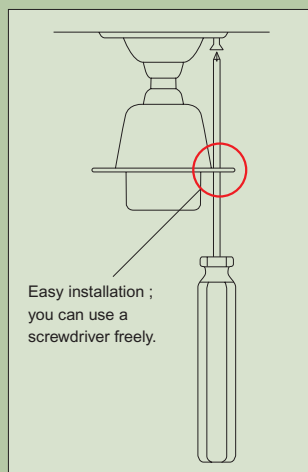
### Simple flange installation

Cuts in the holder side allow you to use a screwdriver straight.



Simple construction type

Quick installation type

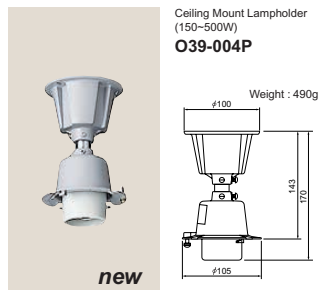
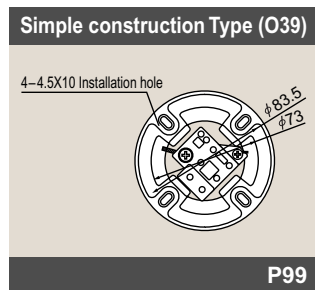


## Caution

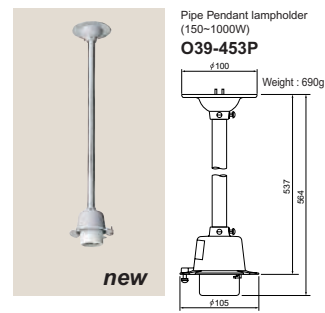
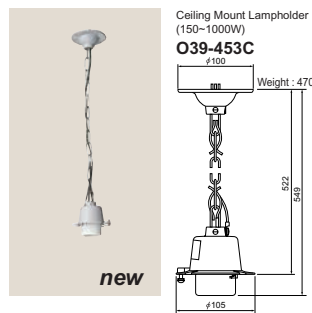
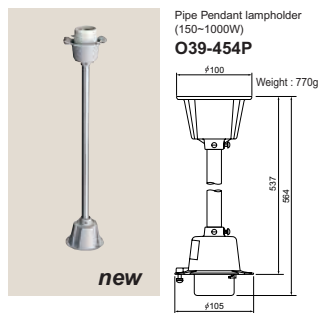
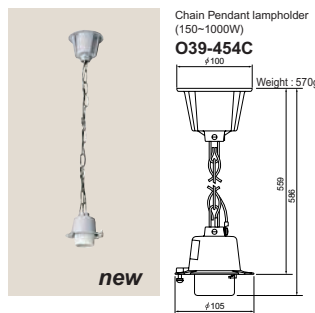
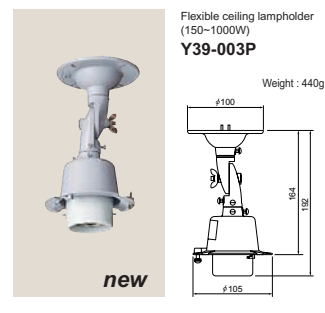
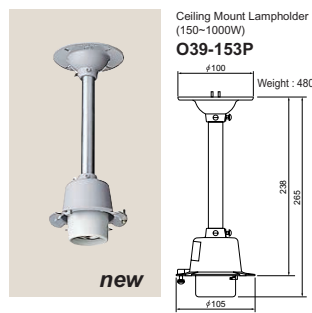
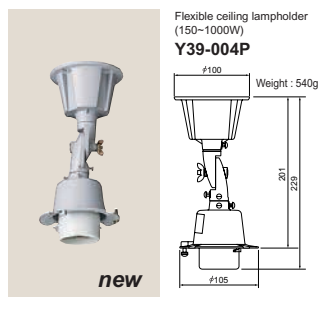
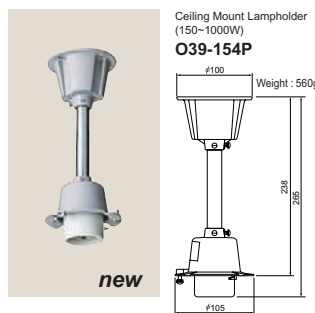
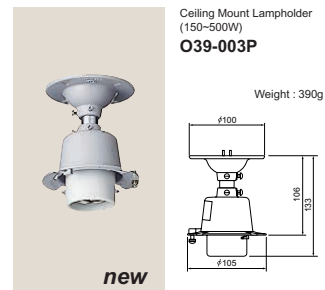
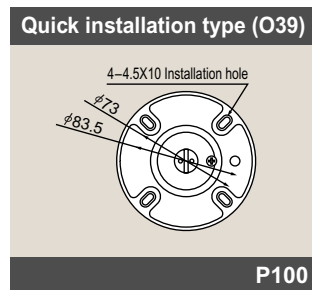
- The lamp holder is for indoor use only. Do not use it at the place where rain falls on it or strong wind blows.
- Do not use the holder where strong vibration or impact is expected.
- For use at a humid place or at an extremely high or low temperature, please contact us.
- When you use 039-002P or Y39-002P at a gymnasium, always use the holder guard for gymnasium.
- When you use a pendant type holder at a place where strong wind blows, use a cap (039 type: PK-440 - PK700, 026 type: PK260).
- For the holder with vibration-proof lifting tool, always keep the flange horizontal.
- The simple construction type and the quick installation type cannot be attached to old types of shade (shade models ending with 1, for example SAW411, 711).
- For the simple construction and quick simple installation types, their flanges are built in the holders, and they cannot be supplied as parts as the case of general type.
- For the simple construction type, feed wiring from the simple contact terminal is not possible.

# Lamp holder accessories

**A**



**A**

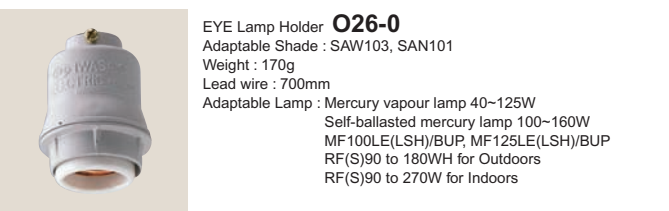


Note) The high bay fixture holders above can be used for the shade types, SAW412, SAW712, SAM412, SAN412 and SAN712. For older types of shades like SAW411, SAW711, SAM411 and SAN411, select one of the lamp holders below.

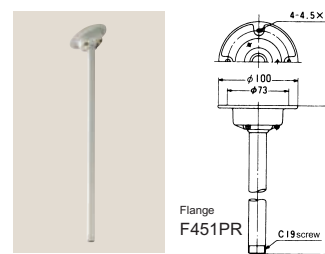
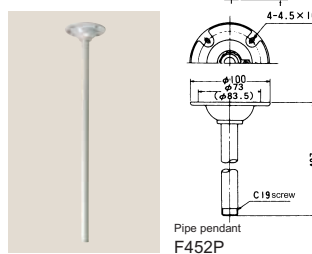
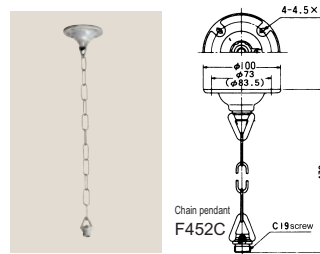
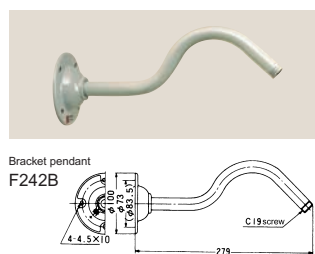
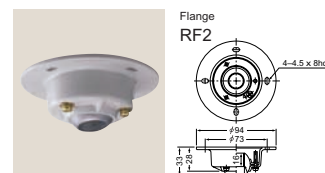
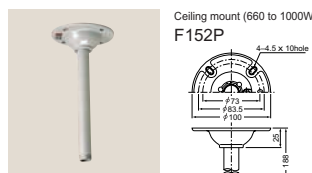
**Plug for General type (O39) P101**



**Plug for General type (O26) P102**

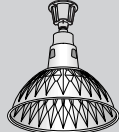
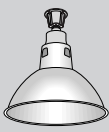
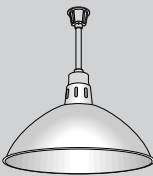
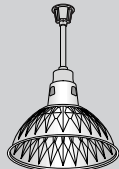
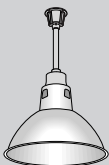
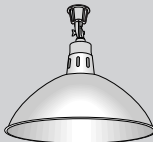
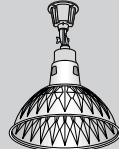
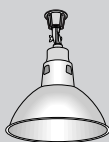
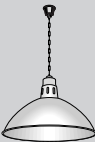
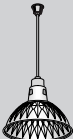
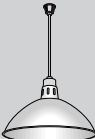
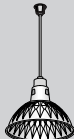
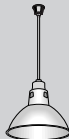


**Common Suspensions (able to combine with former general lamp holders) \*Common specification for general type O39 and O26**



# Lamp Holder for High Bay Fixture and Shade

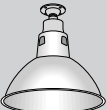
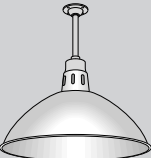
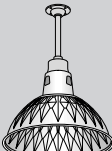
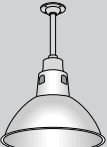
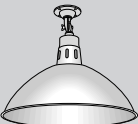
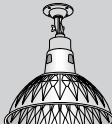
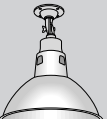
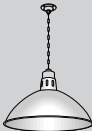
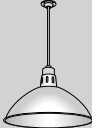
**Simple construction type O39** Combination Table of Holder and Shade

| Light Distribution                               | Wide                                                                                                          | Narrow                                                                              | Wide                                                                                                          | Medium                                                                                | Narrow                                                                                |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Shade                                            | <b>SAW712</b><br>660~1000W                                                                                    | <b>SAN712</b><br>660~1000W                                                          | <b>SAW412</b><br>150~500W                                                                                     | <b>SAM412</b><br>150~500W                                                             | <b>SAN412</b><br>150~500W                                                             |
| Holder                                           |                              |    |                              |    |    |
| <b>O39-004P</b><br>Ceiling mount<br>150~500W     | Not suitable                                                                                                  | Not suitable                                                                        | <br><small>CADDATA</small>   |    |    |
| <b>O39-154P</b><br>Ceiling mount<br>150~1000W    | <br><small>CADDATA</small>  |   |                             |   |   |
| <b>Y39-004P</b><br>Flexible ceiling<br>150~1000W |                            |  |                            |  |  |
| <b>O39-454C</b><br>Chain pendant<br>150~1000W    | <br><small>CADDATA</small> |  | <br><small>CADDATA</small> |  |  |
| <b>O39-454P</b><br>Pipe pendant<br>150~1000W     | <br><small>CADDATA</small> |  | <br><small>CADDATA</small> |  |  |

# Lamp Holder for High Bay Fixture and Shade

## Quick Installation type O39

## Combination Table of Holder and Shade

| Light Distribution                               | Wide                                                                                                          | Narrow                                                                              | Wide                                                                                                          | Medium                                                                                | Narrow                                                                                |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Shade                                            | <b>SAW712</b><br>660~1000W                                                                                    | <b>SAN712</b><br>660~1000W                                                          | <b>SAW412</b><br>150~500W                                                                                     | <b>SAM412</b><br>150~500W                                                             | <b>SAN412</b><br>150~500W                                                             |
| Holder                                           |                              |    |                              |    |    |
| <b>O39-003P</b><br>Ceiling mount<br>150~500W     | Not suitable                                                                                                  | Not suitable                                                                        | <br><small>CADDATA</small>   |    |    |
| <b>O39-153P</b><br>Ceiling mount<br>150~1000W    | <br><small>CADDATA</small>  |   |                             |   |   |
| <b>Y39-003P</b><br>Flexible ceiling<br>150~1000W |                            |  |                            |  |  |
| <b>O39-453C</b><br>Chain pendant<br>150~1000W    | <br><small>CADDATA</small> |  | <br><small>CADDATA</small> |  |  |
| <b>O39-453P</b><br>Pipe pendant<br>150~1000W     | <br><small>CADDATA</small> |  | <br><small>CADDATA</small> |  |  |

# Lamp Holder for High Bay Fixture and Shade

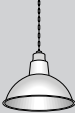
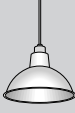
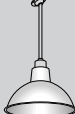
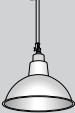
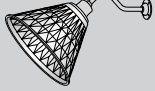
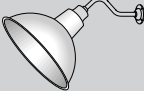
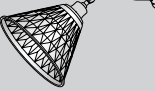
## EYE Area Light, General type O39

Combination Table of Holder and Shade

| Type                                                                                                                                             | EYE Area Light                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Shade                                                                                                                                            | <b>SAH811</b><br>150~400W<br> |
| Holder                                                                                                                                           |                                                                                                                |
| <b>O39-002P</b><br>Ceiling mount<br>150~500W<br>                |                               |
| <b>Y39-002P</b><br>Flexible Ceiling<br>150~1000W<br>            |                               |
| <b>O39-452C</b><br>Chain Pendant<br>150~1000W<br>              | Not suitable                                                                                                   |
| <b>O39-452P</b><br>Pipe Pendant<br>150~1000W<br>              |                             |
| <b>Y39-452P</b><br>Flexible<br>Pipe Pendant<br>150~1000W<br>  |                             |
| <b>O39-451PR</b><br>Pipe Pendant<br>150~1000W<br>             |                             |
| <b>Y39-451PR</b><br>Flexible<br>Pipe Pendant<br>150~1000W<br> |                             |
| <b>O39-242B</b><br>Bracket Pendant<br>150~1000W<br>           |                             |
| <b>Y39-242B</b><br>Flexible Bracket Pendant<br>150~1000W<br>  |                             |

## General type O26

Combination Table of Holder and Shade

| Light Distribution                                                                                                                             | Wide                                                                                                            | Narrow                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Shade                                                                                                                                          | <b>SAW103</b><br>80~160W<br> | <b>SAN101</b><br>80~160W<br> |
| Holder                                                                                                                                         |                                                                                                                 |                                                                                                                 |
| <b>O26-002P</b><br>Ceiling<br>80~160W<br>                    | <br>CADDATA                  |                              |
| <b>Y26-002P</b><br>Flexible Ceiling<br>80~160W<br>           |                              |                              |
| <b>O26-452C</b><br>Chain Pendant<br>80~160W<br>              | <br>CADDATA                 |                             |
| <b>O26-452P</b><br>Pipe Pendant<br>80~160W<br>              | <br>CADDATA                |                            |
| <b>Y26-452P</b><br>Flexible<br>Pipe Pendant<br>80~160W<br>  |                            |                            |
| <b>O26-451PR</b><br>Pipe Pendant<br>80~160W<br>             |                            |                            |
| <b>Y26-451PR</b><br>Flexible<br>Pipe Pendant<br>80~160W<br> |                            |                            |
| <b>O26-242B</b><br>Bracket Pendant<br>80~160W<br>           |                            |                            |
| <b>Y26-242B</b><br>Flexible Bracket Pendant<br>80~160W<br>  |                            |                            |

# Lamp Holder for High Bay Fixture and Shade

## The cap parts for vibration proof lamp holders

| Type No.         | Suitable cap type No. | Suitable lamps                                                                            |
|------------------|-----------------------|-------------------------------------------------------------------------------------------|
| <b>O39-TS440</b> | <b>PK440</b>          | RS(F)270WH, BHRF250~300WH                                                                 |
| <b>O39-TS500</b> | <b>PK500</b>          | H(F)200~400PD, SB250~300W, M(F)250~400LS/BUP(U), NH150~360(F)LS, RS(F)450WH               |
| <b>O39-TS550</b> | <b>PK550</b>          | H(F)700~1000PD, HRF200~400PD, SB500~750W(H), M(F)700~1000LS, NHR220~360LS, NH660~940(F)LS |
| <b>O39-TS700</b> | <b>PK700</b>          | HRF700~1000PD                                                                             |

## Instructions for Use

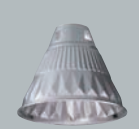
- Do not use the holder:
  - outdoors, or
  - in the place where the resonance frequency is always generated.

|                                |         |
|--------------------------------|---------|
| Lifting weight                 | 2kg     |
| Vertical resonance frequency   | 8~14Hz  |
| Horizontal resonance frequency | 21~28Hz |

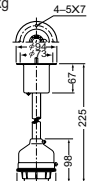
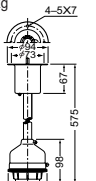
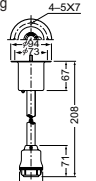
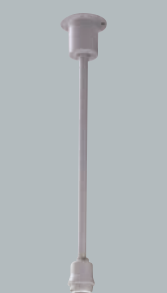
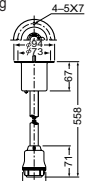
|                                |         |
|--------------------------------|---------|
| Lifting weight                 | 4.5kg   |
| Vertical resonance frequency   | ~8Hz    |
| Horizontal resonance frequency | 19~25Hz |

\* A resonance frequency will shake the luminaries.

- When using the holder, always use the following items together:
  - A cap set (Select the type according to the table.)
  - Shade (for 82 mm dia.) + a guard
- Securely fix the holder using 2 pcs. of Flat bolt, M10 with spring washer
- Connect the chain attached to the shade to the ceiling by using a bracket.
- Mount the holder horizontally.
- When you use the non-Teflon-coated Metal Halide lamp, always use the protector for the shade.
- On replacing a bulb, also check the cap.
- If you find a crack on the cap, replace it.

| Light Distribution | Wide                                                                              | Narrow                                                                            | Wide                                                                              | Medium                                                                            | Narrow                                                                             |
|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Reflector          | <b>SAW712</b><br>660W~1000W                                                       | <b>SAN712</b><br>660W~1000W                                                       | <b>SAW412</b><br>150W~400W                                                        | <b>SAM412</b><br>150W~400W                                                        | <b>SAN412</b><br>150W~400W                                                         |
| Holder             |  |  |  |  |  |
| <b>O39-TS440</b>   | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                              |
| <b>O39-TS500</b>   | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                              |
| <b>O39-TS550</b>   | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                              |
| <b>O39-TS700</b>   | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                             | <input type="radio"/>                                                              |

## Vibration proof pendant type lamp holder

|                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>O39-102S</b><br/>(for 100mm pipe)<br/>Suitable lamp : Mercury lamp, up to 1000W<br/>Sustainable max. weight : 2.5 kg</p>  |  <p><b>O39-452S</b><br/>(for 450mm pipe)<br/>Suitable lamp : Mercury lamp, up to 1000W<br/>Sustainable max. weight : 2.5 kg</p>  |  <p><b>O26-102S</b><br/>Suitable lamp : Mercury lamp, up to 125W<br/>Sustainable max. weight : 2.5 kg</p>  |  <p><b>O26-452S</b><br/>Suitable lamp : Mercury lamp, up to 125W<br/>Sustainable max. weight : 2.5 kg</p>  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

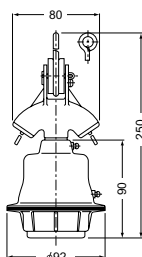
| Light Distribution | Wide                                                                                | Narrow                                                                              | Wide                                                                                | Medium                                                                              | Narrow                                                                               | Wide                                                                                  | Narrow                                                                                |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Reflector          | <b>SAW712</b><br>660W~1000W<br>Weight : 980g                                        | <b>SAN712</b><br>660W~1000W<br>Weight : 1250g                                       | <b>SAW412</b><br>150W~400W<br>Weight : 430g                                         | <b>SAM412</b><br>150W~400W<br>Weight : 570g                                         | <b>SAN412</b><br>150W~400W<br>Weight : 570g                                          | <b>SAW103</b><br>70W~125W<br>Weight : 180g                                            | <b>SAN101</b><br>70W~125W<br>Weight : 255g                                            |
| Holder             |  |  |  |  |  |  |  |
| <b>O39-102S</b>    | <input type="radio"/>                                                               | <input type="radio"/>                                                               | <input type="radio"/>                                                               | <input type="radio"/>                                                               | <input type="radio"/>                                                                | <b>Not suitable</b>                                                                   | <b>Not suitable</b>                                                                   |
| <b>O39-452S</b>    | <input type="radio"/>                                                               | <input type="radio"/>                                                               | <input type="radio"/>                                                               | <input type="radio"/>                                                               | <input type="radio"/>                                                                | <b>Not suitable</b>                                                                   | <b>Not suitable</b>                                                                   |
| <b>O26-102S</b>    | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                  | <input type="radio"/>                                                                 | <input type="radio"/>                                                                 |
| <b>O26-452S</b>    | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                 | <b>Not suitable</b>                                                                  | <input type="radio"/>                                                                 | <input type="radio"/>                                                                 |

# Suspension type lamp holder and Corrosion-proof lamp holder

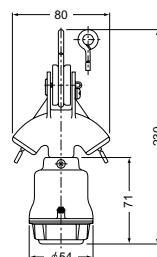
## Suspension type lamp holder



**O39-K1**



**O26-K1**



\* When using one of the holders below, always use the Highbay Reflector. \* When using a holder at factories where it is subjected to vibration or impact, select a vibration-proof fixture or a holder with vibration-proof lifting tool.

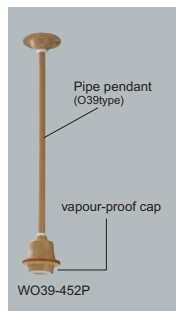
| Light Distribution | Wide                        | Narrow                      | Wide                       | Medium                     | Narrow                     | Wide                      | Narrow                    |
|--------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|---------------------------|
| Reflector          | <b>SAW712</b><br>660W~1000W | <b>SAN712</b><br>660W~1000W | <b>SAW412</b><br>150W~400W | <b>SAM412</b><br>150W~400W | <b>SAN412</b><br>150W~400W | <b>SAW103</b><br>70W~125W | <b>SAN101</b><br>70W~125W |
| Holder             |                             |                             |                            |                            |                            |                           |                           |
| <b>O39-K1</b>      | ○                           | ○                           | ○                          | ○                          | ○                          | <b>Not suitable</b>       | <b>Not suitable</b>       |
| <b>O26-K1</b>      | <b>Not suitable</b>         | <b>Not suitable</b>         | <b>Not suitable</b>        | <b>Not suitable</b>        | <b>Not suitable</b>        | ○                         | ○                         |

\*1 When using a holder in a windy application, always use a cap (PK440 to PK700 for type 039 and PK260 for type 026).

\*2 For the holder with vibration-proof lifting tool, always keep the flange horizontal.

## Corrosion-proof lamp holder (for indoor use)

Good for a highly humid place like a pool or a chemical plant where corrosive gas exists.



| Type No.                                                 |
|----------------------------------------------------------|
| <b>Ceiling mount (up to 500W)</b><br><b>WO39-002P</b>    |
| <b>Ceiling mount (Flexible type)</b><br><b>WY39-002P</b> |
| <b>Pipe pendant</b><br><b>WO39-452P</b>                  |
| <b>Pipe pendant (Flexible type)</b><br><b>WY39-452P</b>  |
| <b>Bracket</b><br><b>WO39-242B</b>                       |

Suitable cap type No.

**PK440**

**PK500**

**PK550**

**PK700**

Suitable lamps

RS(F)270WH, R type SB250-300WH

H(F)200~400PD, SB250-300W,  
M(F)250~400LS/BU(P), NH110~360(F)LS,  
RS(F)450WH

H(F)700~1000PD, HRF200~400PD,  
SB500-750W(H), M(F)700-1000LS  
NHR220~360LX, NH660-940(F)LX

HRF700-1000PD, NHR660-940(D)LX

## Instructions for Use

- The corrosion-proof holders consist of anticorrosion parts to block off humid and corrosive gas.
- Make sure to put a vapour-proof cap (put in a separate package) between the lamp and the holder.
- When using the Metal Halide lamp without Teflon coating, always attach the protector at the bottom of the shade.
- On replacing a bulb, also check the cap.
- If you find a crack on the cap, replace it.

| Classification for application                  | ○: Usable<br>X: Unusable |
|-------------------------------------------------|--------------------------|
| High humidity atmosphere                        | ○                        |
| Sulfurous acid gas atmosphere                   | ○                        |
| Alcohol gas atmosphere                          | ○                        |
| Acid salt, neutral salt and alkaline atmosphere | ○                        |
| Diluted acid atmosphere                         | ○                        |
| Diluted alkaline atmosphere                     | ○                        |
| Concentrated acid atmosphere                    | X                        |
| Concentrated alkaline atmosphere                | X                        |
| Ammonia gas atmosphere                          | X                        |

| Light Distribution | Wide                        | Narrow                      | Wide                       | Medium                     | Narrow                     |
|--------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| Reflector          | <b>SAW712</b><br>660W~1000W | <b>SAN712</b><br>660W~1000W | <b>SAW412</b><br>150W~400W | <b>SAM412</b><br>150W~400W | <b>SAN412</b><br>150W~400W |
| Holder             |                             |                             |                            |                            |                            |
| <b>WO39-002P</b>   | <b>Not suitable</b>         | <b>Not suitable</b>         | ○                          | ○                          | ○                          |
| <b>WY39-002P</b>   | ○                           | ○                           | ○                          | ○                          | ○                          |
| <b>WO39-452P</b>   | ○                           | ○                           | ○                          | ○                          | ○                          |
| <b>WY39-452P</b>   | ○                           | ○                           | ○                          | ○                          | ○                          |
| <b>WO39-242B</b>   | ○                           | ○                           | ○                          | ○                          | ○                          |

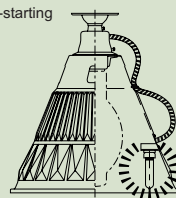
## Highbay Reflector with Emergency Light

The EYE Highbay Reflector with an emergency light is an auxiliary lighting equipment for the HID lights whose illuminance level is low right after it is turned on and for a short time after power recovery. Even when you have a power interruption, you do not have to worry about any accidents. It will be useful at many factories where they need emergency lights for the time the HID lamps go out for power interruption or for some other reasons. It will be further effective if the EYE halogen light is used together as the high bay emergency light.

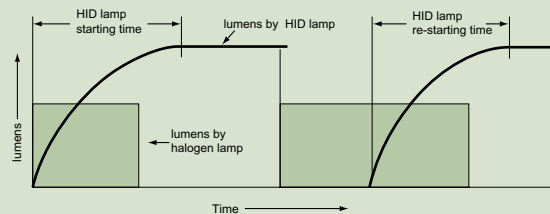
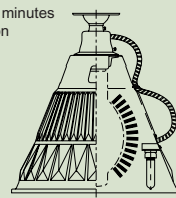
**Note:**

The tungsten halogen lamp inside the Highbay Reflector will light right after the HID lamp is turned off and for a short time after the power recovery, it goes out when the luminous flux of the HID lamp reaches a certain (90% luminosity) level. Also you can use the halogen lamp only as a night light or an emergency light.

At Starting, re-starting



Several minutes operation



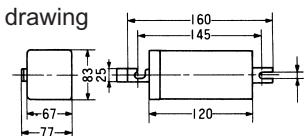
Ballast with Compensation Apparatus drawing

### KNH202

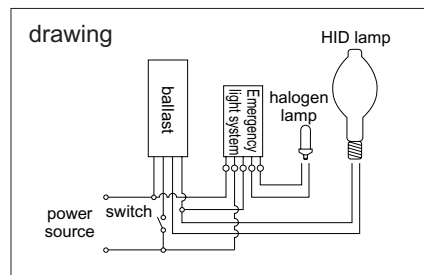
(for HID lamp)

Even when a power interruption occurs or you turn off the power switch by mistake, the EYE Highbay Emergency Light automatically detects the secondary voltage of the ballast automatically to turn on the halogen light. The built-in timer keeps the halogen lamp operation for a while after the HID lamp is turned on or for a short time after power recovery while the luminosity is low.

- \* Use the ballast of reactor (H to C, CC or CL) type for 200V line source.
- \* For another line voltage, please contact us.
- \* For the wattage of halogen lamp, 500 W or less wattage is adaptable.



drawing



Wide

For HID lamp 1000W



Pipe pendant (for HID lamp 1000W)

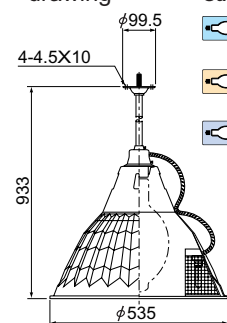
### KNW711P3

without lamps and ballast

- Specification : Halogen lamp 220V250W
- Weight : 2.0kg

Optical data p.209

drawing



Suitable lamps

- M(F)700~1000LE/BU
- NH660~940(F)LX
- H(F)700~1000(PD)



Wide

For HID lamp 400W



Ceiling mount (for HID lamp 400W)

### KNW411D3

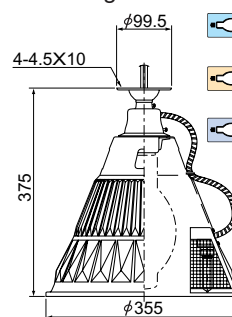
without lamps and ballast

- Specification : Halogen lamp 220V250W
- Weight : 1.5kg

Optical data p.209

Guard, Louver p.116

drawing



Suitable lamps

- M(F)250~400LE/BUP
- NH220~360(F)LX
- H(F)200~400(PD)

\* Select the accessories for EYE Highbay Reflector except for the glass protector.

\* For narrow and medium light distribution type, please contact our dealer.

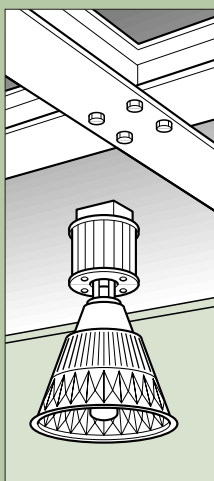
\* You cannot use a built-in FEC type lamp (MF-LS or NH-LS). Use EYE Sunlux Ace or EYE Multi Hi-Ace (MF-LE) with former type of built-in ignitor lamps. Please contact our dealer for the detail information.

# Built-in Ballast Type Highbay Fixtures

- Simple installation; no need to connect wire between the ballast and the lamp holder.
- No need of accessory to connect to EYE Automatic Raising & Lowering Device (electric lift) of 10 kg type. However, you cannot use luminaires for more than 700 W with EYE Automatic Raising & Lowering Device (electric lift) of 10 kg type.
- Can be mounted on outlet boxes and exposed boxes with stud bolts.
- The triple safety function of the ballast especially designed for high wiring insulation to protect over current and abnormal temperature surge.
- The capacitor protected by the multi-point distribution type detector with electric protective circuit.

## Instructions for Use

- When you use the fixture with a lifting tool, order the built-in ballast type Highbay Fixtures with eyebolt (M10).
- When you use the fixture with a lifting tool, the tool length cannot be longer than the standard length.
- When you use the fixture with a lifting tool, keep the pipe lifting tool horizontal.
- The fixture types HB7020 and HB10020 are too heavy to be used for exposed boxes.
- When you use the fixture with a lifting tool, model UDM63252/K, use the accessory for model UDA29/15KG/HB7020.
- Use the fixture indoors where the ambient temperature is below 35°C.
- The fluctuation of supply voltage should be kept within +/-6% of the rated voltage.



| Wattage | Type No.                           | Lamps                                | Fig. | Supply voltage (V) | Frequency (Hz) | Primary current (A) |           | Consumption wattage (W) | Weight (kg) |
|---------|------------------------------------|--------------------------------------|------|--------------------|----------------|---------------------|-----------|-------------------------|-------------|
|         |                                    |                                      |      |                    |                | at start            | at stable |                         |             |
| 250W    | HB2520A (50Hz)<br>HB2520B (60Hz)   | NH220FLX,<br>MF250LS/U<br>HF250PD    |      | 200                | 50(60)         | 2.6                 | 1.45      | 263                     | 6.0         |
| 300W    | HB3020A (50Hz)<br>HB3020B (60Hz)   | NH270FLX,<br>MF300LS/U<br>HF300PD    |      | 200                | 50(60)         | 3.0                 | 1.75      | 313                     | 6.5         |
| 400W    | HB4020A (50Hz)<br>HB4020B (60Hz)   | NH360FLX,<br>MF400LS/U,<br>HF400PD   |      | 200                | 50(60)         | 4.0                 | 2.30      | 420                     | 7.0         |
| 700W    | HB7020A (50Hz)<br>HB7020B (60Hz)   | NH660FLX,<br>MF700LE/BUH,<br>HF700PD |      | 200                | 50(60)         | 7.0                 | 4.10      | 745                     | 9.0         |
| 1000W   | HB10020A (50Hz)<br>HB10020B (60Hz) | NH940FLX,<br>MF1000LS/U,<br>HF1000PD |      | 200                | 50(60)         | 9.5                 | 5.80      | 1050                    | 10.0        |

## Holder

| Holder type | Pipe holder | Chain holder | Ceiling (Hook) |
|-------------|-------------|--------------|----------------|
| Type No.    | <b>FB11</b> | <b>FB21</b>  | <b>FB31</b>    |
| Length (mm) | 500         | 500          | 120            |
| Weight (kg) | 1.1         | 0.7          | 0.45           |

# Built-in Ballast Type Highbay Fixture

A compact built-in ballast type lamp holder is easily installable.



- The ballast integrated with the lamp holder allows a simple installation without the need of wire bounding.
- It can be directly installed to the EYE Automatic Raising & Lowering Device (elec. lift), 10kg type without using any accessories.
- It can be directly installed to an outlet box or an exposed box without using stud bolts.
- The triple safety function of the ballast that is resistant to high voltage pulse prevents the over-current and abnormal temperature surge.
- The capacitor protected by the multi-point distribution type detector with electric protective circuit.

**Adaptable shade:**

|        |        |
|--------|--------|
| HCP403 | HCP407 |
| HPP403 | HPP407 |
| HSL403 | HSL407 |
| HCP401 | HCP408 |
| HPP401 | HPP408 |
| HSL401 | HSL408 |
| HCP402 |        |
| HPP402 |        |
| HSL402 |        |

| Watt                | 250W                                                 | 300W                                                 | 400W                                                 |
|---------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| type                | HB2520A(B)                                           | HB3020A(B)                                           | HB4020A(B)                                           |
| Lamp                | Sunlux Ace 220W<br>Multi-Hi Ace 250W<br>Mercury 250W | Sunlux Ace 270W<br>Multi-Hi Ace 300W<br>Mercury 300W | Sunlux Ace 360W<br>Multi-Hi Ace 400W<br>Mercury 400W |
| Supply voltage (V)  | 200                                                  | 200                                                  | 200                                                  |
| Frequency (Hz)      | 50(60)                                               | 50(60)                                               | 50(60)                                               |
| Power factor        | High                                                 | High                                                 | High                                                 |
| Input current (A)   | At starting                                          | 2.6                                                  | 3                                                    |
|                     | Stable operation                                     | 1.45                                                 | 1.75                                                 |
| Primary wattage (W) | 263                                                  | 313                                                  | 420                                                  |
| weight (kg)         | 6.0                                                  | 6.5                                                  | 7.0                                                  |

| type        | Pipe suspension | Chain suspension | Surface mount hook |
|-------------|-----------------|------------------|--------------------|
| Name        | FB11            | FB21             | FB31               |
| Length (mm) | 500             | 500              | 120                |
| Weight (kg) | 1.1             | 0.7              | 0.45               |

- When you use a fixture with a lifting, use the eyebolt (M10) for the built-in ballast type high bay fixture.
- Select the aluminum alloy molded fixture and the standard shade hood. (Price of the fixture does not include that for the lamp and the shade.)

**Instructions for Use**

You cannot make the lifting tool longer than the standard length.

Make sure to keep the pipe suspension horizontal.

You cannot use HB7020 and HB10020 for an exposed box.

Use the fixture indoors where the ambient temperature is below 35°C.

The fluctuation of supply voltage should not exceed  $\pm 6\%$  of the rated voltage.

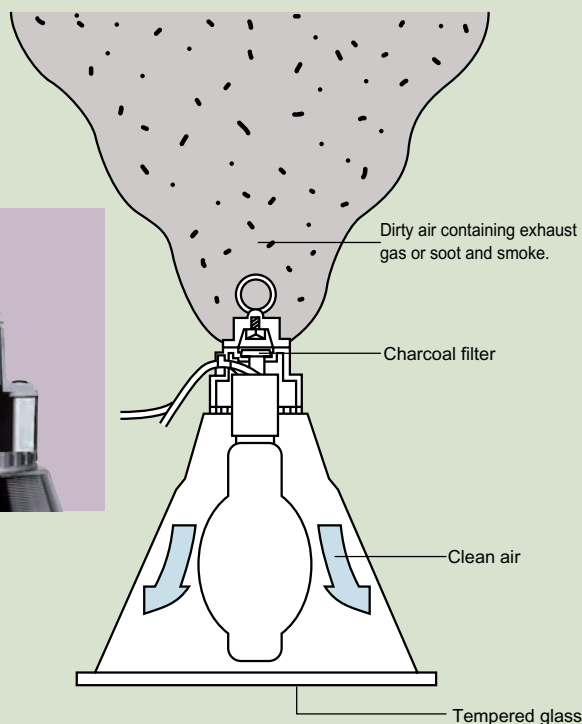
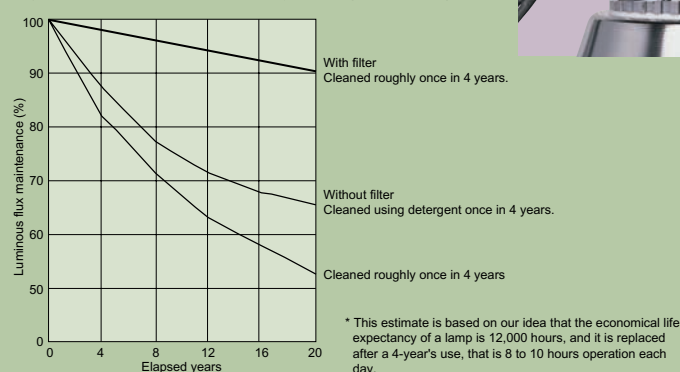
# Highbay Fixtures with Charcoal Filters

A charcoal filter in the socket holder of the highbay fixture keeps the reflector clean even in a dusty place and maintains the high reflectance. The ALGLAS-coated shade features corrosion resistance. You can easily clean it and enjoy effective lighting for long time.

## Charcoal filter

Activated charcoal with high adsorption prevents exhaust gas or soot and smoke from entering into the luminaire when it is switched on and off.

## Aged deterioration for 20 years (estimate)



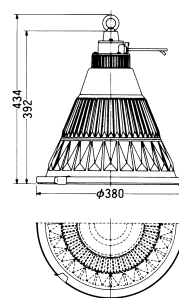
HID lamp 360W

## EVS401

### Specification

- Reflector : Aluminium, ALGLAS finished
- Front glass : Clear tempered glass
- Socket housing : Aluminium extrusion
- Charcoal filter
- Weight : 3.1 kg

drawing



### Suitable lamps

- MF250~300LE(LSH)/BU
- NH360FLX
- HF200~300PD

Optical data

p.209

Pipe holder (HID lamp 360W)

## EVS401 + FB11

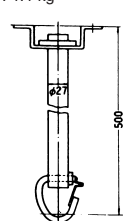
Fixture : EVS401 Pipe Pendant : FB11 Weight : 4.2 kg



### Pipe pendant FB11

- Finish : Galvanized steel plate
- Length : 500mm
- Weight : 1.1 kg

drawing



Set length : 934mm

Chain holder (HID lamp 360W)

## EVS401 + FB21

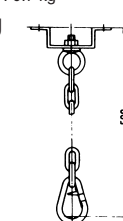
Fixture : EVS401 Chain Pendant : FB21 Weight : 3.8 kg



### Chain pendant FB21

- Finish : Galvanized steel plate
- Length : 500mm
- Weight : 0.7 kg

drawing



Set length : 934mm

Ceiling mount holder (HID lamp 360W)

## EVS401 + FB31

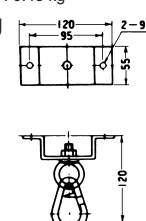
Fixture : EVS401 Hook Pendant : FB31 Weight : 3.6 kg



### Hook pendant FB31

- Finish : Galvanized steel plate
- Length : 120mm
- Weight : 0.45 kg

drawing



Set length : 554mm

# EYE Mixed Light (Combination light)

## Features

### - Uniform illuminance improves your visual environment

The special facet reflector and the globe made of special glass not only save energy but provide comfortable visual environment. Comparing to shades with louvers, glare is reduced by 27% for a direction of 30° and by 20% for a direction of 45°. You will enjoy the flux distribution without colour heterogeneity.

### - Expense of power consumption is reduced by 30% to 40%

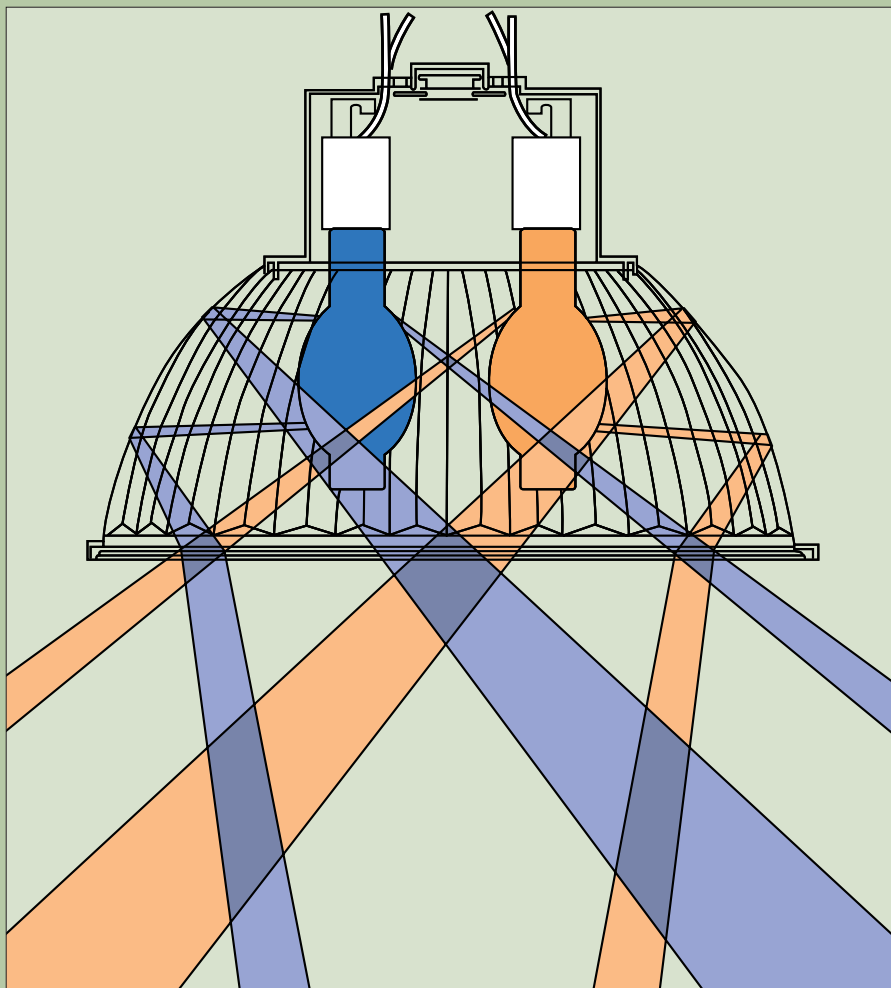
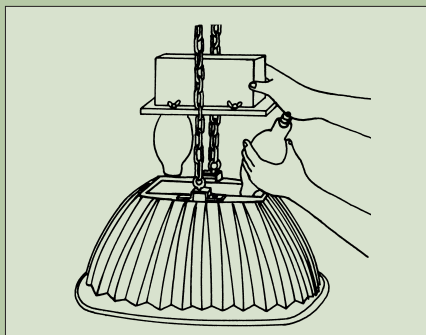
Comparing to the illumination using mercury lamps, the expense of power consumption can be reduced by 15% to 44% depending on the light source combination.

### - Maintenance-free for long time

The ALGLAS reflector and closed structure with a charcoal filter keep the luminaire clean to provide the best performance for a long time.

## Lamp replacement

You can easily replace the lamps by removing the light source box.



## Comparison between a single light and combination lights (Example: combination of light sources)

You can make an optically combined light in one luminaire by combining two lamps in different light colours with special facet reflector and diffusion glass. A combination light improves colour rendering and saves electricity. You can compare the luminous efficacy between the single light and the combination light in the table below.

|                            | HF vs. NH HF                                                      |                   | HF vs. NH HF                                                      |                   | HF vs. NH MF                                                      |                       | HF vs. NH MF                                                      |                       | MF vs. NH MF                                                      |                       |
|----------------------------|-------------------------------------------------------------------|-------------------|-------------------------------------------------------------------|-------------------|-------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------|-----------------------|
| Lamp type                  | HF400PD                                                           | NH220FLX, HF300PD | HF700PD                                                           | NH360FLX, HF400PD | HF700PD                                                           | NH360FLX, MF400LE/BUP | HF400PD                                                           | NH220FLX, MF300LE/BUP | MF700LE/BUH                                                       | NH220FLX, MF400LE/BUP |
| Efficiency (lm/W)          | 55                                                                | 81.3              | 58.5                                                              | 91.4              | 58.6                                                              | 112.5                 | 55                                                                | 100                   | 82.9                                                              | 97.7                  |
| Initial lumens (lm, 100H)  | 22000                                                             | 42300             | 41000                                                             | 69500             | 41000                                                             | 85500                 | 22000                                                             | 52000                 | 58000                                                             | 64500                 |
| Ratio of mixed light       | —                                                                 | 63 : 37           | —                                                                 | 68 : 32           | —                                                                 | 56 : 44               | —                                                                 | 51 : 49               | —                                                                 | 41 : 59               |
| Correlated colour temp.(K) | 4100                                                              | 2550              | 4100                                                              | 2470              | 4100                                                              | 2600                  | 4100                                                              | 2700                  | 3800                                                              | 2900                  |
| Ra                         | 40.0                                                              | 33.0              | 40.0                                                              | 32.5              | 40.0                                                              | 48.0                  | 40.0                                                              | 49.0                  | 70.0                                                              | 55.0                  |
| Consumption wattage (W)    | 415                                                               | 540               | 945                                                               | 790               | 745                                                               | 790                   | 415                                                               | 540                   | 745                                                               | 645                   |
| Efficiency (W/ klm)        | 18.9                                                              | 12.8              | 18.2                                                              | 11.4              | 18.2                                                              | 9.2                   | 18.9                                                              | 10.4                  | 12.8                                                              | 10.0                  |
| Purpose of mixed light     | Energy-saving                                                     |                   | Energy-saving                                                     |                   | Energy-saving                                                     |                       | Energy-saving & Good colour rendition                             |                       | Energy-saving & Good colour rendition                             |                       |
| Remarks                    | NH220LX+HF300PD combination comes to 68% of the power consumption |                   | NH360LX+HF400PD combination comes to 63% of the power consumption |                   | NH360LX+MF400LE combination comes to 51% of the power consumption |                       | NH220LX+MF300LE combination comes to 55% of the power consumption |                       | NH220LX+MF400LE combination comes to 78% of the power consumption |                       |

## Cautions:

\* The combination light contains two lamps and has a closed structure. Comparing to open type lights, the temperature inside the fixture remains high for longer time to cause the delay in restart of the HID light source. In case of the Metal Halide lamp (MF-LE), especially, it takes about 20 minutes until the HID light source is turned on after it is switched off.

\* The FEC lamp (NH-LS or MF-LS) is not adaptable. Use Sunlux Ace or Multi Hi-Ace (MF-LE) with the former built-in ignitor. Please contact our dealer for details.

\* The power consumption above table is when the high power factor type ballast for 200 V is used.

## Comparison of 'Combination light' and 'Combination lighting using single lights'

### Conditions:

Area: 26 x 30 m

Height of lights: 8 m

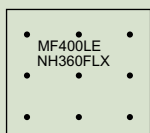
Design illuminance: 300 lux

Light source used: EYE Multi Hi-Ace (MF400LE) + EYE Sunlux Ace (NH360FLX)

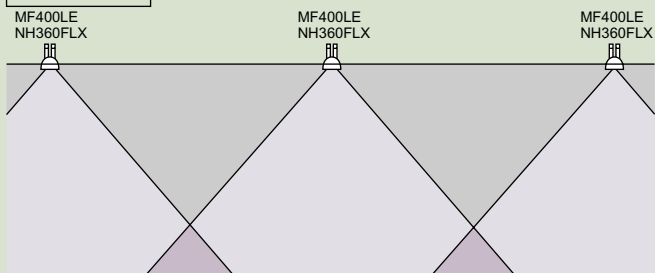
The areas of 100 lux were patterned.

### 'Combination light, EVM820'

Nine units of the combination light, EVM820 provide ideal illumination with homogeneous illuminance without colour heterogeneity.



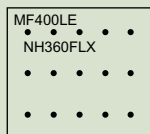
Lighting fixture: EVM820 x 9 units  
Light source: (NH360FLX + MF400LE) x 9 units  
Average illuminance: 350 lux, average colour rendering index (Ra): 46  
Luminous efficacy: 105 lm/w



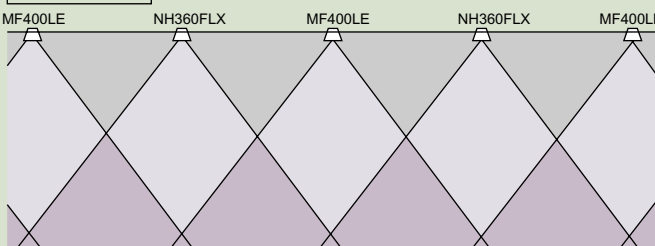
Sukagawa Arena  
Client: Sukagawa City Government  
Designed by: Ishimoto Construction

### 'Combination lighting using single lights, SAW412'

Total 15 units of single light type reflector (SAW412) are required for combination lighting. With the combination lighting, you can have uniform planar illuminance but colour heterogeneity occurs on illuminated surface and in space. This will cause inconvenience in plays using balls, etc. because balls, etc. moving in the space have flicker effect because of the colour or brightness heterogeneity.

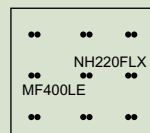


Light fitting: EVM820 x 9 units  
Light source: (NH360FLX + MF400LE) x 9 units  
Average illuminance: 350 lux, average colour rendering index (Ra): 46  
Luminous efficacy: 105 lm/w

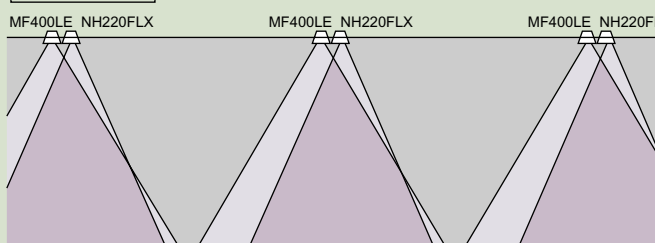


### 'Combination lighting using single lights, SAW412 – Close-set double-bay-fixture lighting'

Combination lighting by closely set double bay fixtures provides almost the same level of illuminance and colour homogeneity as that of combination light. However you will find colour heterogeneity in space and glare directly from lamps and also feel uncomfortable because of lamps in different colours laid.



Light fitting: (SAW412 x 18 + Y39W holder) x 9 sets  
Light source: (NH220FLX + MF400LE) x 9 units  
Average illuminance: 281 lux, average colour rendering index (Ra): 52  
Luminous efficacy: 941 lm/w



Yuzawa Municipal Gymnasium  
Client: Yuzawa City Government  
Designed by: Cosmo Design Ltd.

# Mixed light

## For 250W + 400W and 400W + 400W lamps

Please refer to the table ( page 108 ) for suitable lamps



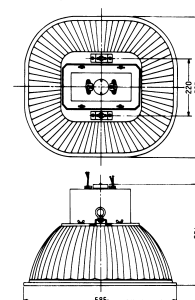
Hanging type  
HID lamp 400W + 400W

### EVM820

- Reflector : ALGLAS finished
- Diffuser : Heat tempered glass with built-in charcoal filter
- Weight : 7.0 kg
- Suspension accessories : FB11 Pipe pendant FB21 Chain  
Two of each

Optical data **p.210**

drawing



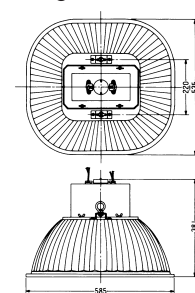
Hanging type  
HID lamp 250W + 400W

### EVM620

- Reflector : ALGLAS finished
- Diffuser : Heat tempered glass with built-in charcoal filter
- Weight : 7.0 kg
- Suspension accessories : FB11 Pipe pendant FB21 Chain  
Two of each

Optical data **p.210**

drawing



Ceiling type  
HID lamp 400W + 400W

### EVM811

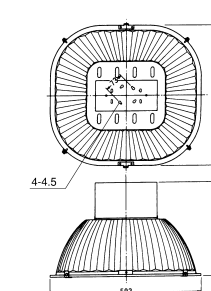
HID lamp 250W + 400W

### EVM611

- Reflector : ALGLAS finished, With guard
- Weight : 5.0 kg

Optical data **p.210**

drawing



Chain hanging type  
HID lamp 400W + 400W

### EVM811 + FH201 = EVM812

HID lamp 250W + 400W

### EVM611 + FH201 = EVM612

- Reflector : ALGLAS finished, With guard
- Suspension accessories : FH201

Optical data **p.210**

# Mixed light

## For 250W + 400W and 400W + 400W lamps

Please refer to the table ( page 108 ) for suitable lamps



For Automatic Raising & Lowering type  
HID lamp 400W + 400W

### EVM821

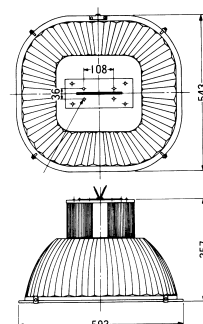
For Automatic Raising & Lowering type  
HID lamp 250W + 400W

### EVM621

- Reflector : ALGLAS finished
- Weight : 3.6kg
- Suspension accessories : UDA28

Optical data p.211

drawing



## Accessories for Mixed light

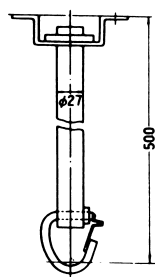


Pipe

### FB11

- Adaptable fixture : EVM820, EVM620
- Weight : 1.1kg
- Finish : Galvanized iron
- Two pipes are required

drawing

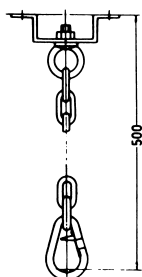


Chain

### FB21

- Adaptable fixture : EVM820, EVM620
- Weight : 0.7kg
- Finish : Galvanized iron
- Two pipes are required

drawing

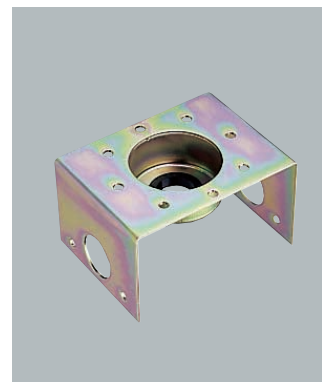
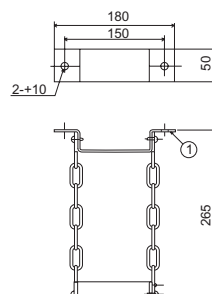


Chain

### FH201

- Adaptable fixture : EVM811, EVM611
- Finish : Galvanized iron

drawing

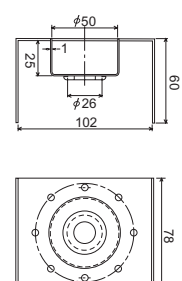


Automatic Raising &  
Lowering Device

### UDA28

- Adaptable fixture : EVM821, EVM621
- Weight : 220g
- Finish : Galvanized iron

drawing

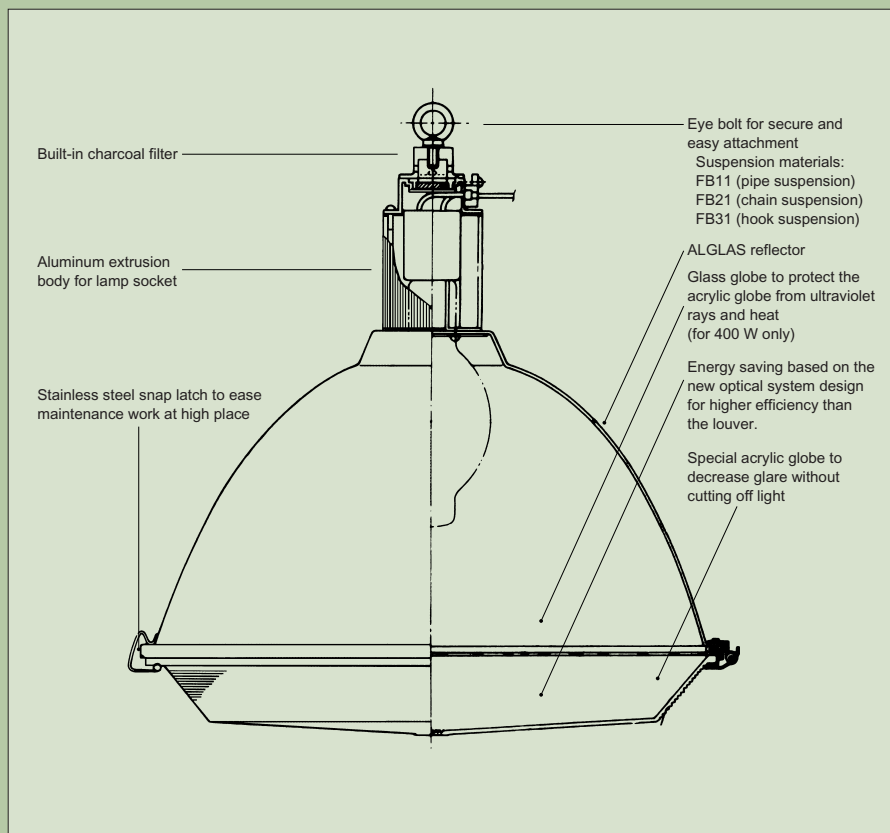


# EYE Low Bright

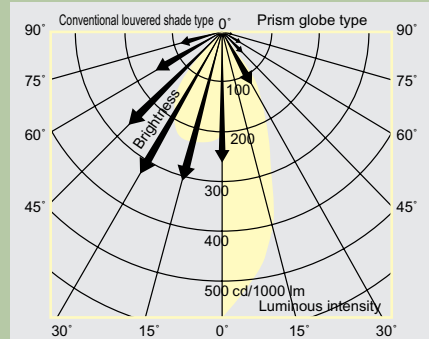
Medium and high bay fixtures that provide little glare. The computer designed reflector accurately controls the light and the globe with new optical prism reduces the glare. The ALGLAS-finished luminary is protected from fouling and damage, and its charcoal filter is helpful to save power consumption and your maintenance work.

## Features

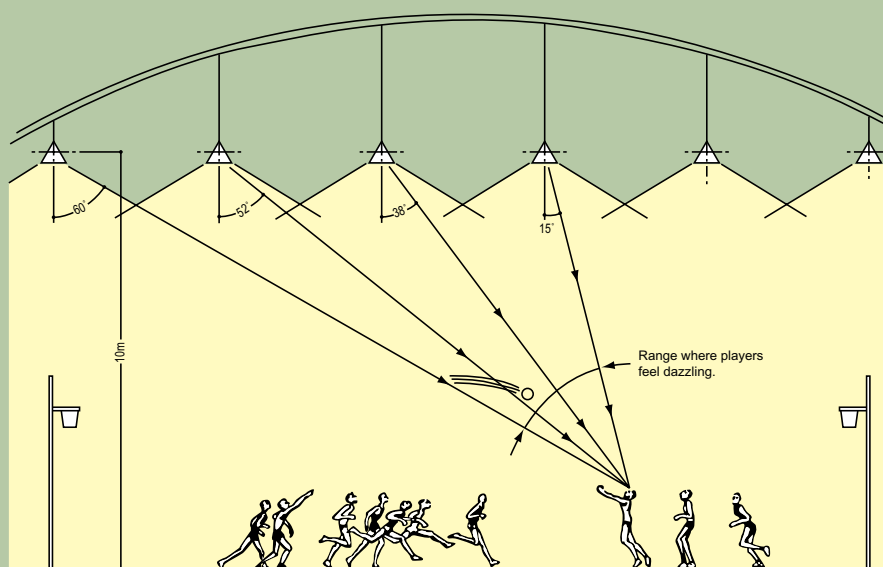
- Comparing to conventional shade type (SAW412 with louver), the prism globe reduces the glare to 1/4 or less for 45 degrees direction, and to about 1/3 for 30 degrees direction. You will enjoy a comfortable visual environment.
- High uniformity of light is obtained. You will have uniform illuminance distribution even with low brightness. You will also have a double of immediate below illuminance comparing to that with louvered shade.
- The closed structure with ALGLAS reflector and charcoal filter keeps the luminary maintenance free for a long time because the exhausted gas or smoke in the air do not come into the unit through the clearance produced in timing with switching on and off.
- The latch switching mechanism ease your lamp replacement at a high place.



## Luminous distribution and brightness of EYE Low Bright and conventional louvered shade



The dark coloured area indicates the luminous distribution. The light is bright if the area is large. The black arrows show the brightness. The light radiation causes much glare if the arrows are large.



In gymnasiums and other indoor sports facilities, it is not uncommon for the control of light distribution to be inadequate over an angle range of 0-60°. (In particular with sports such as volleyball, badminton or basketball, where the play is carried out over a fairly wide area, competitors looking upwards to track the ball (or shuttlecock) can be dazzled and subjected to strong glare, which can temporarily impair vision.

# EYE LOW BRIGHT 400W, 250W



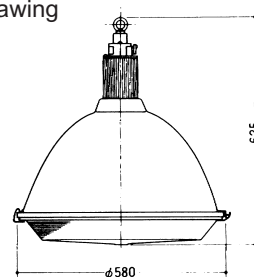
HID lamp 400W

## EYL420

### Specification

- Suitable pendant : FB11, FB21, FB31
- ALGLAS reflector
- With charcoal filter
- Acrylic globe with prism
- With tempered glass
- Weight : 6.0 kg

drawing



### Suitable lamps

- Metal halide lamps MF400LS/U
- High pressure sodium lamps NH360FLX
- Mercury lamps HF400PD

Optical data

p.211

CADDATA



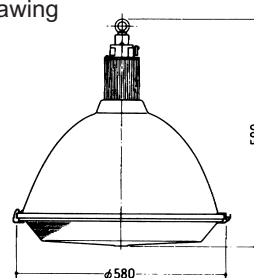
HID lamp 250W

## EYL220

### Specification

- Suitable pendant : FB11, FB21, FB31
- ALGLAS reflector
- With charcoal filter
- Acrylic globe with prism
- Weight : 4.0 kg

drawing



### Suitable lamps

- Metal halide lamps MF250LS/U
- High pressure sodium lamps NH220FLX
- Mercury lamps HF250PD

Optical data

p.211

CADDATA

## Pendants for EYE LOW BRIGHT

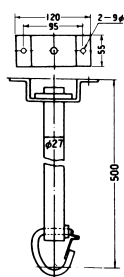


Pipe pendant

## FB11

- Suitable fixture : EVM820, EVM620
- Weight : 1.1 kg
- Finish : Galvanized iron
- Two pipes are required for the installation.

drawing

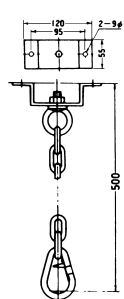


Chain pendant

## FB21

- Suitable fixture : EVM820, EVM620
- Weight : 0.7 kg
- Finish : Galvanized iron
- Two chains are required for the installation.

drawing

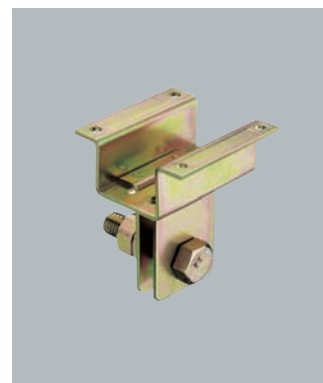
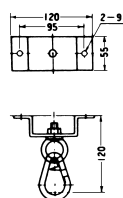


Ceiling mount

## FB31

- Suitable fixture : EYL420, EYL220
- Weight : 0.45 kg
- Finish : Galvanized iron

drawing

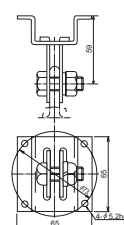


Parts for Automatic Rising & Lowering Device (10kg type)

## UDA29

- Suitable fixture : EYL420, EYL220
- Suitable Automatic rising & lowering device : for 5kg, 6kg, 10kg
- Finish : Galvanized iron

drawing



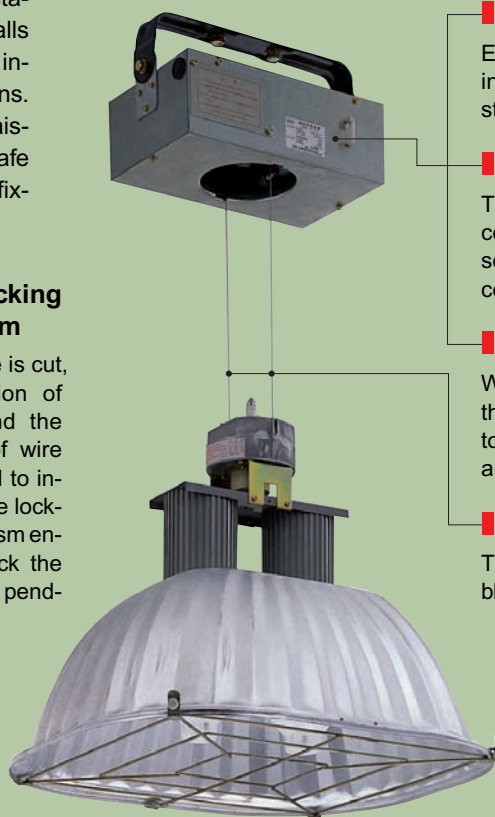
# Automatic Raising & Lowering Device

High bay fixtures used in gymnasiums, station concourses or building entrance halls require periodical, usually a large-scale inspection works in safe working conditions. Iwasaki's electric lift, EYE Automatic Raising & Lowering Device allows you a safe and efficient maintenance work for any fixtures.



## Auto. locking mechanism

When a wire is cut, the inclination of machine and the slackness of wire are detected to instantly let the locking mechanism engaged to lock the wire. (Patent pending)



## Auto. stop mechanism

Even when a power interruption occurs during operation, the machine automatically stops and never falls.

## Maintenance-free

The machine incorporates the special reducer with high allowable torque. You need no service work for the motor and reducer except for special cases.

## Auto. locking mechanism

When the machine is electrically connected, the lifting mechanism is automatically locked to ensure the safety of work. (except for 3 kg and 6 kg types)

## Two-wire suspension

The two-wire suspension system ensures stable lifts of luminaries without rotation.

### Standard 3 kg and 6 kg types

- For lifting height of up to 15 m (8 m for 3 kg type), especially for gymnasiums, warehouses, factories and commercial facilities.
- For luminaries in 6 kg in total. (less than 3 kg for 3 kg type)
- Low price.
- Compact design not disfiguring the ceiling.
- Drop prevention
- The locking mechanism locks the fixture even when the wire is cut.



### Standard surface type

- Smooth moving with 2wires
- Auto stop function
- Maintenance free
- Auto lock function

|                            | 5kg | 10kg | 15kg | 20kg |
|----------------------------|-----|------|------|------|
| Square type                | ●   | ●    | ●    | ●    |
| Square type for Bank light | ●   | ●    |      |      |
| Round type                 | ●   | ●    |      |      |



### Closed type (5 kg type)

- Closed moisture-proof mechanism
- Allows the use in dusty and humid locations.
- Anti-pollution feature
- Provided by the stainless steel body and major components.
- Safe and high performance reversible motor.
- Can be used for slope-ceilings
- The inclination block allows the use for slope-ceilings of up to 30 degrees.



### Recessed type (5 kg type)

- The machine is stored in the ceiling to allow maintenance work of luminaries without disfiguring the lobbies, entrance halls and commercial spaces.
- Recessed type for down-light lift is also available.

### Down light type (5 kg type)

- Automatic Raising & Lowering Device incorporated
- Auto lock function
- Auto stop function
- Variety ranges



### Bank light type (5 kg type)

- Automatic Raising & Lowering Device incorporated
- Allows the use of multi-bank lights
- The mounting channel can incorporate the ballast.
- Simple transportation and installation
- The mounting channel and the equipment are separated.
- Three types of equipment forms:
- All of Square, Round and Hexagonal types can be used for multi-light operation.
- Feed wiring is possible.



# Automatic Raising & Lowering Device

A summary table

| Fixture Type                    | Weight type (kg)  | Appearance                                                                                                                                                              | Specification                                            | Type #                                               | Support weight (kg) | Reference page |
|---------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------|---------------------|----------------|
| Standard surface type           | 3kg               |                                                                                        | Square shape, 2 wire system, ceiling, slope ceiling      | UDM20183/K<br>UDM20283/K<br>UDM40183/K<br>UDM40283/K | 0kg ~ 3kg           | P.117          |
|                                 |                   |                                                                                        | Square shape, 2 wire system With protector               | UDM20283<br>UDM40283                                 |                     |                |
|                                 | 5kg               |                                                                                        | Round shape 2 wire system, ceiling, With protector       | UDM21273<br>UDM41273<br>UDM21274<br>UDM41274         | 1kg ~ 5kg           | P.118          |
|                                 |                   |                                                                                        | Square shape, 2 wire system, ceiling, slope ceiling      | UDM21172/K<br>UDM21272/K<br>UDM41172/K<br>UDM41272/K | 1kg ~ 5kg           | P.119          |
|                                 |                   |                                                                                        | Square shape, 2 wire system With protector               | UDM21172<br>UDM21272<br>UDM41172<br>UDM41272         |                     |                |
|                                 |                   |                                                                                        | Square shape, 2 wire system, ceiling, slope ceiling      | UDM21183/K<br>UDM21283/K<br>UDM41183/K<br>UDM41283/K | 0kg ~ 6kg           | P.120          |
|                                 |                   |                                                                                        | Square shape, 2 wire system With protector               | UDM21183<br>UDM21283<br>UDM41183<br>UDM41283         | 0kg ~ 6kg           |                |
|                                 |                   |                                                                                       | Square shape, 2 wire system Slope ceiling                | UDM42272/K<br>UDM62252/K                             | 1kg ~ 10kg          | P.121          |
|                                 | 10kg              |                                                                                      | Square shape, 2 wire system With protector               | UDM42272<br>UDM62252                                 | 1kg ~ 10kg          |                |
|                                 |                   |                                                                                      | Round shape 2 wire system                                | UDM42273<br>UDM62253                                 | 1kg ~ 10kg          |                |
|                                 |                   |                                                                                      | Round shape 2 wire system                                | UDM63252/K<br>UDM83252/K                             | 2kg ~ 15kg          | P.123          |
|                                 | 15kg              |                                                                                      | Round shape 2 wire system                                | UDM85252/K<br>UDM15252/K                             | 3kg ~ 25kg          |                |
|                                 | 25kg              |                                                                                      | Round shape 2 wire system                                |                                                      |                     |                |
| Closed type                     | 5kg               |                                                                                      | Closed type 2 wire system, ceiling, slope ceiling        | UDM21273M/K                                          | 1kg ~ 5kg           | P.124          |
| Recessed type<br>Downlight type | Recessed 5kg      |                                                                                      | Recessed type 2 wire system                              | UDM21275<br>UDM41275                                 | 1kg ~ 5kg           | P.124          |
|                                 | 5kg               |   | Square shape, 2 wire system<br>Round shape 2 wire system | UDM21276<br>UDM41276<br>UDM21277<br>UDM41277         |                     | P.127          |
|                                 |                   |   | Square shape, 2 wire system<br>Round shape 2 wire system | UDM22278<br>UDM22279                                 |                     | P.127          |
|                                 | Exclusive ballast |   | Square shape, 2 wire system<br>Round shape 2 wire system |                                                      | —                   | P.128          |
|                                 |                   |   | Square shape, 2 wire system<br>Round shape 2 wire system |                                                      |                     | P.128          |
| Bank light type                 | 5kg               |                                                                                      | Square shape                                             | 1 lamp type 41011M                                   | 1kg ~ 5kg           | P.125          |
|                                 |                   |                                                                                                                                                                         |                                                          | 2 lamps type 42011M                                  |                     |                |
|                                 |                   |                                                                                                                                                                         |                                                          | 3 lamps type 43011M                                  |                     |                |
|                                 |                   |                                                                                                                                                                         |                                                          | 4 lamps type 44011M                                  |                     |                |
|                                 |                   |                                                                                      | Round shape                                              | 1 lamp type 41021M                                   | 1kg ~ 5kg           | —              |
|                                 |                   |                                                                                                                                                                         |                                                          | 2 lamps type 42021M                                  |                     |                |
|                                 |                   |                                                                                                                                                                         |                                                          | 3 lamps type 43021M                                  |                     |                |
|                                 |                   |                                                                                                                                                                         |                                                          | 4 lamps type 44021M                                  |                     |                |
|                                 |                   |                                                                                      | Hexagonal shape                                          | 1 lamp type 41031M                                   | 1kg ~ 5kg           | —              |
|                                 |                   |                                                                                                                                                                         |                                                          | 2 lamps type 42031M                                  |                     |                |
|                                 |                   |                                                                                                                                                                         |                                                          | 3 lamps type 43031M                                  |                     |                |
|                                 |                   |                                                                                                                                                                         |                                                          | 4 lamps type 44031M                                  |                     |                |

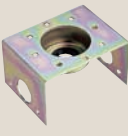
# Automatic Raising & Lowering Device

## Combination with accessories

| Lamp holder                                                                                               | Type of accessories   |                                                                                                            | Guard popular type                                                                                        | Louver popular type                                                                                         | Guard                                                                                                    | Guard with net                                                                                          | Net protector                                                                                              | Recessed guard                                                                                            | Glass protector                                                                                           | Recessed louver                                                                                           | Louver                                                                                                    |
|-----------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|                                                                                                           | lamp                  | Highbay reflector                                                                                          |                                                                                                           |                                                                                                             |                                                                                                          |                                                                                                         |                                                                                                            |                                                                                                           |                                                                                                           |                                                                                                           |                                                                                                           |
| 026-0002P<br>(265g)<br>  | MF125LS/BUP<br>(130g) | SAW103<br>(180g)<br>      |                                                                                                           |                                                                                                             | GSAW13<br>(420g)<br>    |                                                                                                         |                                                                                                            |                                                                                                           |                                                                                                           |                                                                                                           | LSAW13<br>(150g)<br>   |
|                                                                                                           |                       |                                                                                                            |                                                                                                           |                                                                                                             |                                                                                                          |                                                                                                         |                                                                                                            |                                                                                                           |                                                                                                           |                                                                                                           |                                                                                                           |
| O39-004P<br>(490g)<br>   | MF400LS/BUP<br>(270g) | SAW412<br>(430g)<br>      | GSAW4101<br>(250g)<br>   | LSAW4101<br>(600g)<br>     | GSAW41<br>(700g)<br>    | GSAW41N<br>(1 kg)<br>  | PSAW41N<br>(700g)<br>    | GEW41<br>(1.3 kg)<br>  | PSAW41G<br>(1.4kg)<br> | LEW41<br>(1.5kg)<br>   |                                                                                                           |
|                                                                                                           |                       | SAM412<br>(570g)<br>      |                                                                                                           |                                                                                                             | GSAM41<br>(800g)<br>    |                                                                                                         | PSAM41N<br>(800g)<br>    |                                                                                                           | PSAM41G<br>(1.7kg)<br> |                                                                                                           | LSAM41<br>(1.1 kg)<br> |
|                                                                                                           |                       | SAN412<br>(570g)<br>      |                                                                                                           |                                                                                                             | GSAM41<br>(800g)<br>    |                                                                                                         | PSAM41N<br>(800g)<br>    |                                                                                                           | PSAM41G<br>(1.7kg)<br> |                                                                                                           | LSAM41<br>(1.1 kg)<br> |
| O39-154P<br>(560g)<br> | MF1000LS/U<br>(560g)  | SAW712<br>(980g)<br>    | GSAW7101<br>(400g)<br> | LSAW7101<br>(1.25kg)<br> | GSAW71<br>(1.2kg)<br> |                                                                                                         | PSAW71N<br>(1.2kg)<br> |                                                                                                           | PSAW71G<br>(3kg)<br> |                                                                                                           |                                                                                                           |
| —                                                                                                         | HF400PD<br>(270g)     | KNW411D3<br>(1.5kg)<br> | GSAW4101<br>(250g)<br> | LSAW4101<br>(600g)<br>   | GSAW41<br>(700g)<br>  | GSAW41N<br>(1kg)<br> | PSAW41N<br>(700g)<br>  | GEW41<br>(1.3kg)<br> |                                                                                                           | LEW41<br>(1.5kg)<br> |                                                                                                           |

|                                                                                     |                                        |                     |                       |                     |                     |                       |
|-------------------------------------------------------------------------------------|----------------------------------------|---------------------|-----------------------|---------------------|---------------------|-----------------------|
|  | High bay Reflector                     | For 250W<br>SAW412  | For 300W<br>SAW412    | For 400W<br>SAW412  | For 700W<br>SAW712  | For 1000W<br>SAW712   |
|                                                                                     | High bay fixture with Built-in ballast | HB2520A(B)<br>(6kg) | HB3020A(B)<br>(6.5kg) | HB4020A(B)<br>(7kg) | HB7020A(B)<br>(9kg) | HB10020A(B)<br>(10kg) |

| Parts                                                                                                  | Lamp                                                           | EYE Low Bright                                                                                         | Set weight |
|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------|
| UDA29<br>(400g)<br> | MF400LS/U<br>(270g)<br>NH360FLX<br>(250g)<br>HF400PD<br>(270g) | EVL420<br>(6kg)<br> | 6.7kg      |
|                                                                                                        | MF250LS/U<br>(215g)<br>NH220FLX<br>(185g)<br>HF250PD<br>(200g) | EVL220<br>(4kg)<br> | 4.7kg      |

| Parts                                                                                                  | Lamp                            | Mixed light reflector                                                                                      | Set weight |
|--------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------|------------|
| UDA28<br>(220g)<br> | MF400LE +<br>NH360FLX<br>(520g) | EVM821<br>(3.6kg)<br> | 4.4kg      |
|                                                                                                        | MF400LE +<br>NH220FLX<br>(455g) | EVM621<br>(3.6kg)<br> | 4.3kg      |

# Automatic Raising & Lowering Device (3kg Surface type)

**Square shape**

**2 wires**

## General Specification

- Motor power : 8W
- Contact rating : 300V/12A
- Max. allowable weight : 0~3kg
- Raising & lowering range : 8m
- Wire rope :  $\phi 1.1$ mm Stainless
- Weight : 4.2kg

## Remarks

1. Do not use in strong wind, corrosive and vibration environment.
2. Be sure the lamp is switch off, before operate the raising & lowering device.
3. Do not operate the device continuously for more than 30 minutes.
4. Be sure to set selector switch to "OFF/STOP" position after operation.



Combination example

- ① Device : UDM20283/ K
- ② Lamp holder : O39-004P
- ③ Shade : SAW412
- ④ Glass protector : PSAW41G, weight - 1.4 kg

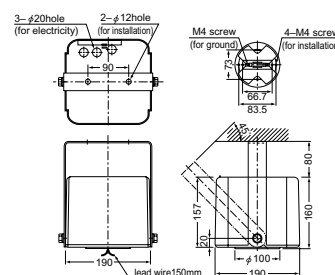
General ceiling and slope ceiling

**UDM20183/K**  
**UDM20283/K**  
**UDM40183/K**  
**UDM40283/K**

The device can be used with a slope ceiling of up to 45°



drawing



| spec. \ type     | UDM20183/K | UDM20283/K | UDM40183/K | UDM40283/K |
|------------------|------------|------------|------------|------------|
| Rated voltage    | 100V       | 200V       | 100V       | 200V       |
| Rated current    | 0.38A      | 0.17A      | 0.38A      | 0.17A      |
| Contact, circuit | 2<br>1     |            | 4<br>2     |            |



Combination example

- ① Device : UDM40283
- ② Lamp holder : O39-003P
- ③ Shade : KNW411D3
- ④ Guard : GSAW41
- ⑤ Protector : TGS414A

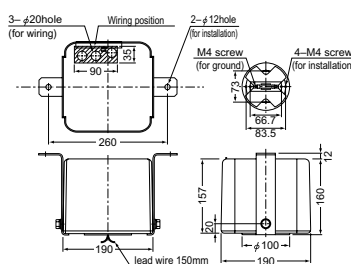
General ceiling and slope ceiling with protector

**UDM20283**  
**UDM40283**

The device can be used with a slope ceiling of up to 35°



drawing



| spec. \ type     | UDM20283 | UDM40283 |
|------------------|----------|----------|
| Rated voltage    | 200V     | 200V     |
| Rated current    | 0.17A    | 0.17A    |
| Contact, circuit | 2<br>1   | 4<br>2   |

# Automatic Raising & Lowering Device ( 5kg Surface type)

|             |
|-------------|
| Round shape |
| 2 wires     |

## General specification

- Rated voltage : 200V
- Rated wattage : 0.23A
- Motor power : 12W
- Contact rating : 300V/12A
- Max. allowable weight : 1~5kg
- Raising & lowering range : 15m
- Wire rope :  $\phi$ 1.1mm Stainless

## Remarks

- Do not use in strong wind, corrosive and vibration environment.
- Be sure the lamp is switch off, before operate the raising & lowering device.
- Do not operate the device continuously for more than 30 minutes.
- Be sure to set selector switch to "OFF/STOP" position after operation.



- Combination example
- ① Device : UDM21273
  - ② Lamp holder : O39-154P
  - ③ Shade : SAW712
  - ④ Guard : GSAW71, weight - 1.2 kg

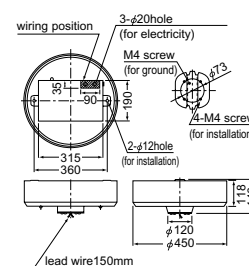
## General ceiling

**UDM21273**  
**UDM41273**

Protector is not available



## drawing



| spec. \ type | UDM21273 | UDM41273 |
|--------------|----------|----------|
| Contact      | 2        | 4        |
| Circuit      | 1        | 2        |
| Weight       | 8.5 Kg   |          |



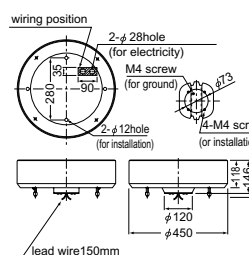
- Combination example
- ① Device : UDM21274
  - ② Protector : TGS412A
  - ③ Lamp holder : O39-002P
  - ④ Shade : SAW412
  - ⑤ Guard : GSAW41, weight - 0.7 kg

## General ceiling and slope ceiling With protector

**UDM21274**  
**UDM41274**



## drawing



| spec. \ type | UDM21274 | UDM41274 |
|--------------|----------|----------|
| Contact      | 2        | 4        |
| Circuit      | 1        | 2        |
| Weight       | 10.5 kg  |          |

# Automatic Raising & Lowering Device ( 5kg Surface type)

|                     |
|---------------------|
| <b>Square shape</b> |
| <b>2 wires</b>      |

## General specification

- Motor power : 12W
- Contact rating : 300V/12A
- Max. allowable weight : 1~5kg
- Raising & lowering range : 15m
- Wire rope :  $\phi$ 1.1mm Stainless
- Weight : 6.5 kg

## Remarks

1. Do not use in strong wind, corrosive and vibration environment.
2. Be sure the lamp is switch off, before operate the raising & lowering device.
3. Do not operate the device continuously for more than 30 minutes.
4. Be sure to set selector switch to "OFF/STOP" position after operation.



Combination example  
 ① Device : UDM41272/ K  
 ② Installation metal parts : UDA28  
 ③ Mixed lights Shade : EVM821

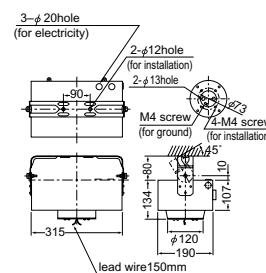
General ceiling and slope ceiling

**UDM21172/K**  
**UDM21272/K**  
**UDM41172/K**  
**UDM41272/K**

The device can be used with a slope ceiling of up to 30°



drawing



| spec. \ type  | UDM21172/K | UDM21272/K | UDM41172/K | UDM41272/K |
|---------------|------------|------------|------------|------------|
| Rated voltage | 100V       | 200V       | 100V       | 200V       |
| Rated current | 0.45A      | 0.23A      | 0.45A      | 0.23A      |
| Contact,      | 2          |            | 4          |            |
| Circuit       | 1          |            | 2          |            |



Combination example  
 ① Metal parts for protector : IA55  
 ② Device : UDM41272  
 ③ Protector : TGS413A  
 ④ Shade : KNW411D3  
 ⑤ Guard : GSAW41

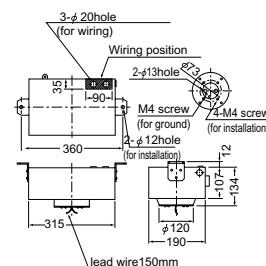
General ceiling and slope ceiling  
 With protector

**UDM21172**  
**UDM21272**  
**UDM41172**  
**UDM41272**

The device can be used with a slope ceiling



drawing



| spec. \ type  | UDM21172 | UDM21272 | UDM41172 | UDM41272 |
|---------------|----------|----------|----------|----------|
| Rated voltage | 100V     | 200V     | 100V     | 200V     |
| Rated current | 0.45A    | 0.23A    | 0.45A    | 0.23A    |
| Contact,      | 2        |          | 4        |          |
| Circuit       | 1        |          | 2        |          |

# Automatic Raising & Lowering Device ( 6kg Surface type)

**Square shape**

**2 wires**

## General specification

- Motor power : 12W
- Contact rating : 300V/12A
- Max. allowable weight : 0~6kg
- Raising & lowering range : 15m
- Wire rope :  $\phi$  1.1mm Stainless
- Weight : 4.8 kg

## Remarks

1. Do not use in strong wind, corrosive and vibration environment.
2. Be sure the lamp is switch off, before operate the raising & lowering device.
3. Do not operate the device continuously for more than 30 minutes.
4. Be sure to set selector switch to "OFF/STOP" position after operation.



Combination example

- ① Device : UDM21283/ K
- ② Holder + installation metal parts : O39-154P
- ③ Shade : SAW712
- ④ Glass protector : PSAW71G

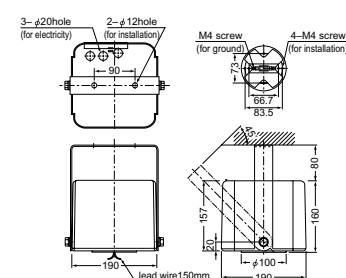
General ceiling and slope ceiling

**UDM21183/K**  
**UDM21283/K**  
**UDM41183/K**  
**UDM41283/K**

The device can be used with a slope ceiling of up to 45°



drawing



| spec. \ type  | UDM21183/K | UDM21283/K | UDM41183/K | UDM41283/K |
|---------------|------------|------------|------------|------------|
| Rated voltage | 100V       | 200V       | 100V       | 200V       |
| Rated current | 0.45A      | 0.23A      | 0.45A      | 0.23A      |
| Contact,      | 2          |            | 4          |            |
| Circuit       | 1          |            | 2          |            |



Combination example

- ① Device : UDM41283
- ② Adaptor : UDA28
- ③ Mixed lights shade : EVM821
- ④ Protector : TGS416A

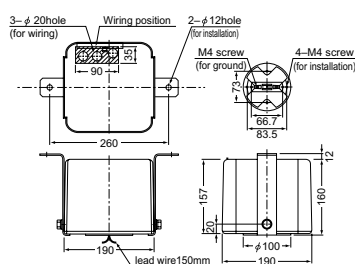
General ceiling and slope ceiling  
With protector

**UDM21183**  
**UDM21283**  
**UDM41183**  
**UDM41283**

The device can be used with a slope ceiling of up to 35°



drawing



| spec. \ type  | UDM21183 | UDM21283 | UDM41183 | UDM41283 |
|---------------|----------|----------|----------|----------|
| Rated voltage | 100V     | 200V     | 100V     | 200V     |
| Rated current | 0.45A    | 0.23A    | 0.45A    | 0.23A    |
| Contact,      | 2        |          | 4        |          |
| Circuit       | 1        |          | 2        |          |

# Automatic Raising & Lowering Device ( 10kg Surface type)

|                     |
|---------------------|
| <b>Square shape</b> |
| <b>2 wires</b>      |

## General specification

- Motor rated voltage : 200V
- Contact rating : 300V/12A
- Max. allowable weight : 1~10kg
- Raising & lowering range : 15m
- Wire rope :  $\phi$ 1.1mm Stainless

## Remarks

1. Do not use in strong wind, corrosive and vibration environment.
2. Be sure the lamp is switch off, before operate the raising & lowering device.
3. Do not operate the device continuously for more than 30 minutes.
4. Be sure to set selector switch to "OFF/STOP" position after operation.



### Combination example

- ① Device : UDM42272/ K
- ② Installation metal parts : UDA29
- ③ EYE Low Bright : EVL420

General ceiling and slope ceiling

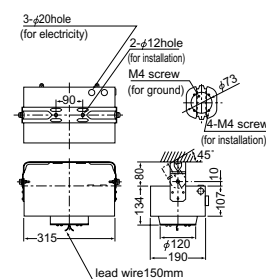
## UDM42272/K

## UDM62252/K

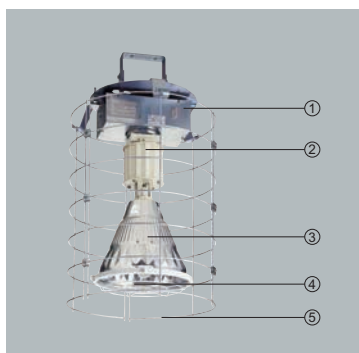
The device can be used with a slope ceiling of up to 30°



drawing



| spec. type       | UDM42272/K | UDM62252/K |
|------------------|------------|------------|
| Rated current    | 0.23A      | 0.25A      |
| Rated power      | 12W        | 15W        |
| Contact, Circuit | 4<br>2     | 6<br>3     |
| Weight           | 7.0 kg     |            |



### Combination example

- ① Device : UDM42272
- ② Highbay fixture with built-in ballast : HB4020A
- ③ Shade : SAW412
- ④ Guard : GSAW41
- ⑤ Protector : TGS415A

General ceiling and slope ceiling  
With protector

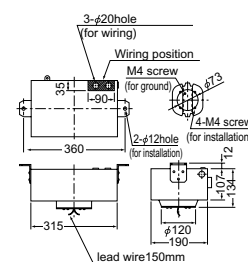
## UDM42272

## UDM62252

The device can be used with a slope ceiling of up to 35°



drawing



| spec. type       | UDM42272 | UDM62252 |
|------------------|----------|----------|
| Rated current    | 0.23A    | 0.25A    |
| Rated power      | 12W      | 15W      |
| Contact, Circuit | 4<br>2   | 6<br>3   |
| Weight           | 6.5 kg   |          |

# Automatic Raising & Lowering Device ( 10kg Surface type)

|             |
|-------------|
| Round shape |
| 2 wires     |

## Remarks

1. Do not use in strong wind, corrosive and vibration environment.
2. Be sure the lamp is switch off, before operate the raising & lowering device.
3. Do not operate the device continuously for more than 30 minutes.
4. Be sure to set selector switch to "OFF/STOP" position after operation.



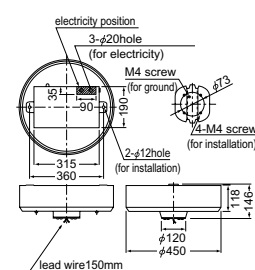
Combination example  
 ①Device : UDM42273  
 ②Highbay fixture with built-in ballast : HB4020A  
 ③Shade : SAW412  
 ④Guard : GSAW41

## UDM42273 UDM62253

The device can be used with  
a slope ceiling of up to 30°



## drawing



| spec. \ type                | UDM42273            | UDM62253 |
|-----------------------------|---------------------|----------|
| Rated voltage               | 200V                |          |
| Rated current               | 0.23A               | 0.25A    |
| Rated power                 | 12W                 | 15W      |
| Contact,<br>Circuit         | 4<br>2              | 6<br>3   |
| Contact rating              | 300V/ 12A / circuit |          |
| Max. allowable<br>weight    | 1~10 kg             |          |
| Raising &<br>lowering range | 15 m                |          |
| Wire rope                   | φ 1.1mm stainless   |          |
| Weight                      | 8.5 kg              |          |

# Automatic Raising & Lowering Device (15kg / 25kg Surface type)

|              |
|--------------|
| Square shape |
| 2 wires      |



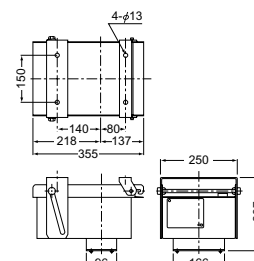
Combination example  
 ① Device : UDM83252/ K  
 ② Arm for 4 lights : UDA25  
 ③ Lamp holder : O39-0  
 ④ Shade : SAW412  
 ⑤ Guard : GSAW41

15kg type

## UDM63252/K UDM83252/K



drawing



| spec.                    | type | UDM63252/ K         | UDM83252/ K |
|--------------------------|------|---------------------|-------------|
| Rated voltage            |      | 200V                |             |
| Rated current            |      | 0.35A               |             |
| Rated power              |      | 20W                 |             |
| Contact,                 |      | 6                   | 8           |
| Circuit                  |      | 3                   | 4           |
| Contact rating           |      | 300V/ 12A / circuit |             |
| Max. allowable weight    |      | 2~ 15 kg            |             |
| Raising & lowering range |      | 15 m                |             |
| Wire rope                |      | φ1.8mm stainless    |             |
| Weight                   |      | 10.5 kg             |             |



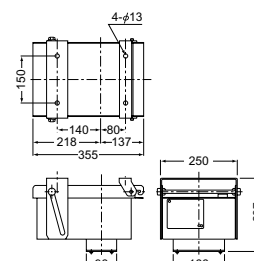
Combination example  
 ① Device : UDM85252/ K  
 ② Arm for 4 lights : UDA25  
 ③ Lamp holder : O39-0  
 ④ Shade : SAW712  
 ⑤ Guard : GSAW71

25kg type

## UDM85252/K UDM15252/K



drawing



| spec.                    | type | UDM85252/ K         | UDM15252/ K |
|--------------------------|------|---------------------|-------------|
| Rated voltage            |      | 200V                |             |
| Rated current            |      | 0.45A               |             |
| Rated power              |      | 40W                 |             |
| Contact,                 |      | 8                   | 10          |
| Circuit                  |      | 4                   | 5           |
| Contact rating           |      | 300V/ 12A / circuit |             |
| Max. allowable weight    |      | 3~ 25 kg            |             |
| Raising & lowering range |      | 15 m                |             |
| Wire rope                |      | φ2.0mm stainless    |             |
| Weight                   |      | 12.5 kg             |             |

# Automatic Raising & Lowering Device (5kg Enclosed type / Recessed type)

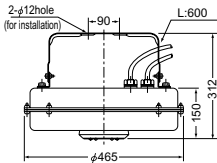
|             |
|-------------|
| Round shape |
| 2 wires     |



Combination example  
 ①Device : UDM21273M/ K  
 ②Adaptor : UDA-PK002P/ M  
 ③Holder : WO39-002P, PK50  
 ④Shade : SAW412

Enclosed type for slope ceiling  
**UDM21273M/K**

drawing



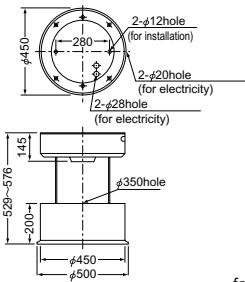
| spec.                    | type | UDM21273M/ K        |
|--------------------------|------|---------------------|
| Rated voltage            |      | 200V                |
| Rated current            |      | 0.23A               |
| Rated power              |      | 12W                 |
| Contact, Circuit         |      | 2<br>1              |
| Contact rating           |      | 300V/ 12A / circuit |
| Max. allowable weight    |      | 1 ~ 5 kg            |
| Raising & lowering range |      | 15 m                |
| Wire rope                |      | φ 1.1mm stainless   |
| Weight                   |      | 12.0 kg             |



Combination example  
 ①Device : UDM21275  
 ②Lamp holder : Q39-002P  
 ③Shade : SAW412  
 ④Guard : GSAW41

Recessed type  
**UDM21275**  
**UDM41275**

drawing



φ480  
 for installation hole



| spec.                    | type | UDM21275            | UDM41275 |
|--------------------------|------|---------------------|----------|
| Rated voltage            |      | 200V                |          |
| Rated current            |      | 0.23A               |          |
| Rated power              |      | 12W                 |          |
| Contact, Circuit         |      | 2<br>1              | 4<br>2   |
| Contact rating           |      | 300V/ 12A / circuit |          |
| Max. allowable weight    |      | 1 ~ 5 kg            |          |
| Raising & lowering range |      | 15 m                |          |
| Wire rope                |      | φ 1.1mm stainless   |          |
| Weight                   |      | 14.5 kg             |          |

# Automatic Raising & Lowering Device

## Bank light

### General Specification

- Body : HT011
- Lamp holder : O39-0
- Suspension accessory : F002P
- Reflector : SAW412
- Guard : GSAW41/P3-309

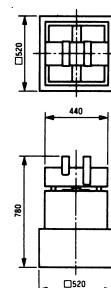


## 41011M

### Specification

- Square type fixture : HT011
- UDM type : UDM21272 (200V 2contacts)
- Channel device : C01 (For 1 reflector)
- Total weight : 25.7kg

drawing

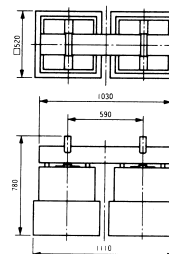


## 42011M

### Specification

- Square type fixture : HT011 X 2
- UDM type : UDM21272 X 2 (200V 2contacts)
- Channel device : C02 (For 2 reflectors)
- Total weight : 49.5kg

drawing

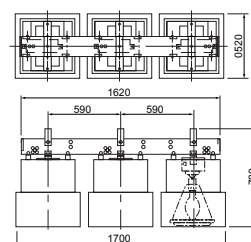


## 43011M

### Specification

- Square type fixture : HT011 X 3
- UDM type : UDM21272 X 3 (200V 2contacts)
- Channel device : C03 (For 3 reflectors)
- Total weight : 74.4kg

drawing

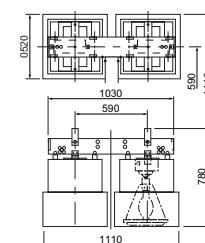


## 44011M

### Specification

- Square type fixture : HT011 X 4
- UDM type : UDM21272 X 4 (200V 2contacts)
- Channel device : C04 (For 4 reflector)
- Total weight : 102.8kg

drawing



# Automatic Raising & Lowering Device

## Down light for Color Arc and SDX lamps

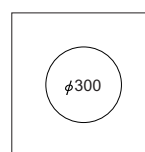
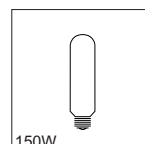
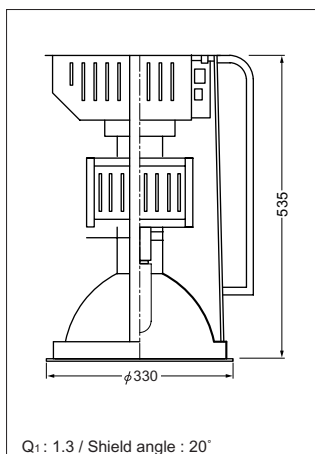
Built-in ballast luminaire with an automatic raising and lowering device.

The down light incorporates an automatic raising and lowering device for the compact HID lamp, For Color Arc and SDX (HYLUX) for your work up to 8 m. With it, you can easily replace lamps of high bay fixtures at building entrances, elevator halls and showrooms. It also enables your simple maintenance and check of ballast. You need no construction for maintenance work. Its mechanical brake system with auto. lock ensures your safety when the motor is lifted. Its design features to provide high quality of light include the reflector of double frame structure to prevent the glare with its shielding angle of 20 degrees.

**UDM21182**  
(100V type)

**UDM21282**  
(200V type)

- Lamps : MT150FSDW  
MT150FSW  
MT150FD  
NHT150FSDX
- Body : Steel plate
- Flame : Steel plate, semi white colour
- Reflector : Aluminium mirror finish
- Raising & lowering range : 8m
- Base : E26
- Weight : 9.8 kg
- With electronic ballast



### Ballast specification

| Type #   | Rated voltage | Input wattage | Frequency | Primary current (A) |             |                     | Rated secondary voltage |
|----------|---------------|---------------|-----------|---------------------|-------------|---------------------|-------------------------|
|          |               |               |           | Without lamps       | At starting | At stable operation |                         |
| UDM21182 | 100V          | 178W          | 50/ 60Hz  | < 1.79              | 1.97        | 1.79                | 110V                    |
| UDM21282 | 200V          | 172W          |           | < 0.87              | 0.96        | 0.87                |                         |

### Raising & Lowering Device specification

| Type #   | Rated voltage | Rated current | wattage | frequency | Motor            |                          |                          |
|----------|---------------|---------------|---------|-----------|------------------|--------------------------|--------------------------|
|          |               |               |         |           | Contact, circuit | Rated current of contact | Raising & lowering speed |
| UDM21182 | 100V          | 0.45A         | 12W     | 50/ 60Hz  | 2                | 12A                      | ≒1.0m/min                |
| UDM21282 | 200V          | 0.23A         |         |           | 1                |                          |                          |

Install the automatic raising and lowering device horizontally (within +/- 2 degrees).

Use a 3-stage selector switch for operation (option) on the market.

The electronic ballast incorporates the pulse stopping circuit. In about 20 minutes if the lamp does not start, the high voltage pulse stops. If you turn off the power and restart it after the stopping function is activated, the pulse is generated for about 20 minutes because of self restart function of the pulse generation.

### Control panel ( with key and select switch )

|                 | Primary voltage | Type #        |
|-----------------|-----------------|---------------|
| 6 circuits 10A  | 200V            | UDA30662/ 10A |
| 12 circuits 20A | 200V            | UDA31222/ 20A |

### Instructions for Use

Carefully wire the fixtures. A wrong wiring may damage them.

Install each breaker for the operation circuit and the lamp circuit.

Do not use the fixtures at a windy, dusty or strongly vibrating place or where the ambient temperature exceeds 40°C.

Make sure to turn off the power when you lift up and down the fixture.

The lifting work must not be continued for more than 30 minutes.

Make sure to return the switch to 'Stop' when you finish the lifting work.

For the lift to more than 8 m height, please contact us.

# Automatic Raising & Lowering Device

**Max. installation weight**  
**5kg type**



**Square shape, 2 wires**

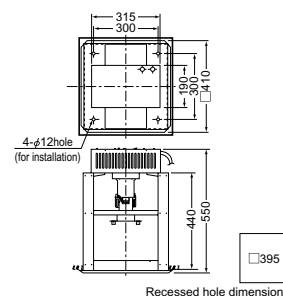
**UDM21276**

2 contacts, 1 circuit

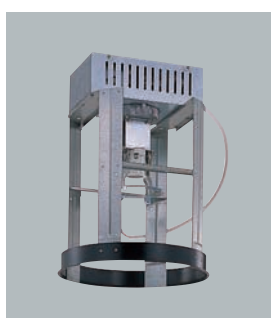
**UDM41276**

4 contacts, 2 circuits

Specifications  
Motor : 200V, 0.23A, 12W  
300V/ 12A / circuit  
Installation weight : 1~5kg  
Raising & lowering range : 15m  
Wire rope :  $\phi$ 1.1mm Stainless  
Weight : 12 kg



**Max. installation weight**  
**5 kg type**



**Round shape, 2 wires**

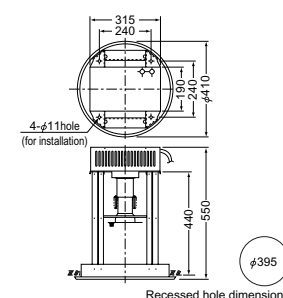
**UDM21277**

2 contacts, 1 circuit

**UDM41277**

4 contacts, 2 circuits

Specifications  
Motor : 200V, 0.23A, 12W  
300V/ 12A / circuit  
Installation weight : 1~5kg  
Raising & lowering range : 15m  
Wire rope :  $\phi$ 1.1mm Stainless  
Weight : 10 kg



**Accessories combination table**

| Accessories                                            | <b>AEK401</b><br>bottom open type | <b>REK401</b><br>with tempered glass | <b>GEK401</b><br>with guard | <b>LEK401</b><br>with aluminium louver |
|--------------------------------------------------------|-----------------------------------|--------------------------------------|-----------------------------|----------------------------------------|
| Automatic Raising & Lowering device<br><b>UDM21276</b> | Weight : 14.5kg                   | Weight : 15.6kg                      | Weight : 14.8kg             | Weight : 14.8kg                        |
| Accessories                                            | <b>AEK412</b><br>bottom open type |                                      | <b>GEK412</b><br>with guard | <b>LEK412</b><br>with aluminium louver |
| Automatic Raising & Lowering device<br><b>UDM41276</b> | Weight : 14.5kg                   | —                                    | Weight : 14.8kg             | Weight : 14.8kg                        |

| Accessories                                            | <b>AEM401</b><br>bottom open type | <b>REM401</b><br>with tempered glass | <b>GEM401</b><br>with guard | <b>LEM401</b><br>with aluminium louver |
|--------------------------------------------------------|-----------------------------------|--------------------------------------|-----------------------------|----------------------------------------|
| Automatic Raising & Lowering device<br><b>UDM21277</b> | Weight : 12kg                     | Weight : 12.9kg                      | Weight : 12.2kg             | Weight : 12.2kg                        |
| Accessories                                            | <b>AEM412</b><br>bottom open type |                                      | <b>GEM412</b><br>with guard | <b>LEM412</b><br>with aluminium louver |
| Automatic Raising & Lowering device<br><b>UDM41277</b> | Weight : 12kg                     | —                                    | Weight : 12.2kg             | Weight : 12.2kg                        |

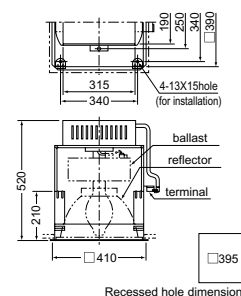
# Automatic Raising & Lowering Device

## Exclusive ballast type



### Square shape, 2 wires UDM22278

Specifications  
 Motor : 200V, 0.23A, 12W  
 2 contacts, 1 circuit  
 300V/ 12A / circuit  
 Installation weight : 1~11kg  
 Raising & lowering range : 15m  
 Wire rope :  $\phi$ 1.1mm Stainless  
 Weight : 11kg



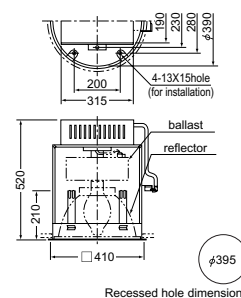
Recessed hole dimensions

## Exclusive ballast type



### Round shape, 2 wires UDM22279

Specifications  
 Motor : 200V, 0.23A, 12W  
 2 contacts, 1 circuit  
 300V/ 12A / circuit  
 Installation weight : 1~11kg  
 Raising & lowering range : 15m  
 Wire rope :  $\phi$ 1.1mm Stainless  
 Weight : 10kg



Recessed hole dimensions

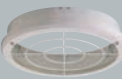
## Accessories combination table

| Accessories                                     |  |                                                                                          | AEK401<br>bottom open type | REK401<br>with tempered glass | GEK401<br>with guard | LEK401<br>with aluminium louver |
|-------------------------------------------------|--|------------------------------------------------------------------------------------------|----------------------------|-------------------------------|----------------------|---------------------------------|
| exclusive ballast                               |  |                                                                                          |                            |                               |                      |                                 |
| Automatic Raising & Lowering device<br>UDM22278 |  | <b>BUD4A01(50Hz)<br/>BUD4B01(60Hz)</b><br>for 400W Mercury ballast<br>Weight : 6.8kg     | Weight : 20.3kg            | Weight : 21.4kg               | Weight : 20.6kg      | Weight : 20.6kg                 |
|                                                 |  | <b>BUD2.5A01(50Hz)<br/>BUD2.5B01(60Hz)</b><br>for 250W Mercury ballast<br>Weight : 6.7kg | Weight : 20.2kg            | Weight : 21.3kg               | Weight : 20.5kg      | Weight : 20.5kg                 |

| Accessories                                     |  |                                                                                          | AEM401<br>bottom open type | REM401<br>with tempered glass | GEM401<br>with guard | LEM401<br>with aluminium louver |
|-------------------------------------------------|--|------------------------------------------------------------------------------------------|----------------------------|-------------------------------|----------------------|---------------------------------|
| exclusive ballast                               |  |                                                                                          |                            |                               |                      |                                 |
| Automatic Raising & Lowering device<br>UDM22279 |  | <b>BUD4A01(50Hz)<br/>BUD4B01(60Hz)</b><br>for 400W Mercury ballast<br>Weight : 6.8kg     | Weight : 18.8kg            | Weight : 19.9kg               | Weight : 19.1kg      | Weight : 19.1kg                 |
|                                                 |  | <b>BUD2.5A01(50Hz)<br/>BUD2.5B01(60Hz)</b><br>for 250W Mercury ballast<br>Weight : 6.7kg | Weight : 18.7kg            | Weight : 19.8kg               | Weight : 19.2kg      | Weight : 19.2kg                 |

# Accessories for Automatic Raising & Lowering Device

## Metal parts and protector

| Accessories              | Highbay reflector                                                                   | Type # | SAW712                                                                            | SAW412                                                                            | SAM412                                                                             | SAN412                                                                              | SAW103                                                                              |
|--------------------------|-------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                          |                                                                                     | Shade  |  |  |  |  |  |
| Name of accessories      | Photos                                                                              |        | Weight : 980g                                                                     | Weight : 430g                                                                     | Weight : 570g                                                                      | Weight : 570g                                                                       | Weight : 180g                                                                       |
| Guard standard type      |    |        | GSAW7101<br>Weight : 400g                                                         | GSAW4101<br>Weight : 250g                                                         |                                                                                    |                                                                                     |                                                                                     |
| Guard                    |    |        | GSAW71<br>Weight : 1.2 kg                                                         | GSAW41<br>Weight : 700g                                                           | GSAM41<br>Weight : 800g                                                            | GSAM41<br>Weight : 800g                                                             | GSAW13<br>Weight : 420g                                                             |
| Guard recessed type      |  |        |                                                                                   | GEW41<br>Weight : 1.3 kg                                                          |                                                                                    |                                                                                     |                                                                                     |
| Guard with net protector |  |        |                                                                                   | GSAW41N<br>Weight : 1.0 kg                                                        |                                                                                    |                                                                                     |                                                                                     |
| Louver standard type     |  |        | LSAW7101<br>Weight : 1.25 kg                                                      | LSAW4101<br>Weight : 600g                                                         |                                                                                    |                                                                                     |                                                                                     |
| Louver                   |  |        |                                                                                   |                                                                                   | LSAM41<br>Weight : 1.1 kg                                                          | LSAM41<br>Weight : 1.1 kg                                                           | LSAW13<br>Weight : 150g                                                             |
| Louver recessed type     |  |        |                                                                                   | LEW41<br>Weight : 1.5 kg                                                          |                                                                                    |                                                                                     |                                                                                     |
| Net protector            |  |        | PSAW71N<br>Weight : 1.2 kg                                                        | PSAW41N<br>Weight : 700g                                                          | PSAM41N<br>Weight : 800g                                                           | PSAM41N<br>Weight : 800g                                                            |                                                                                     |
| Glass protector          |  |        | PSAW71G<br>Weight : 3.0 kg                                                        | PSAW41G<br>Weight : 1.4 kg                                                        | PSAM41G<br>Weight : 1.7 kg                                                         | PSAM41G<br>Weight : 1.7 kg                                                          |                                                                                     |

# Accessories for Automatic Raising & Lowering Device

## Metal parts and protector



### IA56

Metal parts for slope ceiling

- Adaptable devices : Round shape  
5kg, 10kg type  
UDM21273, UDM41273,  
UDM21274, UDM41274,  
UDM42273, UDM62253
- Slope angle : Up to 30 degrees



### TGS712A

- Adaptable devices : Round shape  
5kg type  
UDM21274, UDM41274
- Materials : Mild steel wire  
with white coating
- Dimensions :  $\phi 680 \times 529 \text{H}$
- Adaptable shade : O39-002P + SAW712



### IA55

Metal parts for protector

- Materials : Galvanized steel plate
- Adaptable protector : TGS413A,  
TGS713A
- Adaptable devices : UDM21172,  
UDM21272, UDM41172, UDM41272,  
UDM42272, UDM62252
- Weight : 1.25 kg
- Slope angle : Up to 30 degrees



### TGS415A

(Built-in ballast type)

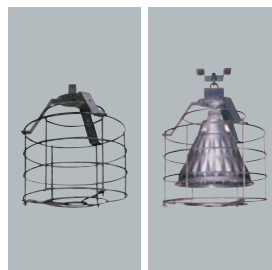
- Adaptable devices : Square shape  
10kg - UDM42172, UDM42272
- Materials : Galvanized mild steel wire
- Dimensions :  $\phi 540 \times 954 \text{H}$
- Slope angle : Up to 35 degrees
- Adaptable fixture : HB4020A(B),  
HB3020A(B) + SAW412, HB2520A(B)



### TGS414A

( $\phi 5 \text{mm}$  wire)

- Adaptable devices : Square shape  
3kg - UDM20283, UDM40283  
6kg - UDM21183, UDM21283,  
UDM41183, UDM41283
- Materials : Galvanized mild steel wire
- Dimensions :  $\phi 540 \times 814 \text{H}$
- Slope angle : Up to 35 degrees
- Adaptable holder : O39-003(4)P +  
SAW412, KNW411D3



### TGS41

The guard for gymnasiums

- Adaptable shades : SAW412,  
SAM412, SAN412
- Dimensions :  $\phi 550 \times 577 \text{H}$
- Finish : White coating
- Weight : 5.5 kg
- Slope angle (ceiling) : Up to 30 degrees



### TGS714A

( $\phi 5 \text{mm}$  wire)

- Adaptable devices : Square shape  
3kg - UDM20283, UDM40283  
6kg - UDM21183, UDM21283,  
UDM41183, UDM41283
- Materials : Galvanized mild steel wire
- Dimensions :  $\phi 720 \times 1084 \text{H}$
- Slope angle : Up to 35 degrees
- Adaptable holder : O39-154P + SAW712



### TGS416A

( $\phi 5 \text{mm}$  wire)

- Adaptable devices : Square shape  
mixed light  
6kg - UDM21183, UDM21283,  
UDM41183, UDM41283
- Materials : Galvanized mild steel wire
- Dimensions :  $W743 \times D693 \times H814$
- Slope angle : Up to 30 degrees
- Adaptable devices : EVM821, EVM621  
+ UDM28



### TGS412A

- Adaptable devices : Round shape  
5 kg - UDM21274, UDM41274
- Materials : Mild steel wire  
with white coating
- Dimensions :  $\phi 500 \times 417 \text{H}$
- Adaptable shade : SAW412,  
O39-0002P + SAW412, KNW412D3

# Automatic Raising & Lowering Device

## Control Panel (Controller and Switch separated)

Lift Controller and Operation Switch separated

The lift controller and the operation switch are separated to make the switch compact and less unpleasant to the eye.

### ●Contact of The EYE Automatic Raising & Lowering Device (lifter) protected

When The EYE Automatic Raising & Lowering Device is lifted, the signal terminal for the remote control relay automatically turns off the lamp to protect its contact.

※The remote control relay is available as an accessory.

### ●Lowering level settings (Automatic stop at a preset level)

By setting the lowering level, you can automatically stop the lifter a preset level. The settings are possible for each line so that the lifter can be used even when the ceiling slopes.

※When the ceiling slopes, luminaries mounted at the same ceiling level have to be connected to the same wiring.

※You can lower the luminaries by force by using the controller.

### ●Simple construction

You can easily fix the lift controller and operation switch, using two-wire 24 V non-polarity system.



The controlled numbers of the devices

| Type \ Circuit | 1 circuit | 3 circuit     | 6 circuit |
|----------------|-----------|---------------|-----------|
| 3kg type       | 55 sets   | 110 (55) sets |           |
| 5kg type       | 34 sets   | 68 (34) sets  |           |
| 10kg type      | 34 sets   | 68 (34) sets  |           |
| 15kg type      | 20 sets   | 40 (20) sets  |           |
| 25kg type      | 15 sets   | 30 (15) sets  |           |
| 35kg type      | 15 sets   | 30 (15) sets  |           |

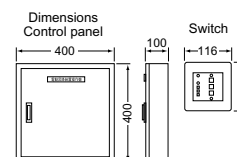
( ) shows max. controlled devices per 1 circuit by feed wiring.



## UDA30124/10A

1 circuit 10A 50Hz / 60Hz

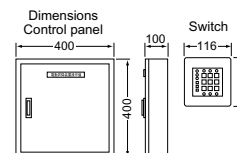
2 leads wiring between the control panel and switch.  
Set up function of the fixture height.  
Protect function of the contact points.  
One switch box



## UDA30324/20A

50Hz / 60Hz

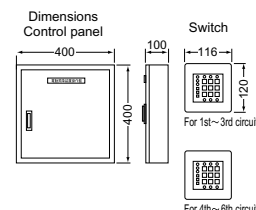
3 circuits 20A 200V type  
2 leads wiring between the control panel and switch.  
Set up function of the fixture height.  
Protect function of the contact points.  
One switch box



## UDA30624/20A

50Hz / 60Hz

6 circuits 20A 200V type  
2 leads wiring between the control panel and switch.  
Set up function of the fixture height.  
Protect function of the contact points.  
Two switch boxes



## Combined type control panel

UDA31223/20A

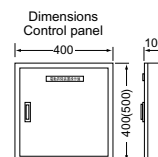
12 circuits 20A

UDA30623/20A

6 circuits 20A

All you have to do is to connect the control line from the lift to the terminal block.

※Calculate the rated current for the breaker as follows:  
(Rated current of the motor) x (Number of lifts used)



( ) shows for UDA30623/ 20A

Max. controlled devices by feed wiring

| Type      | Feeding sets | Feeding sets by 12 circuits | Type      | Feeding sets | Feeding sets by 12 circuits |
|-----------|--------------|-----------------------------|-----------|--------------|-----------------------------|
| 3kg type  | 10 sets      | 72 sets                     | 15kg type | 6 sets       | 36 sets                     |
| 5kg type  | 10 sets      | 72 sets                     | 25kg type | 6 sets       | 36 sets                     |
| 10kg type | 10 sets      | 72 sets                     | 35kg type | 6 sets       | 36 sets                     |

## ① Safety Precautions

●Do not use the equipment under the conditions described below as it may cause fire, electrical shock or fall of equipment resulting in personal injury.

- Place where the equipment is exposed to rain or condensation
- Place where the equipment is exposed to corrosive or flammable gas
- Humid place (except for enclosed type)
- Dusty place (except for enclosed type)
- Place where the equipment is exposed to vibration or impact
- Windy place

●The weight of the luminaries mounted must not exceed the allowance and they must be balanced in weight.

●Use the specified primary voltage (+/-6%) and frequency only. Inappropriate power supply may cause fire or burn of equipment

●The equipment is designed for maintenance of lighting fixtures only. Use of the equipment for other purposes may cause accidents including the drop of the equipment or luminaries.

## Instructions for Use of the EYE Automatic Raising & Lowering Device (lifter)

- Always switch off the luminaries before lifting them.
- After each lifting operation, return the equipment switch to "STOP".
- The maximum continuous operation time allowed for the 3 kg type equipment is 15 minutes.
- The maximum continuous operation time allowed for the 5 kg shade lift type and 5 kg/10 kg exclusive ballast lift type is 15 minutes.
- Do not use the equipment at windy, dusty, vibrating or extremely hot (40°C or above) places.
- Cover the equipment with a protector where balls may hit it.

# Color Arc and SDX (HYLUX)

## Compact HID lamp with excellent colour rendition

To illuminate various objects beautifully and vividly is an important role of lighting. Color Arc and SDX (HYLUX), with its five colour variations, creates expressive spaces in commercial facilities with high colour rendering and appropriate colour temperature. The great choice of Color Arc and SDX (HYLUX) and its features of long life and high performance add alternatives in your illumination plan.

## Five colour temperatures that change a space scene

Colour temperature of light greatly changes the expression of the space. With Color Arc and SDX (HYLUX) that has five types of colour choice, you can create an expressive space according to your space concept. Combinations of those types also allow you to create a new type of illumination just as your image.



**For optimum colour temperature as with evening lighting conditions: 2,500K**

The warm light colour as that of incandescent lamps is good for creating relaxed atmosphere in lobbies and entrance of hotels and restaurants. It can also create calm and deluxe space in brand goods stores.



**For optimum colour temperature as with early morning lighting conditions: 3,000K**

The light colour of rising sun relaxes you just at dawn. The natural colour covers everything to make a rich space.



Fluorescent lamp



SDX (2500K)



Metal halide lamp



Fluorescent lamp



Color Arc (3000K)



Metal halide lamp



For optimum colour temperature as with morning lighting conditions: 3,500K

Illumination intended for morning lighting conditions. This allows clear and colour faithful representation for whatever objective, whether it be lighting a painting or even highly reflective objects such as metallic objects or jewelry. This is also effective in improving the appearance of leather goods on display.



For optimum colour temperature just like strong sunlit conditions: 4,500K

For bringing forth the most vivid colours across the spectrum. As the light quality is close to that of natural light, it is ideal for showing off the freshness of fruits and vegetables. This kind of lighting is ideal for casual shopping areas or fitness centers.



For colour temperature just like normal daylight: 6,500K

This provides lighting that is fresh and clear. It is ideal for showing of the green of botanical displays or the blueness of water. It is also particularly effective for places such as places where sporting goods are sold, concourses or lobbies.



Fluorescent lamp



Color Arc (3500K)



Metal halide lamp



Fluorescent lamp



Color Arc (4500K)



Metal halide lamp



Fluorescent lamp



Color Arc (6500K)



Metal halide lamp

# Castool

How we can enjoy the best performance of the light source and to which extent our requirements are fulfilled are of our immediate interest. The design to provide the high lighting efficacy enhances the basic performance level of the base light, providing the flexibility for diversity of the space.

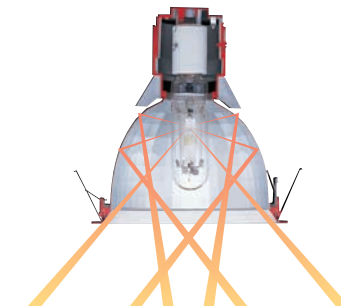
You can easily combine Castool with Color Arc and SDX (HYLUX) that has high colour rendering performance or with other compact fluorescent lamp or halogen lamp because our luminary designs are uniformed for better match each other. Our products will give you more choice in your lighting plan.

## Facet reflector with high efficiency for high level light control

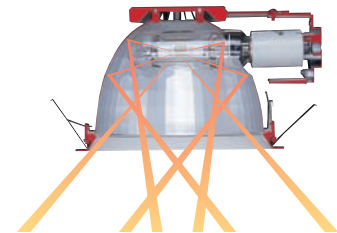
The facet reflector with high efficiency designed for Castool has enabled the light control as high as light output ratio of about 80%. The light from multi faceted reflector downwards without being influenced by the lamp to have the maximum performance of the light source. It also saves energy because less number of lamps obtains the same level of illuminance.



Facet reflector with high efficiency



Common type



Shallow type

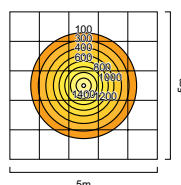
## Changeable light distribution for flexible lighting methods

You can select the range of light distribution from narrow, medium and wide by changing the position of a lamp using the adjusting screws. In addition to the light distribution adjustment after installation, Castool has such flexibility that you can make use of various lighting methods without changing the fixtures. The facet reflector provides uniform light distribution after your change of it.



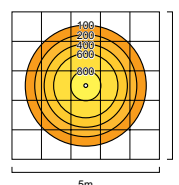
The lamp position can be adjusted by screws

### HDW30121



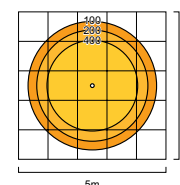
#### Narrow beam

Lamp : MT150SW  
Installation height : 3.2m  
At 1m from the floor surface : GL+1.0m  
Maintenance factor : 1.0



#### Medium beam

Lamp : MT150SW  
Installation height : 3.2m  
At 1m from the floor surface : GL+1.0m  
Maintenance factor : 1.0



#### Wide beam

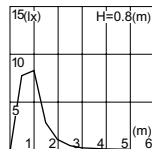
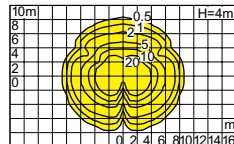
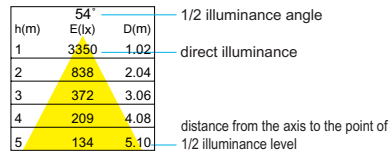
Lamp : MT150SW  
Installation height : 3.2m  
At 1m from the floor surface : GL+1.0m  
Maintenance factor : 1.0



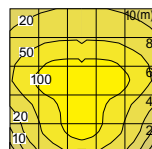
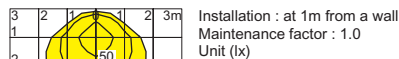
# Down light

## How to read the data

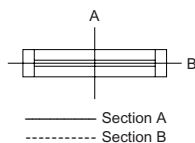
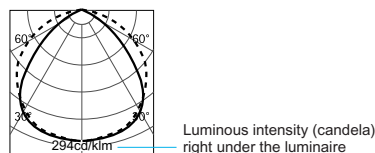
### Illuminance distribution (Horizontal illuminance)



### Illuminance distribution (Vertical illuminance)



### luminous intensity distribution (cd/klm)



- Correlation between the light distribution and the horizontal brightness
- To minimize the light contrast, keep the mounting pitch of the fixture within the diameter of the half beam angle. (within the diameter of the 1/10 beam angle for in-ground up light (recessed) type upper light fixture and floodlight).
- The data indicates the initial illuminance and does not include the maintenance factor.
- The horizontal illuminance is for the pole light and the approach light.
- The data indicates the initial illuminance and does not include the maintenance factor.

- The chart shows the vertical illuminance distribution when a wall washer is installed one meter apart from the wall.
- The calculation is based only on the direction illuminance, not on the interreflection.
- The data indicates the initial illuminance and does not include the maintenance factor.
- The chart shows the vertical illuminance distribution when Uni Spot luminaire is installed five meters apart from the wall.
- The data indicates the initial illuminance and does not include the maintenance factor.

- The chart shows the relation between the light direction and the light intensity (candela) per 1,000 lux of light flux.
- For the luminaries which light distribution is not point-symmetrical, the cross section A shows the light distribution vertical to the lamp and the cross section B shows the same in parallel to the lamp.

### Utilization factor table

| FHEN4435                              |         | FHEN4235 |    |    | Lamp type           |    |    | FHF32EX-N |    |       | Fixture efficiency | Upward   |    | 0.00  |    |  |
|---------------------------------------|---------|----------|----|----|---------------------|----|----|-----------|----|-------|--------------------|----------|----|-------|----|--|
| FHEN4335                              |         |          |    |    | Max. mounting pitch |    |    | A         |    | 1.25H |                    | Downward |    | 80.00 |    |  |
|                                       |         |          |    |    |                     |    |    | B         |    | 1.2H  |                    | Total    |    | 80.00 |    |  |
| Reflection ratio (%)                  | Ceiling | 80       |    |    | 70                  |    |    | 50        |    |       | 30                 |          |    | 0     |    |  |
|                                       | Wall    | 70       | 50 | 30 | 70                  | 50 | 30 | 70        | 50 | 30    | 70                 | 50       | 30 | 0     |    |  |
|                                       | floor   | 10       |    |    | 10                  |    |    | 10        |    |       | 10                 |          |    | 0     |    |  |
| Room index utilization factor (X0.01) | 0.60    | 49       | 40 | 34 | 48                  | 39 | 34 | 46        | 38 | 33    | 44                 | 38       | 33 | 28    | 36 |  |
|                                       | 0.80    | 57       | 48 | 42 | 55                  | 47 | 42 | 53        | 46 | 41    | 51                 | 45       | 41 | 38    |    |  |
|                                       | 1.00    | 62       | 55 | 49 | 61                  | 54 | 49 | 59        | 53 | 48    | 57                 | 52       | 48 | 43    |    |  |
|                                       | 1.25    | 66       | 59 | 54 | 65                  | 59 | 54 | 63        | 57 | 53    | 61                 | 56       | 52 | 48    |    |  |
|                                       | 1.50    | 70       | 64 | 59 | 69                  | 63 | 59 | 67        | 62 | 58    | 65                 | 61       | 57 | 53    |    |  |
|                                       | 2.00    | 74       | 69 | 65 | 73                  | 68 | 65 | 71        | 67 | 64    | 69                 | 65       | 63 | 58    |    |  |
|                                       | 2.50    | 77       | 73 | 69 | 76                  | 72 | 68 | 73        | 70 | 67    | 71                 | 69       | 66 | 62    |    |  |
|                                       | 3.00    | 78       | 75 | 72 | 77                  | 74 | 71 | 75        | 72 | 70    | 73                 | 71       | 69 | 65    |    |  |
|                                       | 4.00    | 81       | 78 | 75 | 80                  | 77 | 75 | 77        | 75 | 73    | 75                 | 74       | 72 | 68    |    |  |
|                                       | 5.00    | 82       | 80 | 77 | 81                  | 79 | 77 | 79        | 77 | 75    | 77                 | 75       | 74 | 71    |    |  |
|                                       | 7.00    | 83       | 82 | 80 | 82                  | 81 | 79 | 80        | 79 | 78    | 78                 | 77       | 76 | 73    |    |  |
|                                       | 10.00   | 84       | 83 | 82 | 83                  | 82 | 81 | 82        | 81 | 80    | 80                 | 79       | 78 | 75    |    |  |

- For the base light and the wall washer for fluorescent lights, please see their catalogues for the light distribution curve and coefficient of utilization.
- The coefficient of utilization described is that when used for calculation of illumination by the lumen method, and it may change according to the room shape (room index) and the reflectance of the room.
- The light contrast will be reduced by keeping the intervals of the installation smaller than the max. mounting pitch (indicated by the ratio of the installation height).

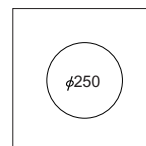
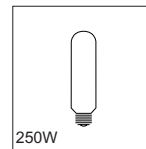
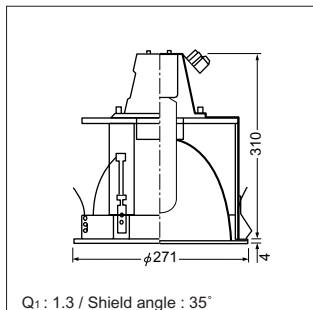
# Down light

## For Color Arc 250W

### HDW40101

**Lamps**  
MT250SW  
MT250SDW

**Finish**  
■ Body : Glavanized iron plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Aluminum (Silver colour finish)  
**Weight** : 1.7kg



| h(m) | 48°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 12740        | 0.90 |
| 2    | 3180         | 1.80 |
| 3    | 1410         | 2.70 |
| 4    | 790          | 3.60 |
| 5    | 500          | 4.49 |

MT250SW

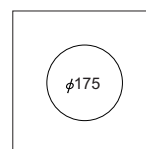
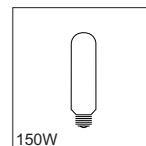
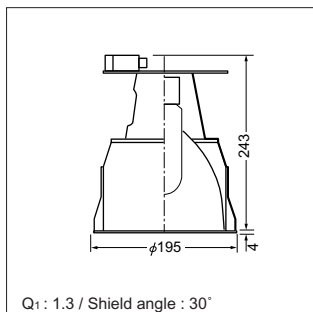
## For Color Arc & SDX 150W

**Hylux EPO**

### HDW30211W

**Lamps**  
NHT150FSDX  
MT150FSLW, MT150FSDW  
MT150FSW, MT150FD

**Finish**  
■ Body : Glavanized iron plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Aluminum (Mirror finish)  
**Weight** : 1.2kg



| h(m) | 49°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4511         | 0.92 |
| 2    | 1128         | 1.83 |
| 3    | 501          | 2.75 |
| 4    | 282          | 3.66 |
| 5    | 180          | 4.58 |

NHT150FSDX

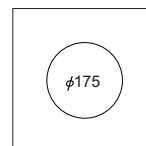
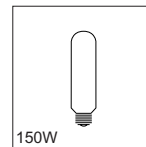
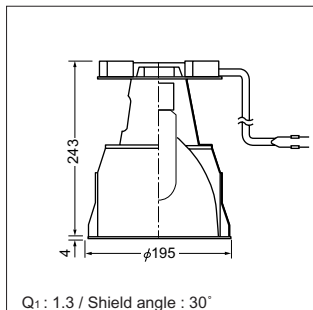
| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4620         | 1.15 |
| 2    | 1155         | 2.29 |
| 3    | 513          | 3.44 |
| 4    | 289          | 4.58 |
| 5    | 185          | 5.73 |

MT150FSW

### HDW30211WX

**Lamps**  
NHT150FSDX  
MT150FSLW, MT150FSDW  
MT150FSW, MT150FD

**Finish**  
■ Body : Glavanized iron plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Aluminum (Mirror finish)  
**Weight** : 1.4kg



| h(m) | 49°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4511         | 0.92 |
| 2    | 1128         | 1.83 |
| 3    | 501          | 2.75 |
| 4    | 282          | 3.66 |
| 5    | 180          | 4.58 |

NHT150FSDX

| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4620         | 1.15 |
| 2    | 1155         | 2.29 |
| 3    | 513          | 3.44 |
| 4    | 289          | 4.58 |
| 5    | 185          | 5.73 |

MT150FSW

# Down light

**For Color Arc & SDX 150W**

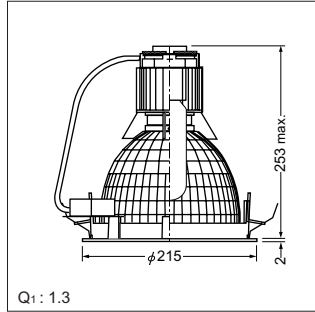
## CASTOOL Common HDW30121

### Lamps

NHT150SDX, MT150SLW  
MT150SDW, MT150SW, MT150D

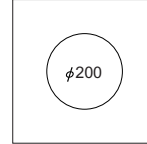
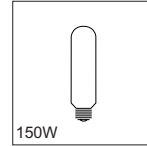
### Finish

■ Body : Aluminium die cast metallic grey  
■ Frame : Aluminium die cast (white colour)  
■ Reflector : Aluminum (Fine matt finish)  
Weight : 0.65kg



Q1 : 1.3

- a) Narrow  
Shield angle : 29°  
b) Medium  
Shield angle : 27°  
c) Wide  
Shield angle : 25°



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 11913        | 0.76 |
| 2    | 2978         | 1.52 |
| 3    | 1324         | 2.28 |
| 4    | 745          | 3.04 |
| 5    | 477          | 3.80 |

### a) MT150SW

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7370         | 1.02 |
| 2    | 1843         | 2.04 |
| 3    | 819          | 3.06 |
| 4    | 461          | 4.08 |
| 5    | 295          | 5.10 |

### b) MT150SW

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4586         | 1.26 |
| 2    | 1172         | 2.53 |
| 3    | 521          | 3.79 |
| 4    | 293          | 5.06 |
| 5    | 187          | 6.32 |

### c) MT150SW

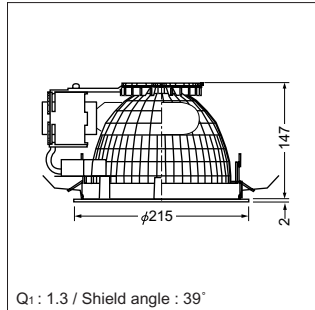
## CASTOOL Shallow HDW30122

### Lamps

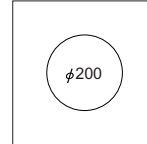
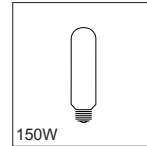
NHT150FSDX  
MT150FSLW, MT150FSDW  
MT150FSW, MT150FD

### Finish

■ Body : Aluminium die cast metallic grey  
■ Frame : Aluminium die cast (white colour)  
■ Reflector : Aluminum (Fine matt finish)  
Weight : 0.6kg



Q1 : 1.3 / Shield angle : 39°



| h(m) | 68°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4598         | 1.35 |
| 2    | 1150         | 2.71 |
| 3    | 511          | 4.06 |
| 4    | 287          | 5.42 |
| 5    | 184          | 6.77 |

### MT150SW

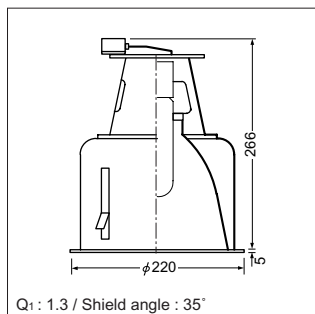
## HDW30201W

### Lamps

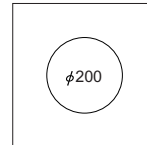
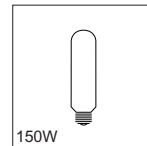
NHT150FSDX  
MT150FSLW, MT150FSDW  
MT150FSW, MT150FD

### Finish

■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
■ Reflector : Aluminum (Mirror finish)  
Weight : 1.2kg



Q1 : 1.3 / Shield angle : 35°



| h(m) | 50°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2500         | 0.93 |
| 2    | 625          | 1.87 |
| 3    | 278          | 2.80 |
| 4    | 156          | 3.73 |
| 5    | 100          | 4.66 |

### NHT150FSDX

| h(m) | 61°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3300         | 1.32 |
| 2    | 825          | 2.64 |
| 3    | 366          | 3.96 |
| 4    | 200          | 5.28 |
| 5    | 130          | 6.59 |

### MT150FSW

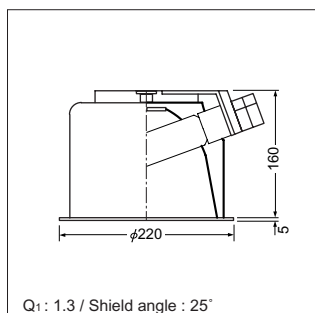
## HDW30208W

### Lamps

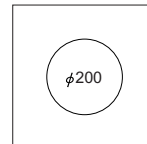
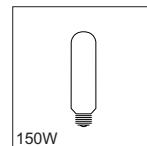
NHT150FSDX  
MT150FSLW, MT150FSDW  
MT150FSW, MT150FD

### Finish

■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
■ Reflector : Aluminum (Mirror finish)  
Weight : 1.1kg



Q1 : 1.3 / Shield angle : 25°



| h(m) | 66°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3030         | 0.93 |
| 2    | 750          | 1.87 |
| 3    | 330          | 2.80 |
| 4    | 180          | 3.73 |
| 5    | 120          | 4.66 |

### NHT150FSDX

| h(m) | 65°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4840         | 1.28 |
| 2    | 1210         | 2.57 |
| 3    | 538          | 3.85 |
| 4    | 303          | 5.14 |
| 5    | 194          | 6.42 |

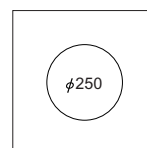
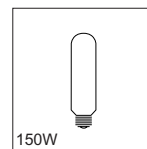
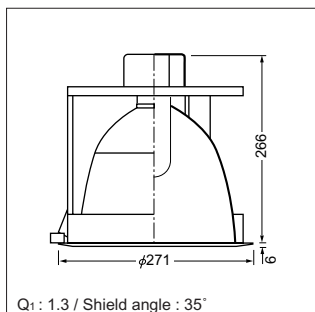
### MT150FSW

# Down light

**For Color Arc & SDX 150W**

## HDW3001/W

**Lamps**  
NHT150(F)SDX  
MT150(F)SLW, MT150(F)SDW  
MT150(F)SW, MT150(F)D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
■ Reflector : Aluminum (Polishing finish)  
**Weight** : 1.4kg



| 50°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 2500 | 0.93 |  |
| 2    | 625  | 1.87 |  |
| 3    | 278  | 2.80 |  |
| 4    | 156  | 3.73 |  |
| 5    | 100  | 4.66 |  |

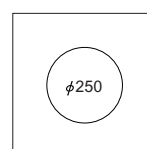
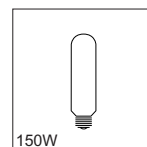
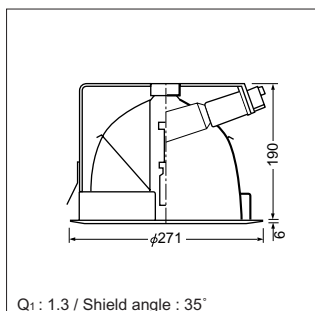
NHT150FSDX

| 61°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 3300 | 1.32 |  |
| 2    | 825  | 2.64 |  |
| 3    | 366  | 3.96 |  |
| 4    | 200  | 5.28 |  |
| 5    | 130  | 6.59 |  |

MT150FSW

## HDW3013/W

**Lamps**  
NHT150(F)FSDX  
MT150(F)SLW, MT150(F)SDW  
MT150(F)SW, MT150(F)D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
■ Reflector : Aluminum (Polishing finish)  
**Weight** : 1.2kg



| 60°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 3900 | 1.15 |  |
| 2    | 975  | 2.29 |  |
| 3    | 430  | 3.44 |  |
| 4    | 240  | 4.58 |  |
| 5    | 160  | 5.73 |  |

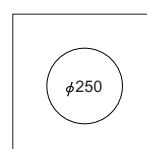
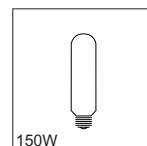
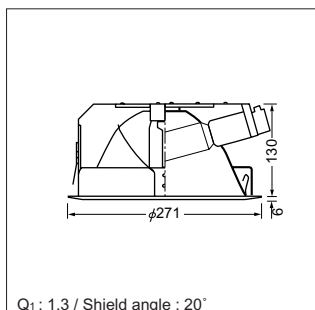
NHT150FSDX

| 57°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 6000 | 1.09 |  |
| 2    | 1500 | 2.18 |  |
| 3    | 660  | 3.27 |  |
| 4    | 370  | 4.36 |  |
| 5    | 240  | 5.45 |  |

MT150FSW

## HDW3024/W

**Lamps**  
NHT150(F)FSDX  
MT150(F)SLW, MT150(F)SDW  
MT150(F)SW, MT150(F)D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
■ Reflector : Aluminum (Mirror finish)  
**Weight** : 1.1kg



| 58°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 4000 | 1.11 |  |
| 2    | 1050 | 2.22 |  |
| 3    | 444  | 3.33 |  |
| 4    | 250  | 4.43 |  |
| 5    | 160  | 5.54 |  |

NHT150FSDX

| 52°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 7000 | 0.98 |  |
| 2    | 1750 | 1.97 |  |
| 3    | 780  | 2.95 |  |
| 4    | 430  | 3.94 |  |
| 5    | 280  | 4.92 |  |

MT150FSW

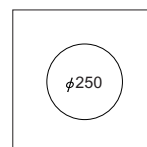
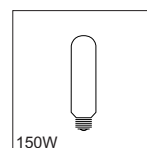
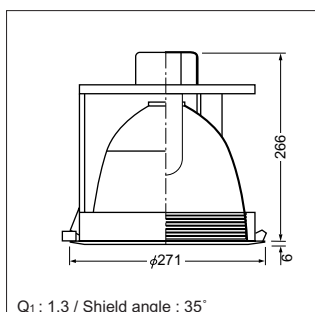
## HDW30117W

(White baffle)

## HDW3002/W

(Black baffle)

**Lamps**  
NHT150(F)SDX  
MT150(F)SLW, MT150(F)SDW  
MT150(F)SW, MT150(F)D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
■ Reflector : Aluminum (Polishing finish)  
**Weight** : 1.5kg



| 64°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 2500 | 1.25 |  |
| 2    | 625  | 2.50 |  |
| 3    | 278  | 3.75 |  |
| 4    | 156  | 5.00 |  |
| 5    | 100  | 6.25 |  |

NHT150FSDX

| 66°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 2850 | 1.30 |  |
| 2    | 710  | 2.60 |  |
| 3    | 310  | 3.90 |  |
| 4    | 178  | 5.20 |  |
| 5    | 114  | 6.49 |  |

MT150FSW

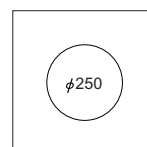
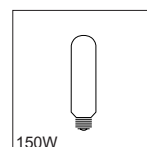
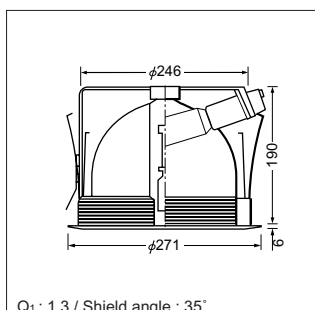
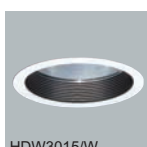
## HDW30119W

(White baffle)

## HDW3015/W

(Black baffle)

**Lamps**  
NHT150FSDX  
MT150(F)SLW, MT150(F)SDW  
MT150(F)SW, MT150(F)D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
■ Reflector : Aluminum (Polishing finish)  
**Weight** : 1.3kg



| 65°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 2700 | 1.26 |  |
| 2    | 675  | 2.53 |  |
| 3    | 300  | 3.79 |  |
| 4    | 168  | 5.06 |  |
| 5    | 105  | 6.32 |  |

NHT150FSDX

| 61°  |      |      |  |
|------|------|------|--|
| h(m) | E lx | D(m) |  |
| 1    | 4700 | 1.18 |  |
| 2    | 1175 | 2.36 |  |
| 3    | 520  | 3.53 |  |
| 4    | 290  | 4.71 |  |
| 5    | 190  | 5.89 |  |

MT150FSW

# Down light

## For Color Arc & SDX 150W

### HDW30517W HDW3502/W

#### Lamps

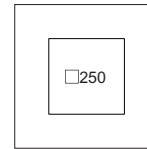
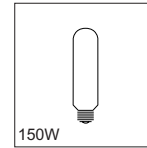
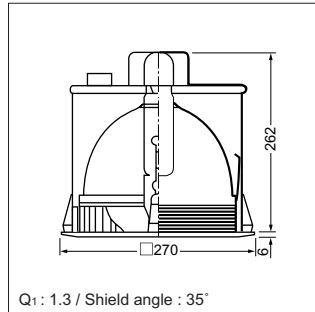
NHT150FSDX, NHT150SDX  
MT150FSLW, MT150SLW  
MT150FSDW, MT150SDW  
MT150FSW, MT150SW  
MT150FD, MT150D

#### Finish

■ Body : Steel plate  
■ Frame : Aluminium extrusion (Semi white colour)  
■ Reflector : Aluminum (Polishing finish)

HDW30517W : White baffle  
HDW3502/W : Black baffle

Weight : 2.0 kg



| h(m) | 72°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1600         | 1.46 |
| 2    | 400          | 2.92 |
| 3    | 178          | 4.38 |
| 4    | 100          | 5.83 |
| 5    | 64           | 7.29 |

NHT150FSDX

| h(m) | 72°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2000         | 1.46 |
| 2    | 500          | 2.92 |
| 3    | 220          | 4.38 |
| 4    | 125          | 5.83 |
| 5    | 80           | 7.29 |

MT150FSW

## For Color Arc & SDX 100W

### Hylux EPO

### HDW20211W

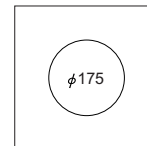
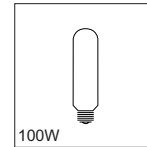
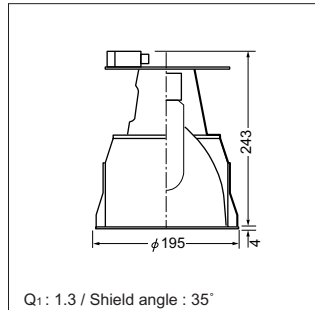
#### Lamps

NHT100FSDX  
MT100FSDW, MT100FSW  
MT100FD

#### Finish

■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
■ Reflector : Aluminum mirror finish

Weight : 1.2kg



| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2300         | 1.07 |
| 2    | 575          | 2.14 |
| 3    | 226          | 3.22 |
| 4    | 144          | 4.29 |
| 5    | 90           | 5.36 |

NHT100FSDX

| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3120         | 1.07 |
| 2    | 780          | 2.14 |
| 3    | 346          | 3.22 |
| 4    | 195          | 4.29 |
| 5    | 124          | 5.36 |

MT100FSW

### HDW20211WX

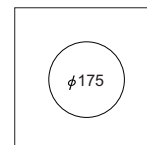
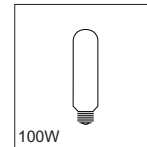
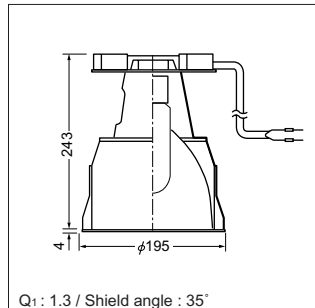
#### Lamps

NHT100FSDX  
MT100FSDW, MT100FSW  
MT100FD

#### Finish

■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
■ Reflector : Aluminum mirror finish

Weight : 1.4 kg



| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2300         | 1.07 |
| 2    | 575          | 2.14 |
| 3    | 226          | 3.22 |
| 4    | 144          | 4.29 |
| 5    | 90           | 5.36 |

NHT100FSDX

| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3120         | 1.07 |
| 2    | 780          | 2.14 |
| 3    | 346          | 3.22 |
| 4    | 195          | 4.29 |
| 5    | 124          | 5.36 |

MT100FSW

### HDW20208W

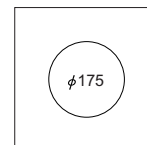
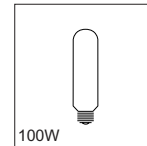
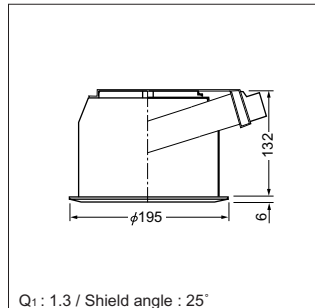
#### Lamps

NHT100FSDX  
MT100FSDW, MT100FSW  
MT100FD

#### Finish

■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
■ Reflector : Aluminum mirror finish

Weight : 0.8 kg



| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2700         | 1.16 |
| 2    | 675          | 2.32 |
| 3    | 300          | 3.48 |
| 4    | 168          | 4.64 |
| 5    | 108          | 5.80 |

NHT100FSDX

# Down light

**For Color Arc & SDX 100W**

## CASTOOL Common

### HDW20121

#### Lamps

NHT100SDX

MT100SDW, MT100SW, MT100D

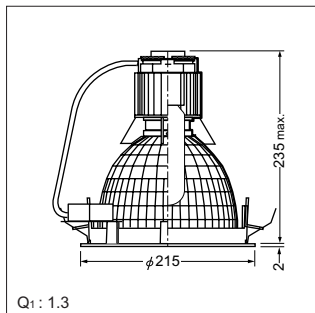
#### Finish

Body : Aluminium die cast (Metallic grey)

Frame : Aluminium die cast (White colour)

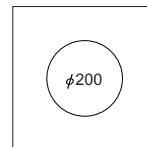
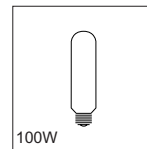
Reflector : Aluminum (Fine matt finish)

Weight : 0.65kg



Q1: 1.3

- a) Shield angle : 29°  
Narrow beam
- b) Shield angle : 27°  
Medium beam
- c) Shield angle : 25°



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 7581  | 0.76 |
| 2    | 1895  | 1.52 |
| 3    | 842   | 2.28 |
| 4    | 474   | 3.04 |
| 5    | 303   | 3.80 |

a) MT100SW

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 4690  | 1.02 |
| 2    | 1173  | 2.04 |
| 3    | 521   | 3.06 |
| 4    | 293   | 4.08 |
| 5    | 188   | 5.10 |

b) MT100SW

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 2982  | 1.26 |
| 2    | 746   | 2.53 |
| 3    | 331   | 3.79 |
| 4    | 186   | 5.06 |
| 5    | 119   | 6.32 |

c) MT100SW

## CASTOOL Shallow

### HDW20122

#### Lamps

NHT100SDX

MT100SDW, MT100SW, MT100D

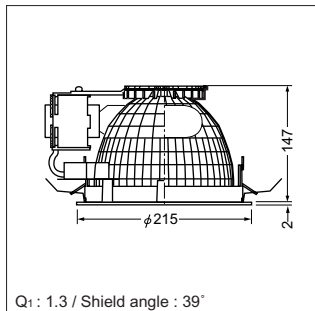
#### Finish

Body : Aluminium die cast (Metallic grey)

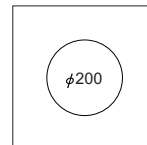
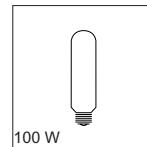
Frame : Aluminium die cast (White colour)

Reflector : Aluminum (Fine matt finish)

Weight : 0.6kg



Q1: 1.3 / Shield angle : 39°



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 2926  | 1.35 |
| 2    | 732   | 2.71 |
| 3    | 325   | 4.06 |
| 4    | 183   | 5.42 |
| 5    | 117   | 6.77 |

MT100SW

### HDW2009/W

#### Lamps

NHT100FSDX

MT100FSW, MT100FSDW, MT100FD

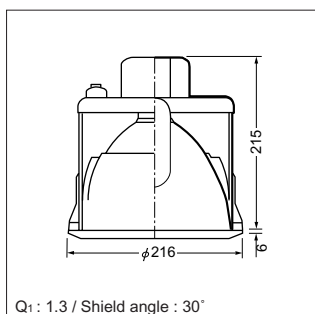
#### Finish

Body : Steel plate

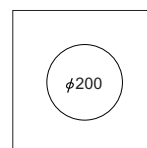
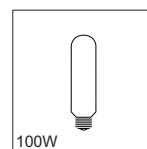
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminum (Polishing finish)

Weight : 1.0kg



Q1: 1.3 / Shield angle : 30°



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 2340  | 1.16 |
| 2    | 585   | 2.32 |
| 3    | 260   | 3.48 |
| 4    | 146   | 4.64 |
| 5    | 93    | 5.80 |

NHT100SDX

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 2100  | 1.18 |
| 2    | 525   | 2.36 |
| 3    | 234   | 3.53 |
| 4    | 130   | 4.71 |
| 5    | 84    | 5.89 |

NHT100FSDX

### HDW2013/W

#### Lamps

NHT100SDX, NHT100FSDX

MT100FSDW, MT100SDW

MT100FSW, MT100SW

MT100FD, MT100D

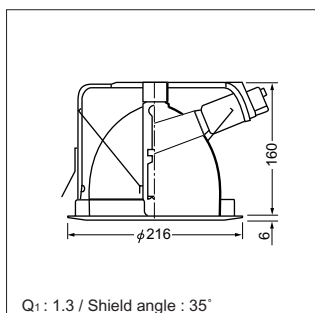
#### Finish

Body : Steel plate

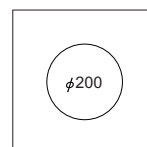
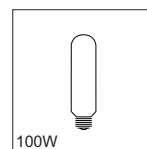
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminum (Polishing finish)

Weight : 0.85kg



Q1: 1.3 / Shield angle : 35°



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 3000  | 0.97 |
| 2    | 750   | 1.93 |
| 3    | 330   | 2.90 |
| 4    | 185   | 3.87 |
| 5    | 120   | 4.83 |

NHT100SDX

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 2700  | 0.98 |
| 2    | 675   | 1.97 |
| 3    | 300   | 2.95 |
| 4    | 170   | 3.94 |
| 5    | 100   | 4.92 |

NHT100FSDX

# Down light

**For Color Arc & SDX 100W**

## HDW20117W HDW2010/W

### Lamps

NHT100FSDX, NHT100SDX  
MT100FSDW, MT100SDW  
MT100FSW, MT100SW  
MT100FD, MT100D

### Finish

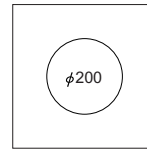
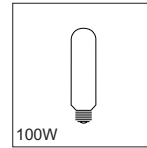
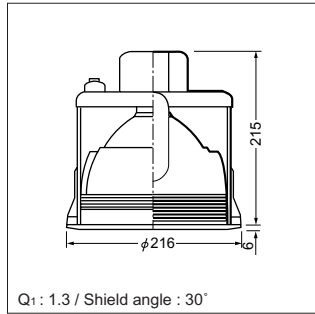
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium (Polishing finish)

HDW20117W : White baffle

HDW2010/W : Black baffle

Weight : 1.0kg



| h(m) | 42°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3000         | 0.78 |
| 2    | 750          | 1.55 |
| 3    | 334          | 2.33 |
| 4    | 188          | 3.10 |
| 5    | 120          | 3.88 |

NHT100SDX

| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2400         | 0.83 |
| 2    | 600          | 1.66 |
| 3    | 266          | 2.49 |
| 4    | 150          | 3.31 |
| 5    | 96           | 4.14 |

NHT100FSDX

## HDW20119W HDW2015/W

### Lamps

NHT100FSDX  
MT100FSDW, MT100FSW  
MT100FD

### Finish

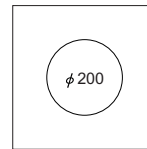
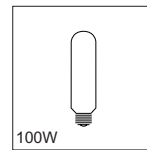
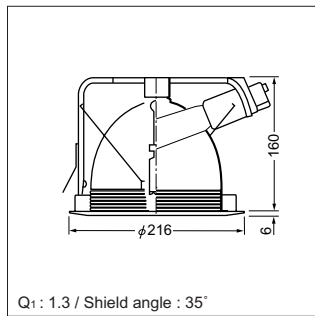
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium (Polishing finish)

HDW20119W : White baffle

HDW2015/W : Black baffle

Weight : 0.9kg



| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2100         | 1.20 |
| 2    | 525          | 2.39 |
| 3    | 230          | 3.59 |
| 4    | 130          | 4.79 |
| 5    | 84           | 5.98 |

NHT100SDX

| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1800         | 1.15 |
| 2    | 450          | 2.29 |
| 3    | 200          | 3.44 |
| 4    | 110          | 4.58 |
| 5    | 72           | 5.73 |

NHT100FSDX

**For Color Arc & SDX 70W**

### Hylux EPO

## HDW17211W

### Lamps

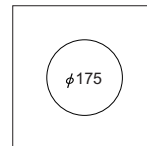
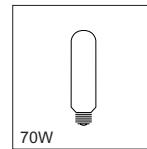
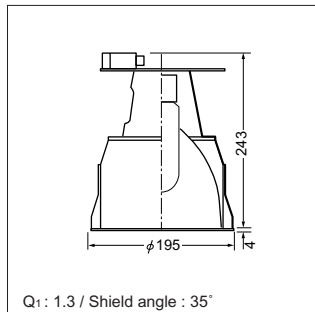
NHT70FSDX  
MT70FSDW, MT70FSW  
MT70FD

### Finish

Body : Steel plate  
Frame : Steel plate (Semi white colour)

Reflector : Aluminium mirror finish

Weight : 1.2kg



| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1800         | 1.15 |
| 2    | 375          | 2.29 |
| 3    | 166          | 3.44 |
| 4    | 94           | 4.58 |
| 5    | 60           | 5.73 |

NHT70FSDX

| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2100         | 1.20 |
| 2    | 525          | 2.39 |
| 3    | 230          | 3.59 |
| 4    | 130          | 4.79 |
| 5    | 84           | 5.98 |

MT70FSW

## HDW17211WX

### Lamps

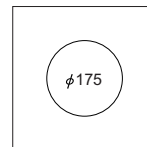
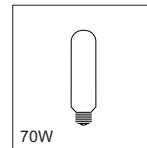
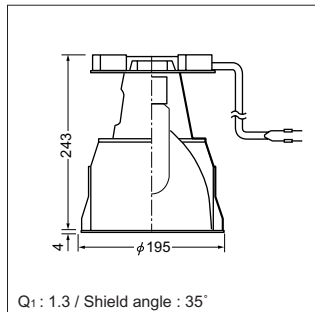
NHT70FSDX  
MT70FSDW, MT70FSW  
MT70FD

### Finish

Body : Steel plate  
Frame : Steel plate (Semi white colour)

Reflector : Aluminium mirror finish

Weight : 1.4kg



| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1800         | 1.15 |
| 2    | 375          | 2.29 |
| 3    | 166          | 3.44 |
| 4    | 94           | 4.58 |
| 5    | 60           | 5.73 |

NHT70FSDX

| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2100         | 1.20 |
| 2    | 525          | 2.39 |
| 3    | 230          | 3.59 |
| 4    | 130          | 4.79 |
| 5    | 84           | 5.98 |

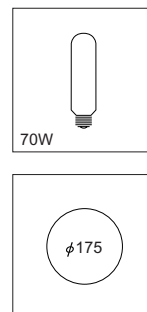
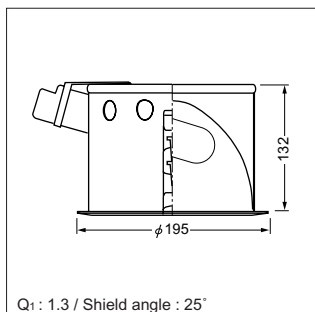
MT70FSW

# Down light

**For Color Arc & SDX 70W**

## HDW17208W

**Lamps**  
NHT70FSDW  
MT70FSDW, MT70FSW  
MT70FD  
**Finish**  
■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Aluminium mirror finish  
HDW20117W : White baffle  
HDW2010W : Black baffle  
**Weight** : 0.8kg



| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2000         | 1.16 |
| 2    | 500          | 2.32 |
| 3    | 220          | 3.48 |
| 4    | 125          | 4.64 |
| 5    | 80           | 5.80 |

NHT70FSDX

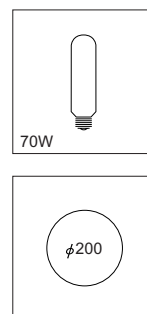
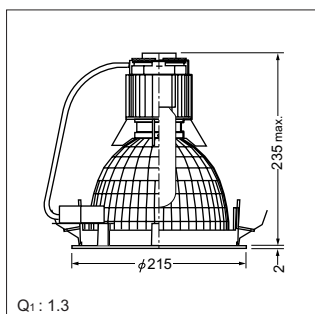
| h(m) | 58°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3960         | 1.11 |
| 2    | 990          | 2.22 |
| 3    | 440          | 3.33 |
| 4    | 246          | 4.43 |
| 5    | 158          | 5.54 |

MT70FSW

**CASTOOL Common**

## HDW17121

**Lamps**  
NHT70SDX, MT70SDW  
MT70SW, MT70D  
**Finish**  
■ Body : Aluminium die cast metallic grey  
■ Frame : Aluminium die cast (White colour)  
**Reflector** : Aluminium (Fine matt finish)  
**Weight** : 0.65kg



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 5415         | 0.76 |
| 2    | 1354         | 1.52 |
| 3    | 602          | 2.28 |
| 4    | 338          | 3.04 |
| 5    | 217          | 3.80 |

a) MT70SW

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3350         | 1.02 |
| 2    | 838          | 2.04 |
| 3    | 372          | 3.06 |
| 4    | 209          | 4.08 |
| 5    | 134          | 5.10 |

b) MT70SW

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2130         | 1.26 |
| 2    | 533          | 2.53 |
| 3    | 237          | 3.79 |
| 4    | 133          | 5.06 |
| 5    | 85           | 6.32 |

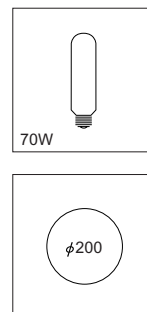
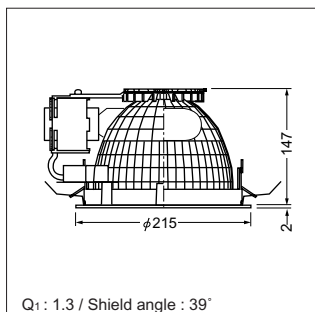
c) MT70SW

- a) Narrow  
Shield angle : 29°  
b) Medium  
Shield angle : 27°  
c) Wide  
Shield angle : 25°

**CASTOOL Shallow**

## HDW17122

**Lamps**  
NHT70SDX, MT70SDW  
MT70SW, MT70D  
**Finish**  
■ Body : Aluminium die cast metallic grey  
■ Frame : Aluminium die cast (White colour)  
**Reflector** : Aluminium (Fine matt finish)  
**Weight** : 0.6kg

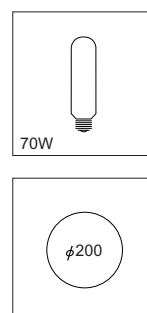
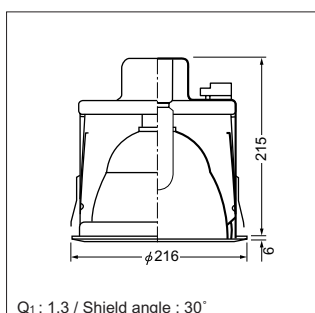


| h(m) | 68°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2090         | 1.35 |
| 2    | 523          | 2.71 |
| 3    | 232          | 4.06 |
| 4    | 131          | 5.42 |
| 5    | 84           | 6.77 |

MT70SW

## HDW17009/W

**Lamps**  
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70SDW  
MT70FSW, MT70SW  
MT70FD, MT70D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
**Reflector** : Aluminium (Polishing finish)  
**Weight** : 1.0kg



| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4450         | 1.20 |
| 2    | 1110         | 2.39 |
| 3    | 490          | 3.59 |
| 4    | 278          | 4.79 |
| 5    | 178          | 5.98 |

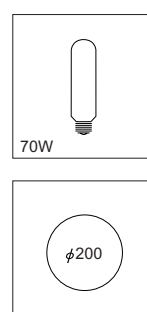
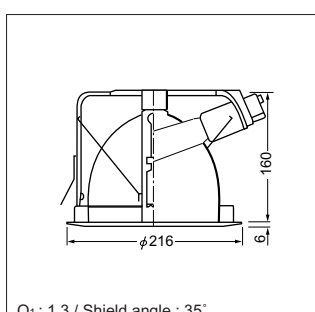
MT70SW

| h(m) | 68°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2880         | 1.35 |
| 2    | 720          | 2.71 |
| 3    | 320          | 4.06 |
| 4    | 130          | 5.42 |
| 5    | 84           | 6.77 |

MT70FSW

## HDW17013/W

**Lamps**  
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70SDW  
MT70FSW, MT70SW  
MT70FD, MT70D  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (Semi white colour)  
**Reflector** : Aluminium (Polishing finish)  
**Weight** : 0.85kg



| h(m) | 48°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3800         | 0.88 |
| 2    | 950          | 1.76 |
| 3    | 420          | 2.65 |
| 4    | 236          | 3.53 |
| 5    | 150          | 4.41 |

MT70FSW

| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2100         | 1.05 |
| 2    | 525          | 2.11 |
| 3    | 233          | 3.16 |
| 4    | 180          | 4.22 |
| 5    | 115          | 5.27 |

NHT70FSDX

# Down light

**For Color Arc & SDX 70W**

## HDW17024/W

### Lamps

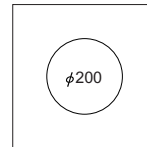
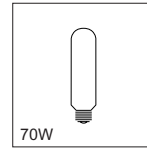
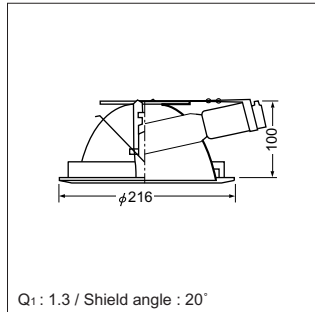
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70FSW  
MT70FSW, MT70SW  
MT70FD, MT70D

### Finish

Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium (Mirror finish)

Weight : 0.7kg



| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2160         | 1.20 |
| 2    | 540          | 2.39 |
| 3    | 240          | 3.59 |
| 4    | 135          | 4.79 |
| 5    | 86           | 5.98 |

MT70SW

| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1980         | 1.20 |
| 2    | 495          | 2.39 |
| 3    | 220          | 3.59 |
| 4    | 120          | 4.79 |
| 5    | 80           | 5.98 |

MT70FSW

## HDW17117W HDW17002/W

### Lamps

NHT70FSDX, NHT70SDX  
MT70FSDW, MT70FSW  
MT70FSW, MT70SW  
MT70FD, MT70D

### Finish

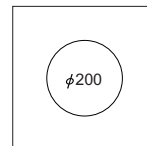
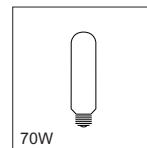
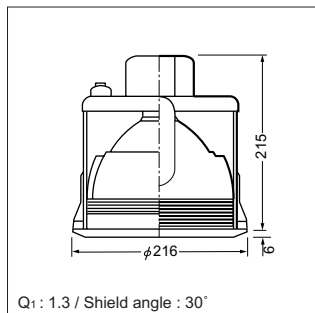
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium (polishing finish)

HDW17117W : White baffle

HDW17002/W : Black baffle

Weight : 1.0kg



| h(m) | 58°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1890         | 1.11 |
| 2    | 470          | 2.22 |
| 3    | 210          | 3.33 |
| 4    | 110          | 4.43 |
| 5    | 76           | 5.54 |

MT70FSW

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1650         | 1.02 |
| 2    | 410          | 2.04 |
| 3    | 180          | 3.06 |
| 4    | 100          | 4.08 |
| 5    | 66           | 5.10 |

NHT70FSDX

## HDW17119W HDW17015/W

### Lamps

NHT70FSDX, NHT70SDX  
MT70FSDW, MT70FSW  
MT70FSW, MT70SW  
MT70FD, MT70D

### Finish

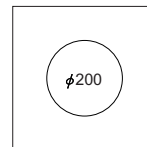
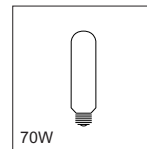
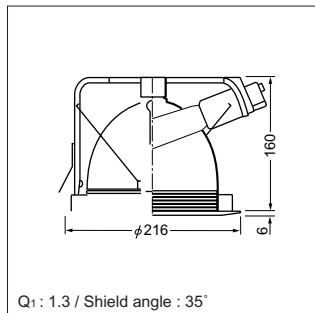
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium (polishing finish)

HDW17119W : White baffle

HDW17015/W : Black baffle

Weight : 1.3kg



| h(m) | 61°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2900         | 1.20 |
| 2    | 725          | 2.39 |
| 3    | 320          | 3.59 |
| 4    | 180          | 4.79 |
| 5    | 116          | 5.98 |

MT70SW

| h(m) | 62°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2200         | 1.21 |
| 2    | 550          | 2.42 |
| 3    | 240          | 3.63 |
| 4    | 140          | 4.84 |
| 5    | 88           | 6.06 |

MT70FSW

## HDW17517W HDW17502/W

### Lamps

NHT70FSDX, NHT70SDX  
MT70FSDW, MT70FSW  
MT70FSW, MT70SW  
MT70FD, MT70D

### Finish

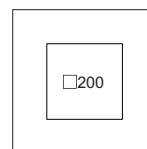
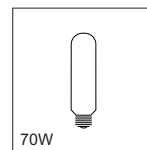
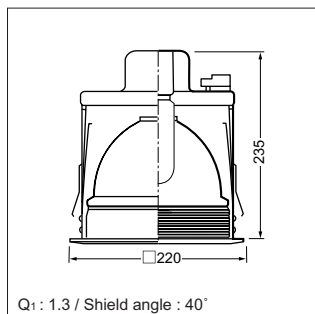
Body : Steel plate  
Frame : Aluminium extrusion (Semi-white colour)

Reflector : Aluminium (polishing finish)

HDW17517W : White baffle

HDW17502/W : Black baffle

Weight : 1.4kg



| h(m) | 65°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1710         | 1.26 |
| 2    | 428          | 2.53 |
| 3    | 190          | 3.79 |
| 4    | 106          | 5.06 |
| 5    | 68           | 6.32 |

MT70SW

| h(m) | 70°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1000         | 1.39 |
| 2    | 250          | 2.78 |
| 3    | 110          | 4.17 |
| 4    | 62           | 5.56 |
| 5    | 40           | 6.95 |

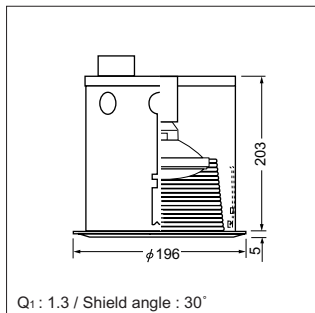
MT70FSW

# Down light

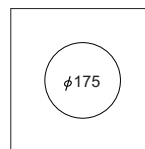
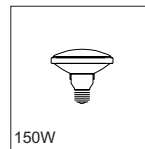
**PAR36 150W**

## HDW31104

**Lamps**  
M150P36SSDW, M150P36SSW  
M150P36SD, M150P36FSDW  
M150P36FSW, M150P36FD  
**Finish**  
■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Black baffle  
**Weight** : 0.9kg



Q1 : 1.3 / Shield angle : 30°



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

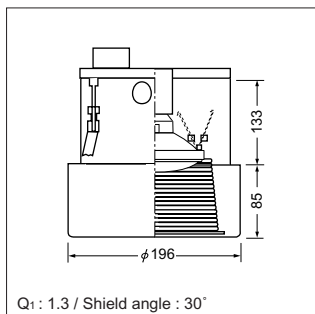
M150P36SSW

| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

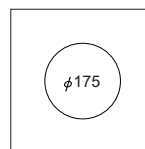
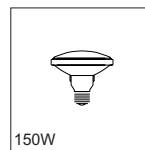
M150P36FSW

## HDW31105

**Lamps**  
M150P36SSDW, M150P36SSW  
M150P36SD, M150P36FSDW  
M150P36FSW, M150P36FD  
**Finish**  
■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Black baffle  
**Weight** : 0.96kg



Q1 : 1.3 / Shield angle : 30°



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

M150P36SSW

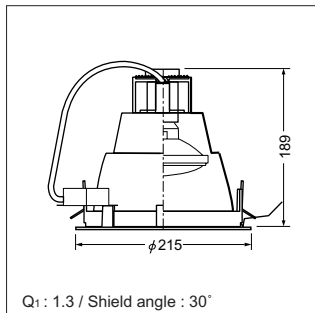
| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

M150P36FSW

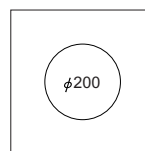
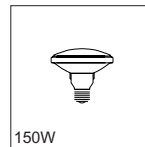
**CASTOOL Common**

## HDW31109

**Lamps**  
M150P36SSDW, M150P36SSW  
M150P36SD, M150P36FSDW  
M150P36FSW, M150P36FD  
**Finish**  
■ Body : Aluminium die cast metallic grey  
■ Frame : Aluminium die cast (White colour)  
**Hood** : Metallic grey colour  
**Weight** : 0.6kg



Q1 : 1.3 / Shield angle : 30°



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

M150P36SSW

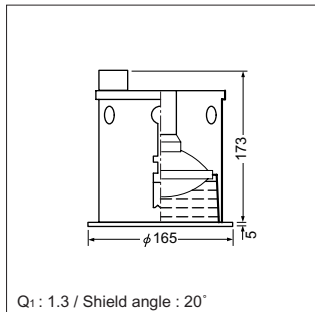
| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

M150P36FSW

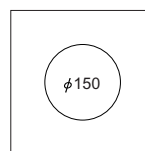
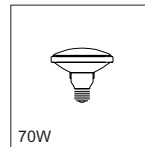
**PAR36 70W**

## HDW171104

**Lamps**  
M70P36SSDW, M70P36SSW  
M70P36SD, M70P36FSDW  
M70P36FSW, M70P36FD  
**Finish**  
■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
**Reflector** : Black baffle  
**Weight** : 0.7kg



Q1 : 1.3 / Shield angle : 20°



| h(m) | 22°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7800         | 0.39 |
| 2    | 1950         | 0.78 |
| 3    | 870          | 1.18 |
| 4    | 490          | 1.57 |
| 5    | 310          | 1.96 |

M70P36SSW

| h(m) | 44°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2000         | 0.81 |
| 2    | 500          | 1.62 |
| 3    | 220          | 2.44 |
| 4    | 130          | 3.25 |
| 5    | 80           | 4.06 |

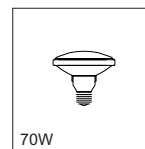
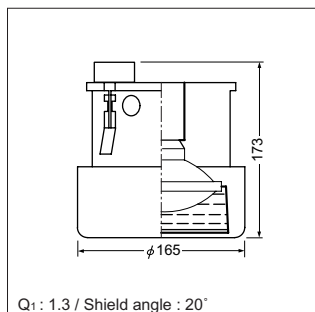
M70P36FSW

# Down light

**PAR36 70W**

## HDW171105

**Lamps**  
M70P36SSDW, M70P36SSW  
M70P36SD, M70P36FSDW  
M70P36FSW, M70P36FD  
**Finish**  
■ Body : Steel plate  
■ Frame : Steel plate (Semi white colour)  
■ Reflector : Black baffle  
**Weight** : 0.7kg



| 22°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 7800  | 0.39 |
| 2    | 1950  | 0.78 |
| 3    | 870   | 1.18 |
| 4    | 490   | 1.57 |
| 5    | 310   | 1.96 |

M70P36SSW

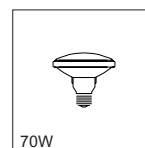
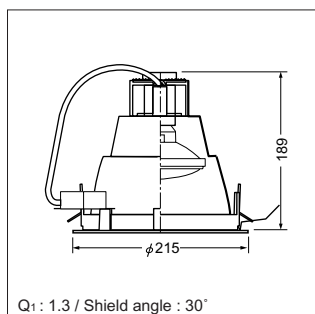
| 44°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 2000  | 0.81 |
| 2    | 500   | 1.62 |
| 3    | 220   | 2.44 |
| 4    | 130   | 3.25 |
| 5    | 80    | 4.06 |

M70P36FSW

**CASTOOL Common**

## HDW171109

**Lamps**  
M70P36SSDW, M70P36SSW  
M70P36SD, M70P36FSDW  
M70P36FSW, M70P36FD  
**Finish**  
■ Body : Aluminium die cast metallic grey  
■ Frame : Aluminium die cast (White colour)  
■ Hood : Metallic grey colour  
**Weight** : 0.6kg



| 22°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 7800  | 0.39 |
| 2    | 1950  | 0.78 |
| 3    | 870   | 1.18 |
| 4    | 490   | 1.57 |
| 5    | 310   | 1.96 |

M70P36SSW

| 44°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 2000  | 0.81 |
| 2    | 500   | 1.62 |
| 3    | 220   | 2.44 |
| 4    | 130   | 3.25 |
| 5    | 80    | 4.06 |

M70P36FSW

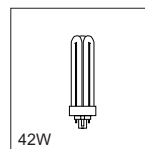
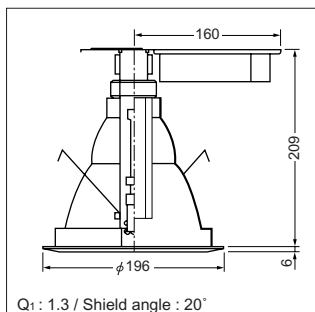
# Down light

## Compact fluorescent lamp 42W

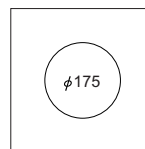
**FHDW4235ERH1**  
(100V)

**FHDW4235ERH2**  
(200V)

**Lamps**  
FHT42EX-L (Incandescent colour)  
FHT42EX-N (Natural white colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish  
**Socket** : GX24q-4  
**Weight** : 1.0kg



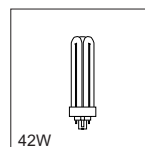
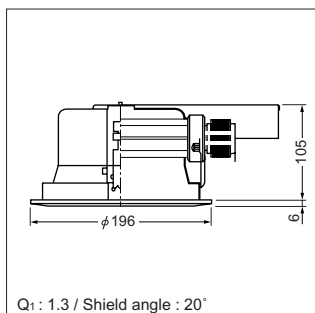
| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1600         | 0.83 |
| 2    | 400          | 1.66 |
| 3    | 177          | 2.49 |
| 4    | 100          | 3.31 |
| 5    | 64           | 4.14 |



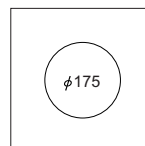
**FHDW4231ERH1**  
(100V)

**FHDW4231ERH2**  
(200V)

**Lamps**  
FHT42EX-L (Incandescent colour)  
FHT42EX-N (Natural white colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish  
**Socket** : GX24q-4  
**Weight** : 1.0 kg



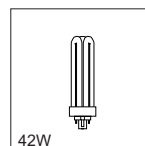
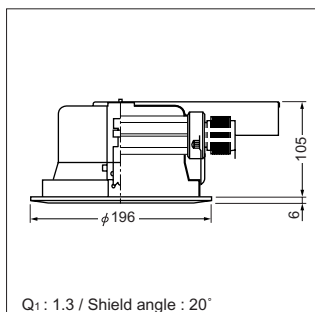
| h(m) | 65°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 640          | 1.26 |
| 2    | 160          | 2.53 |
| 3    | 71           | 3.79 |
| 4    | 40           | 5.06 |
| 5    | 25           | 6.32 |



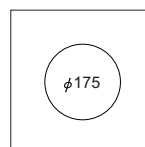
**FHDW4234ERH1**  
(100V)

**FHDW4234ERH2**  
(200V)

**Lamps**  
FHT42EX-L (Incandescent colour)  
FHT42EX-N (Natural white colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish  
**Socket** : GX24q-4  
**Weight** : 1.0kg



| h(m) | 65°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 640          | 1.26 |
| 2    | 160          | 2.53 |
| 3    | 71           | 3.79 |
| 4    | 40           | 5.06 |
| 5    | 25           | 6.32 |

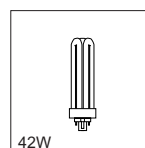
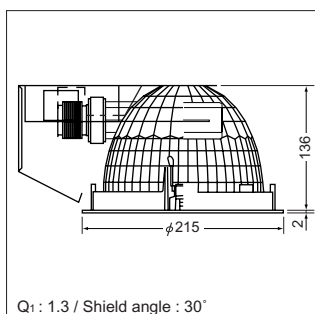


## CASTOOL Shallow

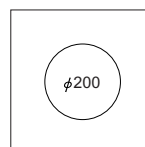
**FHDW4253ERH1**  
(100V)

**FHDW4253ERH2**  
(200V)

**Lamps**  
FHT42EX-L (Incandescent colour)  
FHT42EX-N (Natural white colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (White colour)  
**Reflector** : Aluminium (Fine matt finish)  
**Socket** : GX24q-4  
**Weight** : 0.95kg



| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 992          | 1.25 |
| 2    | 248          | 2.51 |
| 3    | 110          | 3.76 |
| 4    | 62           | 5.02 |
| 5    | 40           | 6.27 |



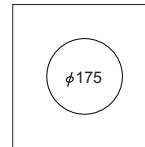
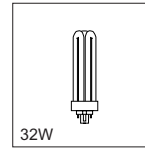
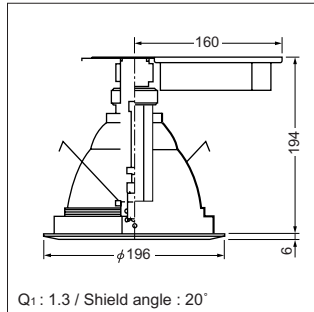
# Down light

## Compact fluorescent lamp 32W

**FHDW3232ERH1**  
(100V)

**FHDW3232ERH2**  
(200V)

**Lamps**  
FHT32EX-L (Incandescent colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish, white baffle  
**Socket** : GX24q-3  
**Weight** : 0.95kg

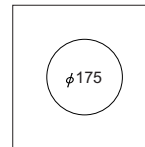
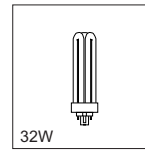
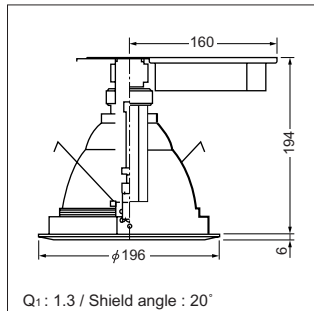


| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 720          | 1.07 |
| 2    | 180          | 2.14 |
| 3    | 80           | 3.22 |
| 4    | 45           | 4.29 |
| 5    | 25           | 5.36 |

**FHDW3235ERH1**  
(100V)

**FHDW3235ERH2**  
(200V)

**Lamps**  
FHT32EX-L (Incandescent colour)  
FHT32EX-N (Natural white colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish, white baffle  
**Socket** : GX24q-3  
**Weight** : 0.95kg



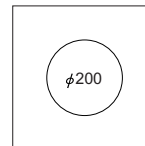
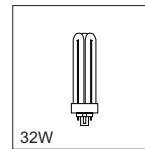
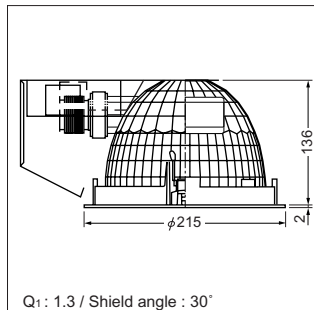
| h(m) | 56°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 720          | 1.07 |
| 2    | 180          | 2.14 |
| 3    | 80           | 3.22 |
| 4    | 45           | 4.29 |
| 5    | 25           | 5.36 |

## CASTOOL Shallow

**FHDW3253ERH1**  
(100V)

**FHDW3253ERH2**  
(200V)

**Lamps**  
FHT32EX-L (Incandescent colour)  
FHT32EX-N (Natural white colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Aluminium die cast (White colour)  
**Reflector** : Aluminium (Fine matt finish)  
**Socket** : GX24q-3  
**Weight** : 0.85kg

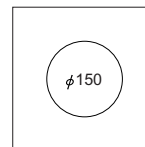
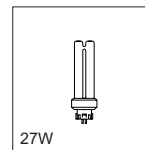
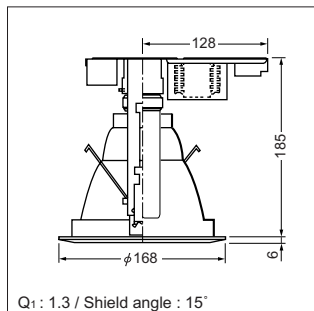


| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 806          | 1.25 |
| 2    | 202          | 2.50 |
| 3    | 90           | 3.75 |
| 4    | 50           | 5.00 |
| 5    | 32           | 6.25 |

## Compact fluorescent lamp 27W

**FDW12730EL1**  
(With electronic starter)

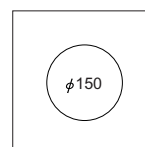
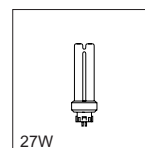
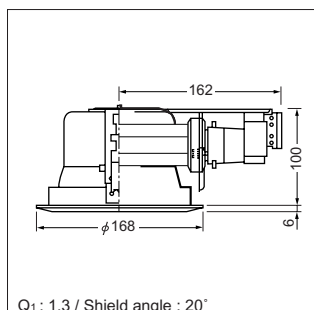
**Lamps**  
FDL27EX-L (Incandescent colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish  
**Socket** : GX10q-4  
**Weight** : 1.2kg



| h(m) | 55°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 470          | 1.04 |
| 2    | 118          | 2.07 |
| 3    | 52           | 3.11 |

**FDW12732EL1**  
(With electronic starter)

**Lamps**  
FDL27EX-L (Incandescent colour)  
**Finish**  
■ Body : Steel plate  
■ Frame : Resin (Semi white colour)  
**Reflector** : Aluminium mirror finish  
**Socket** : GX10q-4  
**Weight** : 1.35kg



| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 370          | 1.16 |
| 2    | 92           | 2.32 |
| 3    | 40           | 3.48 |

# Down light

**For Color Arc & SDX 150W**

## CASTOOL Multi HDW30123

### Lamps

NHT150SDX, MT150SLW  
MT150SDW, MT150SW, MT150D

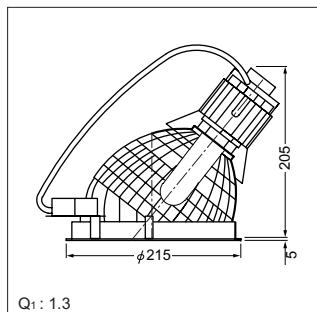
### Finish

Body : Aluminium die cast metallic grey

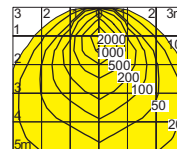
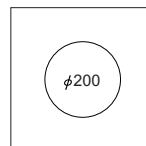
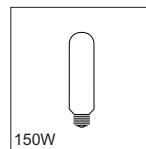
Frame : Aluminium die cast (White colour)

Reflector : Aluminium (Fine matt finish)

Weight : 0.7kg

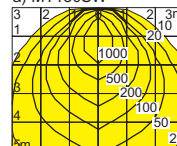


- a) Narrow  
b) Medium  
c) Wide



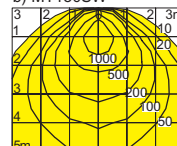
a) MT150SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)



b) MT150SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)



c) MT150SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

## CASTOOL Multi-Shallow HDW30124

### Lamps

NHT150SDX, MT150SLW  
MT150SDW, MT150SW, MT150D

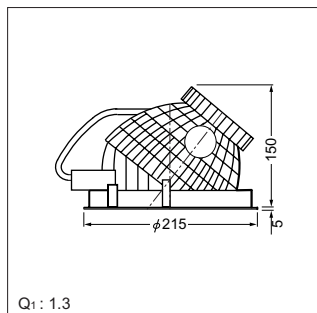
### Finish

Body : Aluminium die cast metallic grey

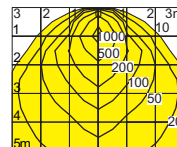
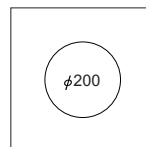
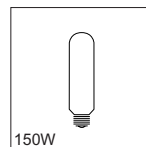
Frame : Aluminium die cast (White colour)

Reflector : Aluminium (Fine matt finish)

Weight : 0.7kg



Q1: 1.3



MT150SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

**For Color Arc & SDX 100W**

## CASTOOL Multi HDW20123

### Lamps

NHT100SDX  
MT100SDW, MT100SW, MT100D

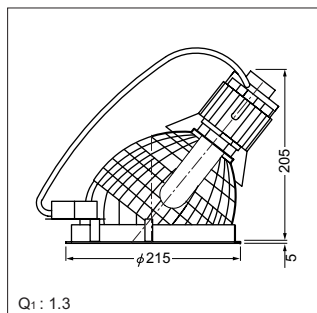
### Finish

Body : Aluminium die cast metallic grey

Frame : Aluminium die cast (White colour)

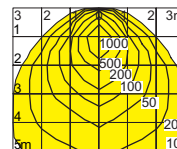
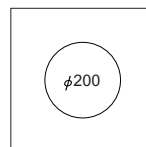
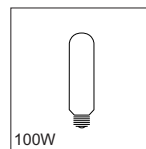
Reflector : Aluminium (Fine matt finish)

Weight : 0.7kg



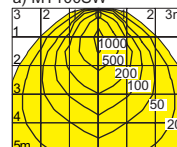
Q1: 1.3

- a) Narrow  
b) Medium  
c) Wide



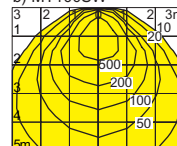
a) MT100SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)



b) MT100SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)



c) MT100SW

Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

# Down light

## For Color Arc & SDX 100W

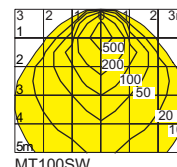
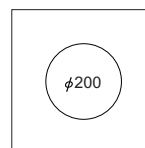
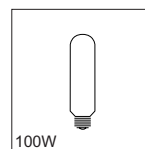
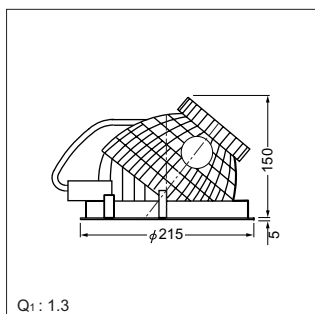
### CASTOOL Multi-Shallow HDW20124

#### Lamps

NHT100SDX, MT100SDW  
MT100SW, MT100D

#### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

## For Color Arc & SDX 70W

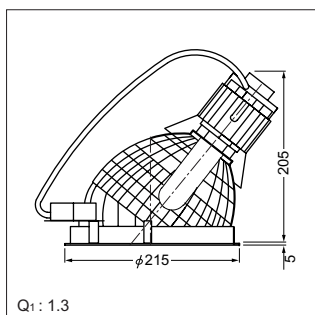
### CASTOOL Multi HDW17123

#### Lamps

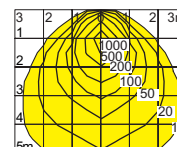
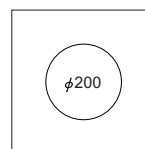
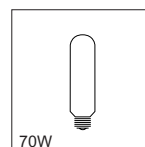
NHT70SDX  
MT70SDW, MT70SW, MT70D

#### Finish

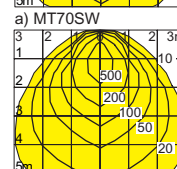
Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



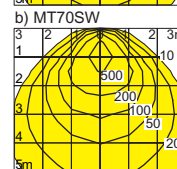
a) Narrow  
b) Medium  
c) Wide



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

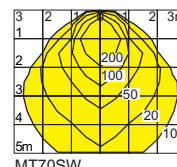
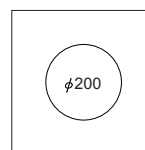
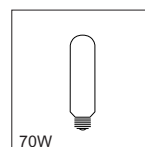
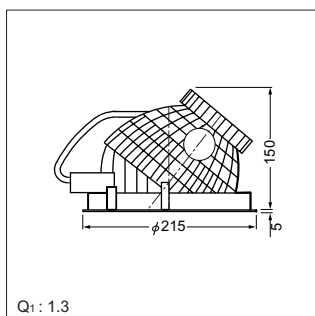
### CASTOOL Multi-Shallow HDW17124

#### Lamps

NHT70SDX  
MT70SDW, MT70SW, MT70D

#### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

## PAR36 150W

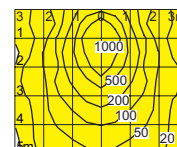
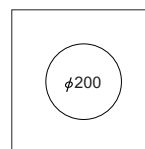
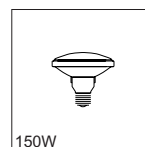
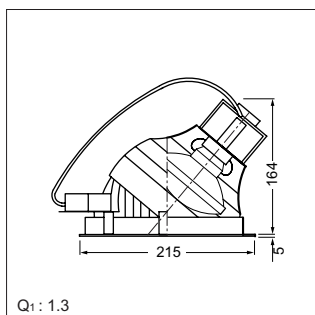
### CASTOOL Multi HDW31108

#### Lamps

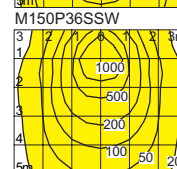
M150P36SSDW, M150P36FSDW  
M150P36SSW, M150P36FSW  
M150P36SD, M150P36FD

#### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Lower part - Aluminium (White colour)  
Upper part - Metallic grey  
Weight : 0.6kg



Installation :  
At 1m from a wall  
Tilt angle : 30°  
Maintenance factor : 1.0  
Unit (lx)



Installation :  
At 1m from a wall  
Tilt angle : 30°  
Maintenance factor : 1.0  
Unit (lx)

# Down light

## PAR36 70W

### CASTOOL Multi

## HDW171108

#### Lamps

M70P36SSDW, M70P36FSDW

M70P36SSW, M70P36FSW

M70P36SD, M70P36FD

#### Finish

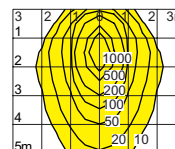
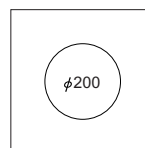
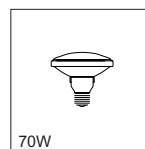
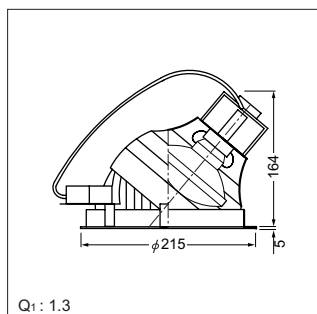
Body : Aluminium die cast metallic grey

Frame : Aluminium die cast (White colour)

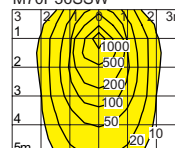
Reflector : Lower part - Aluminium (White colour)

Upper part - Metallic grey

Weight : 0.6kg



M70P36SSW



M70P36FSW

Installation :  
At 1m from a wall  
Tilt angle : 30°  
Maintenance factor : 1.0  
Unit (lx)

Installation :  
At 1m from a wall  
Tilt angle : 30°  
Maintenance factor : 1.0  
Unit (lx)

## HID lamp 100W

## HDW1183

#### Lamps

MF100LS/BUP

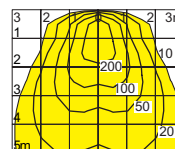
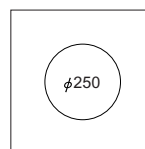
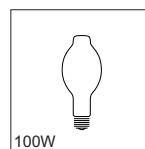
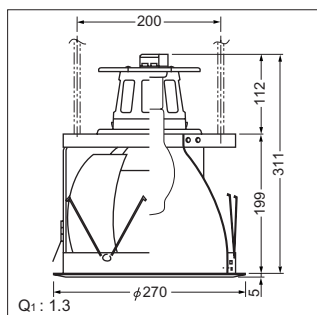
#### Finish

Body : Steel plate

Frame : Steel plate (Semi white colour)

Reflector : Aluminium (Mirror finish)

Weight : 1.4kg



MF100LS/BUP

Installation :  
At 1m from a wall  
Maintenance factor : 1.0  
Unit (lx)

### EYE Color Arc PAR

The reflection type compact sealed beam lamp with the high colour rendering performance of EYE Color Arc PAR offers your choice in three colour temperatures of 3500K, 4500K and 6500K, and in two light distributions of narrow and wide.

### Multi Super Ace

The intense and free whitish light creates a fresh wide space in an atrium, etc. It features short starting time, high luminous efficacy and long life of lamp.

# Down light

## Compact fluorescent lamp 42W

**FHDW4233ERH1**  
(100V)

**FHDW4233ERH2**  
(200V)

### Lamps

FHT42EX-L (Incandescent colour)

FHT42EX-N (Natural white colour)

### Finish

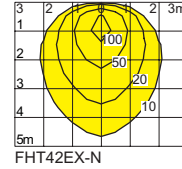
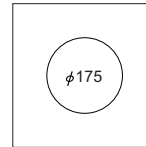
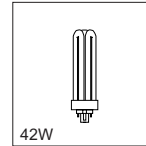
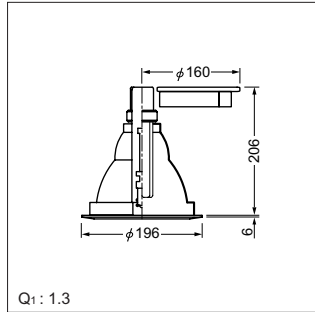
Body : Steel plate

Frame : Resin (Semi white colour)

Reflector : Aluminium mirror finish

Socket : GX24q-4

Weight : 1.0kg



Installation :  
At 1m from a wall  
Maintenance factor : 1.0  
Unit (lx)

## CASTOOL Multi-Shallow

**FHDW4254ERH1**  
(100V)

**FHDW4254ERH2**  
(200V)

### Lamps

FHT42EX-L (Incandescent colour)

FHT42EX-N (Natural white colour)

### Finish

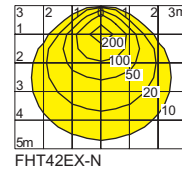
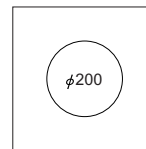
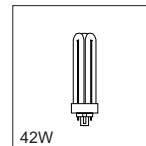
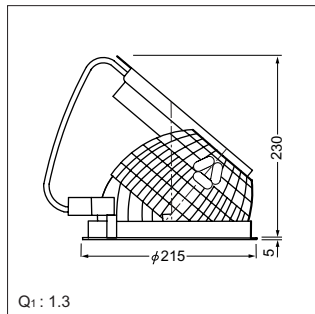
Body : Steel plate

Frame : Aluminium die cast (White colour)

Reflector : Aluminium (Fine matt finish)

Socket : GX24q-4

Weight : 1.1kg



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

## Compact fluorescent lamp 32W

**FHDW3233ERH1**  
(100V)

**FHDW3233ERH2**  
(200V)

### Lamps

FHT32EX-L (Incandescent colour)

FHT32EX-N (Natural white colour)

### Finish

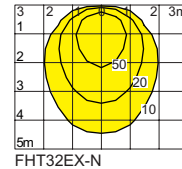
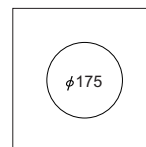
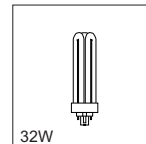
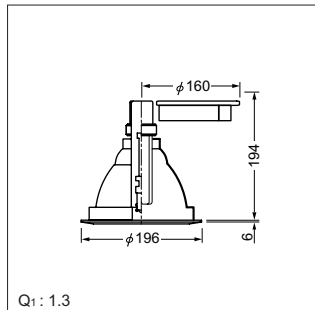
Body : Steel plate

Frame : Resin (Semi white colour)

Reflector : Aluminium mirror finish

Socket : GX24q-3

Weight : 0.95kg



Installation :  
At 1m from a wall  
Maintenance factor : 1.0  
Unit (lx)

# Down light

## Compact fluorescent lamp triple 32W

### CASTOOL Multi-Shallow

**FHDW3254ERH1**  
(100V)

**FHDW3254ERH2**  
(200V)

#### Lamps

FHT32EX-L (Incandescent colour)

FHT32EX-N (Natural white colour)

#### Finish

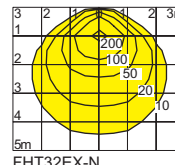
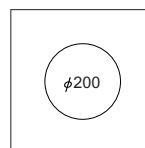
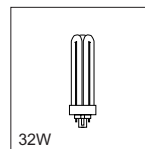
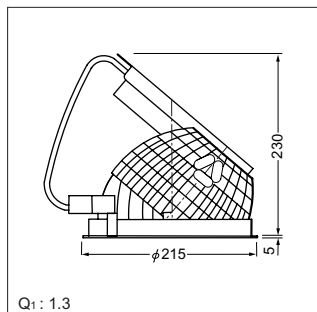
Body : Steel plate

Frame : Aluminium die cast (White colour)

Reflector : Aluminium (Fine matt finish)

Socket : GX24q-3

Weight : 0.95kg



Installation :  
At 1m from a wall  
Tilt angle : 40°  
Maintenance factor : 1.0  
Unit (lx)

## Compact fluorescent lamp double 27W

**FDW12719EL1**

#### Lamps

FDL27EX-L (Incandescent colour)

#### Finish

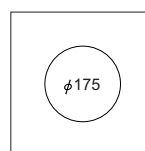
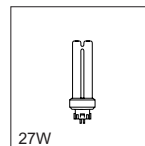
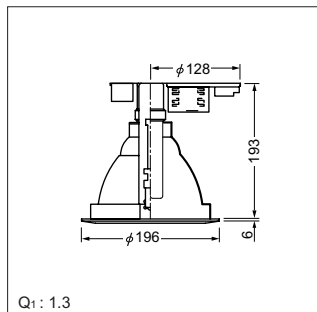
Body : Steel plate

Frame : Resin (Semi white colour)

Reflector : Aluminium mirror finish

Socket : GX10q-4

Weight : 1.3kg



Installation :  
At 1m from a wall  
Maintenance factor : 1.0  
Unit (lx)

## Compact fluorescent lamp double 18W

**FDW11819EL1**

#### Lamps

FDL18EX-L (Incandescent colour)

#### Finish

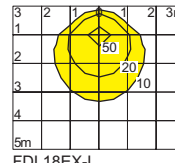
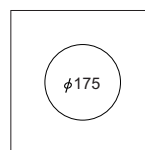
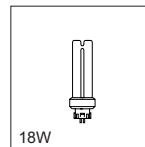
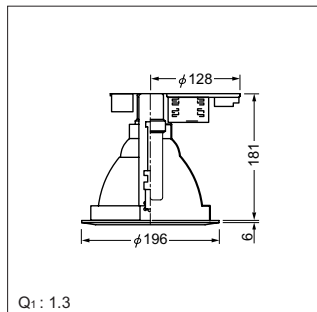
Body : Steel plate

Frame : Resin (Semi white colour)

Reflector : Aluminium mirror finish

Socket : GX10q-3

Weight : 1.2kg



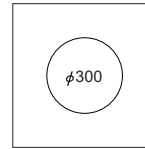
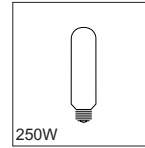
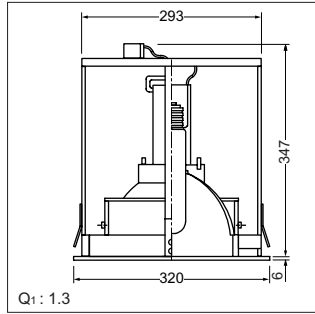
Installation :  
At 1m from a wall  
Maintenance factor : 1.0  
Unit (lx)

# Down light

## For Color Arc 250W

### HDW40102

**Lamps**  
MT250SDW  
MT250SW  
**Finish**  
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)  
**Reflector** : Aluminium crepe finish, (With white baffle)  
**Weight** : 2.5kg



| h(m) | 47°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 11790        | 0.87 |
| 2    | 2940         | 1.73 |
| 3    | 1310         | 2.60 |
| 4    | 730          | 3.46 |
| 5    | 470          | 4.33 |

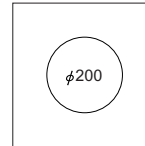
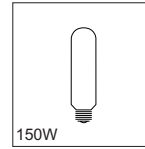
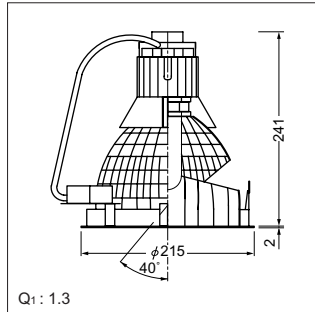
MT250SW

## For Color Arc & SDX 150W

### CASTOOL Multi

### HDW30123

**Lamps**  
NHT150SDX, MT150SLW  
MT150SDW, MT150SW, MT150D  
**Finish**  
Body : Aluminium die cast (Metallic grey)  
Frame : Aluminium die cast (White colour)  
**Reflector** : Aluminium (Fine matt finish)  
**Weight** : 0.7kg



| h(m) | 30°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 14993        | 0.55 |
| 2    | 3748         | 1.10 |
| 3    | 1666         | 1.65 |
| 4    | 937          | 2.20 |
| 5    | 600          | 2.75 |

a) MT150SW

| h(m) | 42°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 9295         | 0.78 |
| 2    | 2324         | 1.55 |
| 3    | 1033         | 2.33 |
| 4    | 581          | 3.10 |
| 5    | 372          | 3.88 |

b) MT150SW

| h(m) | 50°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7183         | 0.93 |
| 2    | 1796         | 1.87 |
| 3    | 798          | 2.80 |
| 4    | 449          | 3.73 |
| 5    | 287          | 4.66 |

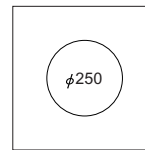
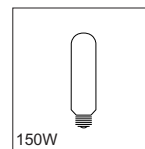
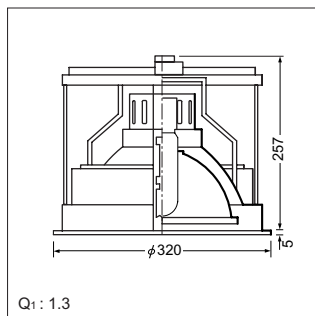
c) MT150SW

Rotational angle : 175°  
Tilt angle : 40° (single side)

a) Narrow  
b) Medium  
c) Wide

### HDW30120N HDW3005/N

**Lamps**  
NHT150FSDX, NHT150SDX  
MT150FSLW, MT150SLW  
MT150FSDW, MT150SDW  
MT150FSW, MT150SW  
MT150FD, MT150D  
**Finish**  
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)  
**Reflector** : Aluminium mirror finish  
HDW30120N : White baffle  
HDW3005/N : Black baffle  
**Weight** : 2.3kg



| h(m) | 11°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 34000        | 0.20 |
| 2    | 8500         | 0.40 |
| 3    | 3770         | 0.60 |
| 4    | 2120         | 0.80 |
| 5    | 1360         | 1.00 |

NHT150SDX

| h(m) | 11°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 72500        | 0.20 |
| 2    | 18100        | 0.40 |
| 3    | 4400         | 0.60 |
| 4    | 2500         | 0.80 |
| 5    | 1600         | 1.00 |

MT150FSW

Rotational angle : 350°  
Tilt angle : 40° (single side)

# Down light

**For Color Arc & SDX 100W**

## CASTOOL Multi HDW20123

### Lamps

NHT100SDX  
MT100SDW, MT100SW, MT100D

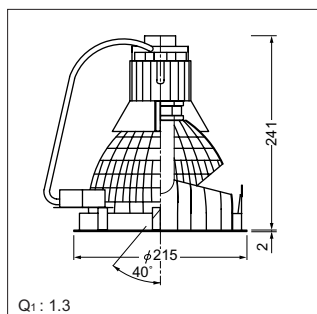
### Finish

Body : Aluminium die cast (Metallic grey)

Frame : Aluminium die cast (White colour)

Reflector : Aluminium (Fine matt finish)

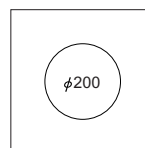
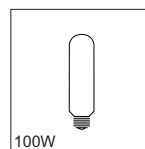
Weight : 0.7kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 40° (single side)

a) Narrow  
b) Medium  
c) Wide



| h(m) | 30°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 9541         | 0.55 |
| 2    | 2385         | 1.10 |
| 3    | 1060         | 1.65 |
| 4    | 596          | 2.20 |
| 5    | 382          | 2.75 |

a) MT100SW

| h(m) | 42°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 5915         | 0.78 |
| 2    | 1479         | 1.55 |
| 3    | 657          | 2.33 |
| 4    | 370          | 3.10 |
| 5    | 237          | 3.88 |

b) MT100SW

| h(m) | 50°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4571         | 0.93 |
| 2    | 1143         | 1.87 |
| 3    | 508          | 2.80 |
| 4    | 286          | 3.73 |
| 5    | 183          | 4.66 |

c) MT100SW

## CASTOOL Multi-Shallow HDW20124

### Lamps

NHT100SDX  
MT100SDW, MT100SW, MT100D

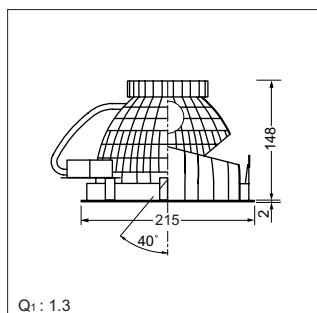
### Finish

Body : Aluminium die cast (Metallic grey)

Frame : Aluminium die cast (White colour)

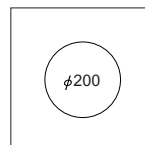
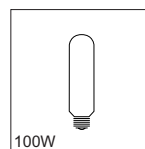
Reflector : Aluminium (Fine matt finish)

Weight : 0.7kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 40° (single side)



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2779         | 0.46 |
| 2    | 695          | 0.92 |
| 3    | 309          | 1.39 |
| 4    | 174          | 1.85 |
| 5    | 111          | 2.31 |

MT100SW

## HDW20120N HDW2011/N

### Lamps

NHT100FSDX, NHT100SDX  
MT100FSDX, MT100SDX  
MT100FSW, MT100SW  
MT100FD, MT100D

### Finish

Body : Steel plate

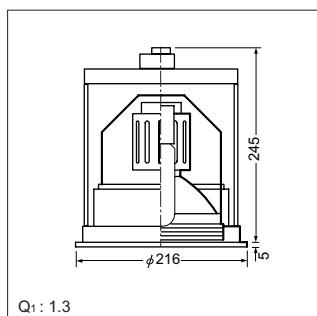
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium mirror finish

HDW20120N : White baffle

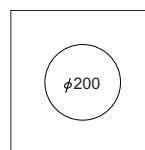
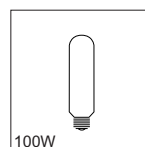
HDW2011/N : Black baffle

Weight : 0.95kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 30° (single side)



| h(m) | 8°<br>E(lx) | D(m) |
|------|-------------|------|
| 1    | 47085       | 0.15 |
| 2    | 11771       | 0.29 |
| 3    | 5232        | 0.44 |
| 4    | 2943        | 0.59 |
| 5    | 1883        | 0.73 |

NHT100SDX

## HDW20120M HDW2011/M

### Lamps

NHT100FSDX, NHT100SDX  
MT100FSDX, MT100SDX  
MT100FSW, MT100SW  
MT100FD, MT100D

### Finish

Body : Steel plate

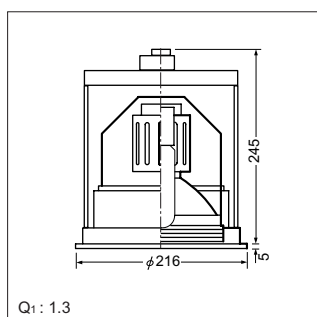
Frame : Aluminium die cast (Semi white colour)

Reflector : Aluminium mirror finish

HDW20120M : White baffle

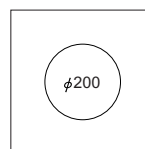
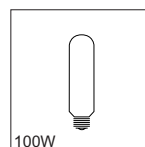
HDW2011/M : Black baffle

Weight : 0.95kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 30° (single side)



| h(m) | 17°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 17230        | 0.31 |
| 2    | 4308         | 0.61 |
| 3    | 1914         | 0.92 |
| 4    | 1077         | 1.22 |
| 5    | 689          | 1.53 |

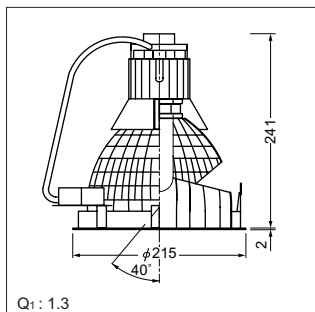
NHT100SDX

# Down light

**For Color Arc & SDX 70W**

## CASTOOL Multi HDW17123

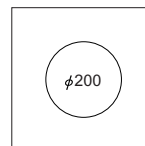
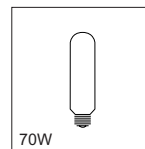
**Lamps**  
NHT70SDX  
MT70SDW, MT70SW, MT70D  
**Finish**  
Body : Aluminium die cast (Metallic grey)  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
**Weight** : 0.7kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 40° (single side)

a) Narrow  
b) Medium  
c) Wide



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 6815  | 0.55 |
| 2    | 1704  | 1.10 |
| 3    | 757   | 1.65 |
| 4    | 426   | 2.20 |
| 5    | 273   | 2.75 |

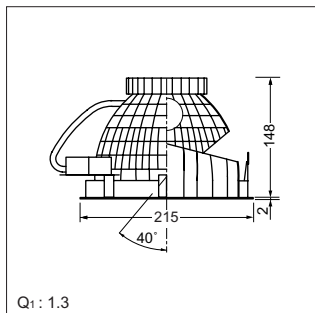
| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 4225  | 0.78 |
| 2    | 1056  | 1.55 |
| 3    | 469   | 2.33 |
| 4    | 264   | 3.10 |
| 5    | 169   | 3.88 |

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 3265  | 0.93 |
| 2    | 816   | 1.87 |
| 3    | 363   | 2.80 |
| 4    | 204   | 3.73 |
| 5    | 131   | 4.66 |

c) NHT70SDX

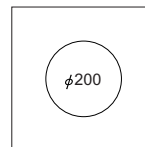
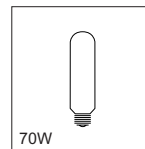
## CASTOOL Multi-Shallow HDW17124

**Lamps**  
NHT70SDX  
MT70SDW, MT70SW, MT70D  
**Finish**  
Body : Aluminium die cast (Metallic grey)  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
**Weight** : 0.7kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 40° (single side)

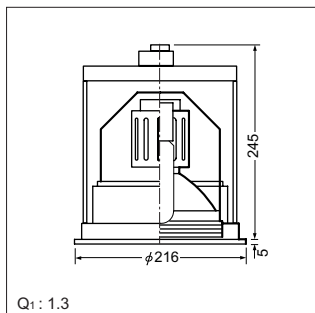
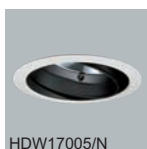


| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 1985  | 0.46 |
| 2    | 496   | 0.92 |
| 3    | 221   | 1.39 |
| 4    | 124   | 1.85 |
| 5    | 79    | 2.31 |

MT70SW

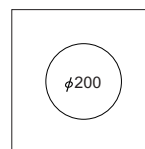
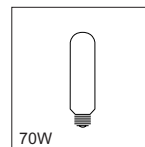
## HDW17120N HDW17005/N

**Lamps**  
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70SDW  
MT70FSW, MT70SW  
MT70FD, MT70D  
**Finish**  
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)  
Reflector : Aluminium mirror finish  
HDW17120N : White baffle  
HDW17005/N : Black baffle  
**Weight** : 0.95kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 30° (single side)



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 15800 | 0.15 |
| 2    | 38900 | 0.29 |
| 3    | 17300 | 0.44 |
| 4    | 9740  | 0.59 |
| 5    | 6230  | 0.73 |

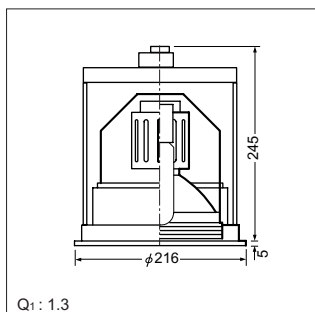
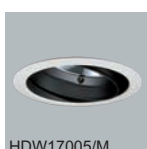
NHT70SDX

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 33200 | 0.11 |
| 2    | 8300  | 0.22 |
| 3    | 3690  | 0.34 |
| 4    | 2075  | 0.45 |
| 5    | 1330  | 0.56 |

MT70SW

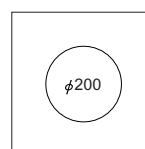
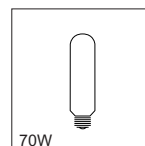
## HDW17120M HDW17005/M

**Lamps**  
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70SDW  
MT70FSW, MT70SW  
MT70FD, MT70D  
**Finish**  
Body : Steel plate  
Frame : Aluminium die cast (Semi white colour)  
Reflector : Aluminium mirror finish  
HDW17120M : White baffle  
HDW17005/M : Black baffle  
**Weight** : 0.95kg



Q1 : 1.3

Rotational angle : 175°  
Tilt angle : 30° (single side)



| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 13200 | 0.31 |
| 2    | 3300  | 0.61 |
| 3    | 1460  | 0.92 |
| 4    | 825   | 1.22 |
| 5    | 530   | 1.53 |

NHT70SDX

| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 25500 | 0.29 |
| 2    | 6375  | 0.58 |
| 3    | 2830  | 0.86 |
| 4    | 1590  | 1.15 |
| 5    | 1000  | 1.44 |

MT70SW

# Down light

**For SDX 50W**

## HDW10120N HDW1011/N

### Lamps

NHT50SDX

### Finish

Body : Steel plate

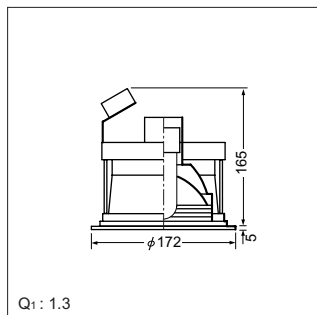
Frame : Resin (Semi-white colour)

Reflector : Aluminium mirror finish

HDW10120N : White baffle

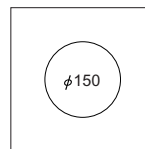
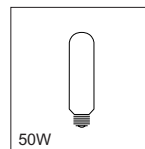
HDW1011/N : Black baffle

Weight : 0.7kg



Q1: 1.3

Rotational angle : 350°  
Tilt angle : 23° (single side)



| h(m) | 9°<br>E(lx) | D(m) |
|------|-------------|------|
| 1    | 22500       | 0.16 |
| 2    | 5625        | 0.33 |
| 3    | 2500        | 0.49 |
| 4    | 1400        | 0.66 |
| 5    | 900         | 0.82 |

NHT50SDX

## HDW10120M HDW1011/M

### Lamps

HT50SDX

### Finish

Body : Steel plate

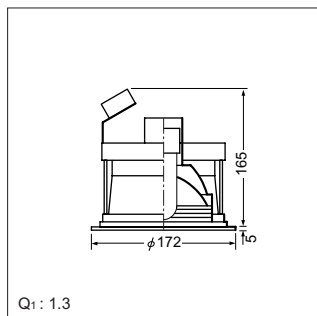
Frame : Resin (Semi-white colour)

Reflector : Aluminium mirror finish

HDW10120M : White baffle

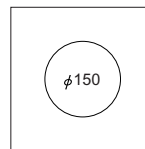
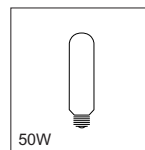
HDW1011/M : Black baffle

Weight : 0.7kg



Q1: 1.3

Rotational angle : 350°  
Tilt angle : 23° (single side)



| h(m) | 12°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7650         | 0.22 |
| 2    | 1910         | 0.43 |
| 3    | 850          | 0.65 |
| 4    | 480          | 0.87 |
| 5    | 300          | 1.09 |

NHT50SDX

**PAR36 150W**

### CASTOOL Multi

## HDW31108

### Lamps

M150P36SSDW, M150P36FSDW

M150P36SSW, M150P36FSW

M150P36SD, M150P36FD

### Finish

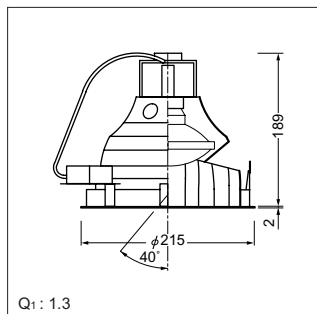
Body : Aluminium die cast metallic grey

Frame : Aluminium die cast (White colour)

Reflector : Upper part - Metallic grey

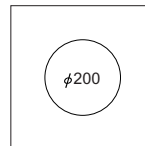
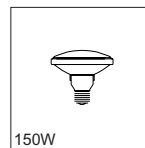
Lower part - Aluminium (White colour)

Weight : 0.6kg



Q1: 1.3

Rotational angle : 175°  
Tilt angle : 40° (single side)



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

M150P36SSW

| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

M150P36FSW

## HDW31106

### Lamps

M150P36SSDW, M150P36SSW

M150P36SD, M150P36FSDW

M150P36FSW, M150P36FD

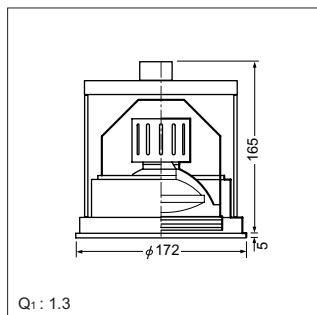
### Finish

Body : Steel plate

Frame : Aluminium die cast (Semi-white colour)

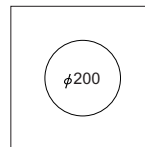
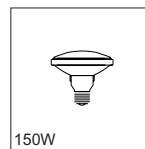
Reflector : Black baffle

Weight : 0.95kg



Q1: 1.3

Rotational angle : 175°  
Tilt angle : 30° (single side)



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

M150P36SSW

| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

M150P36FSW

# Down light

**PAR36 70W**

**CASTOOL Multi**

## HDW171108

### Lamps

M70P36SSDW, M70P36FSDW

M70P36SSW, M70P36FSW

M70P36SD, M70P36FD

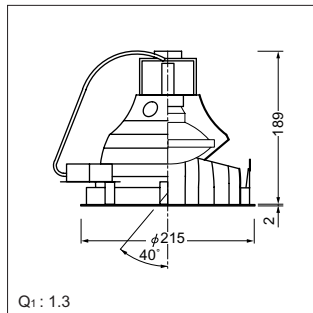
### Finish

Body : Aluminium die cast metallic grey

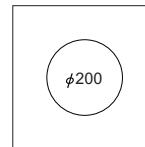
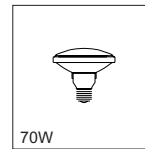
Frame : Aluminium die cast (White colour)

Reflector : Aluminium white colour (Metallic grey)

Weight : 0.6kg



Rotational angle : 175°  
Tilt angle : 40° (single side)



| 22°  |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 7800  | 0.39 |  |
| 2    | 1950  | 0.78 |  |
| 3    | 870   | 1.18 |  |
| 4    | 490   | 1.57 |  |
| 5    | 310   | 1.96 |  |

M70P36SSW

| 44°  |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 2000  | 0.81 |  |
| 2    | 500   | 1.62 |  |
| 3    | 220   | 2.44 |  |
| 4    | 130   | 3.25 |  |
| 5    | 80    | 4.06 |  |

M70P36FSW

## HDW171106

### Lamps

M70P36SSDW, M70P36SSW

M70P36SD, M70P36FSDW

M70P36FSW, M70P36FD

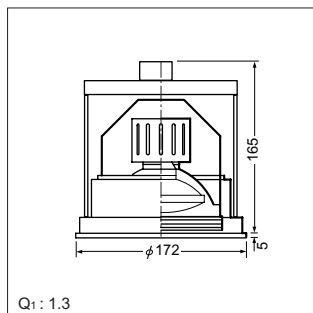
### Finish

Body : Steel plate

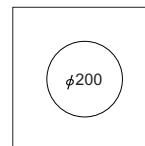
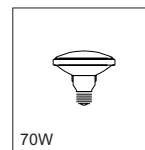
Frame : Aluminium die cast (Semi-white colour)

Reflector : With black baffle

Weight : 0.95kg



Rotational angle : 175°  
Tilt angle : 30° (single side)



| 9°   |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 22500 | 0.16 |  |
| 2    | 5625  | 0.33 |  |
| 3    | 2500  | 0.49 |  |
| 4    | 1400  | 0.66 |  |
| 5    | 900   | 0.82 |  |

M70P36SSW

| 9°   |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 22500 | 0.16 |  |
| 2    | 5625  | 0.33 |  |
| 3    | 2500  | 0.49 |  |
| 4    | 1400  | 0.66 |  |
| 5    | 900   | 0.82 |  |

M70P36FSW

# Down light

## Compact fluorescent lamp triple 42W

### CASTOOL Multi-Shallow

**FHDW4254ERH1**  
(100V)

**FHDW4254ERH2**  
(200V)

**Lamps** : EYE compact fluorescent lamp triple  
FHT42EX-L (Incandescent colour)  
FHT42EX-N (Natural white colour)

**Finish**

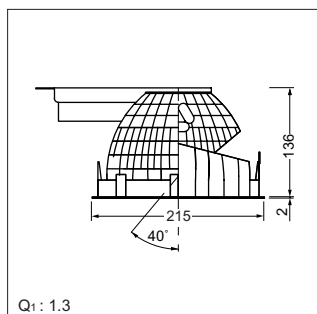
Body : Steel plate

Frame : Aluminium die cast (White colour)

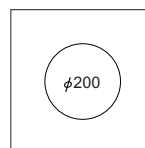
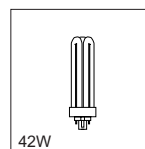
Reflector : Aluminium (Fine matt finish)

Socket : GX24q-4

Weight : 1.1kg



Rotational angle : 175°  
Tilt angle : 40°



| h(m) | 59°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1027         | 1.14 |
| 2    | 257          | 2.27 |
| 3    | 114          | 3.41 |
| 4    | 64           | 4.54 |
| 5    | 41           | 5.68 |

FHT42EX-N

## Compact fluorescent lamp triple 32W

### CASTOOL Multi-Shallow

**FHDW3254ERH1**  
(100V)

**FHDW3254ERH2**  
(200V)

**Lamps** : EYE compact fluorescent lamp triple  
FHT32EX-L (Incandescent colour)  
FHT32EX-N (Natural white colour)

**Finish**

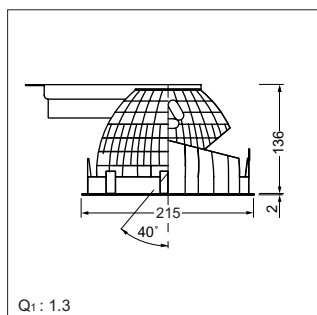
Body : Steel plate

Frame : Aluminium die cast (White colour)

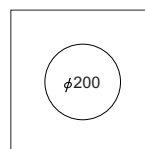
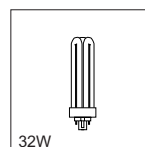
Reflector : Aluminium (Fine matt finish)

Socket : GX24q-3

Weight : 0.95kg



Rotational angle : 175°  
Tilt angle : 40°



| h(m) | 58°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 917          | 1.11 |
| 2    | 229          | 2.22 |
| 3    | 102          | 3.33 |
| 4    | 57           | 4.43 |
| 5    | 37           | 5.54 |

FHT32EX-N

# Down light

**For Color Arc & SDX 150W**

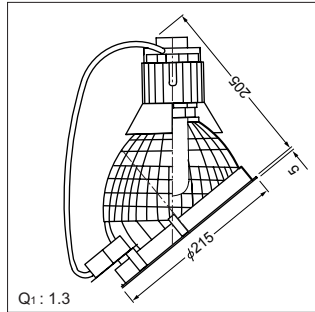
## CASTOOL Multi HDW30123

### Lamps

NHT150SDX, MT150SLW  
MT150SDW, MT150SW, MT150D

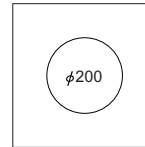
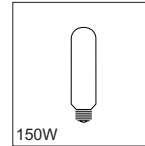
### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Adaptable ceiling slope angle : 0~40°

a) Narrow  
b) Medium  
c) Wide



| h(m) | 30°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 14993        | 0.55 |
| 2    | 3748         | 1.10 |
| 3    | 1666         | 1.65 |
| 4    | 937          | 2.20 |
| 5    | 600          | 2.75 |

a) MT150SW

| h(m) | 42°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 9295         | 0.78 |
| 2    | 2324         | 1.55 |
| 3    | 1033         | 2.33 |
| 4    | 581          | 3.10 |
| 5    | 372          | 3.88 |

b) MT150SW

| h(m) | 50°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7183         | 0.93 |
| 2    | 1796         | 1.87 |
| 3    | 798          | 2.80 |
| 4    | 449          | 3.73 |
| 5    | 287          | 4.66 |

c) MT150SW

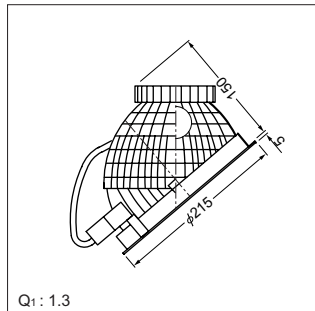
## CASTOOL Multi-Shallow HDW30124

### Lamps

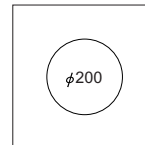
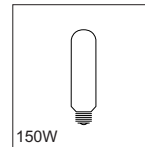
NHT150SDX, MT150SLW  
MT150SDW, MT150SW, MT150D

### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Adaptable ceiling slope angle : 0~40°



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4367         | 0.46 |
| 2    | 1092         | 0.92 |
| 3    | 485          | 1.39 |
| 4    | 273          | 1.85 |
| 5    | 175          | 2.31 |

MT150SW

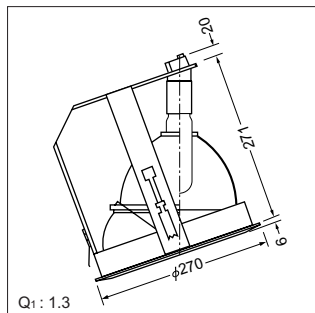
## HDW3017

### Lamps

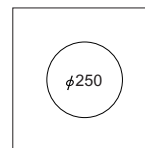
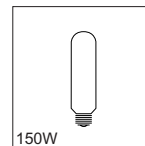
NHT150FSDX, NHT150DX  
MT150FSLW, MT150SLW  
MT150FSDW, MT150SDW  
MT150FSW, MT150SW  
MT150FD, MT150D

### Finish

Body : Steel plate  
Frame : Aluminium die cast (Semi-white colour)  
Reflector : Aluminium (Polishing finish with black baffle)  
Adaptable ceiling slope angle : 15~25°  
Weight : 1.4kg



Adaptable ceiling slope angle : 15~25°



| h(m) | 24°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 5000         | 0.41 |
| 2    | 1250         | 0.82 |
| 3    | 550          | 1.23 |
| 4    | 310          | 1.64 |
| 5    | 200          | 2.05 |

NHT150SDX

| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 6200         | 0.47 |
| 2    | 1550         | 0.94 |
| 3    | 690          | 1.41 |
| 4    | 390          | 1.88 |
| 5    | 248          | 2.35 |

MT150SW

# Down light

**For Color Arc & SDX 100W**

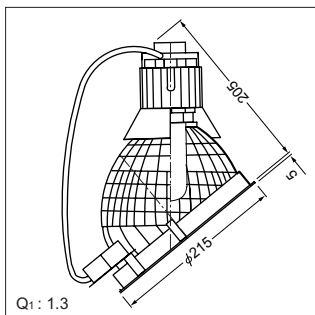
## CASTOOL Multi HDW20123

### Lamps

NHT100SDX,  
MT100SDW, MT100SW, MT100D

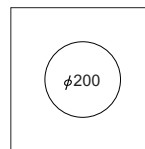
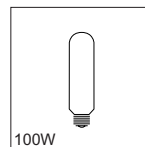
### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Adaptable ceiling slope angle : 0~40°

a) Narrow  
b) Medium  
c) Wide



| h(m) | 30°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 954.1        | 0.55 |
| 2    | 238.5        | 1.10 |
| 3    | 106.0        | 1.65 |
| 4    | 59.6         | 2.20 |
| 5    | 38.2         | 2.75 |

a) MT100SW

| h(m) | 42°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 591.5        | 0.78 |
| 2    | 147.9        | 1.55 |
| 3    | 65.7         | 2.33 |
| 4    | 37.0         | 3.10 |
| 5    | 23.7         | 3.88 |

b) MT100SW

| h(m) | 50°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 457.1        | 0.93 |
| 2    | 114.3        | 1.87 |
| 3    | 50.8         | 2.80 |
| 4    | 28.6         | 3.73 |
| 5    | 18.3         | 4.66 |

c) MT100SW

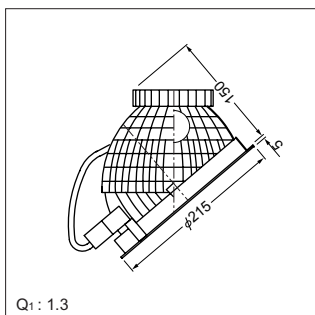
## CASTOOL Multi-Shallow HDW20124

### Lamps

NHT100SDX,  
MT100SDW, MT100SW, MT100D

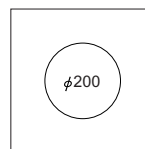
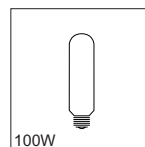
### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Adaptable ceiling slope angle : 0~40°

a) Narrow  
b) Medium  
c) Wide



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 277.9        | 0.46 |
| 2    | 69.5         | 0.92 |
| 3    | 30.9         | 1.39 |
| 4    | 17.4         | 1.85 |
| 5    | 11.1         | 2.31 |

MT100SW

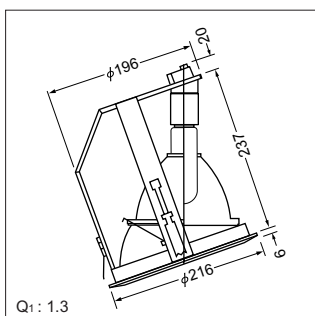
## HDW2017

### Lamps

NHT100FSDX, NHT100DX,  
MT100FSDW, MT100SDW,  
MT100FSW, MT100SW,  
MT100FD, MT100D

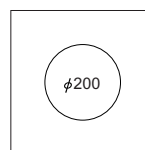
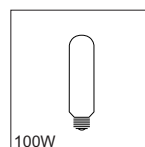
### Finish

Body : Steel plate  
Frame : Aluminium die cast (Semi-white colour)  
Reflector : Aluminium polishing finish with black baffle  
Weight : 1.1kg



Adaptable ceiling slope angle : 15~25°

a) Narrow  
b) Medium  
c) Wide



| h(m) | 38°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 320.0        | 0.68 |
| 2    | 80.0         | 1.37 |
| 3    | 35.5         | 2.05 |
| 4    | 20.0         | 2.74 |
| 5    | 12.8         | 3.42 |

NHT100FSDX

**For Color Arc & SDX 70W**

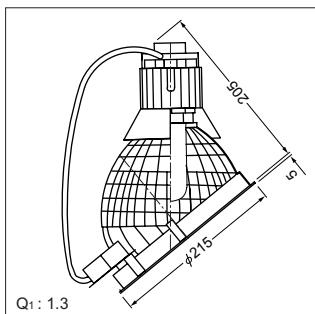
## CASTOOL Multi HDW17123

### Lamps

NHT70SDX,  
MT70SDW, MT70SW, MT70D

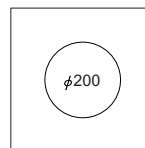
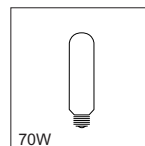
### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)  
Weight : 0.7kg



Adaptable ceiling slope angle : 0~40°

a) Narrow  
b) Medium  
c) Wide



| h(m) | 30°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 681.5        | 0.55 |
| 2    | 170.4        | 1.10 |
| 3    | 75.7         | 1.65 |
| 4    | 42.6         | 2.20 |
| 5    | 27.3         | 2.75 |

a) MT70SW

| h(m) | 42°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 422.5        | 0.78 |
| 2    | 105.6        | 1.55 |
| 3    | 46.9         | 2.33 |
| 4    | 26.4         | 3.10 |
| 5    | 16.9         | 3.88 |

b) MT70SW

| h(m) | 50°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 326.5        | 0.93 |
| 2    | 81.6         | 1.87 |
| 3    | 36.3         | 2.80 |
| 4    | 20.4         | 3.73 |
| 5    | 13.1         | 4.66 |

c) MT70SW

# Down light

**For Color Arc & SDX 70W**

## CASTOOL Multi-Shallow HDW17124

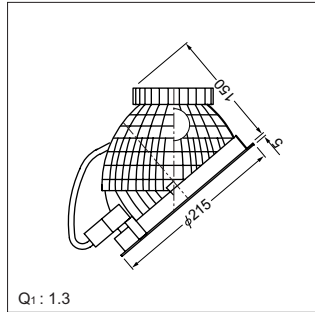
### Lamps

NHT70SDX,  
MT70SDW, MT70SW, MT70D

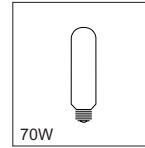
### Finish

Body : Aluminium die cast metallic grey  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (Fine matt finish)

Weight : 0.7kg



Adaptable ceiling slope angle : 0~40°



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1985         | 0.46 |
| 2    | 496          | 0.92 |
| 3    | 221          | 1.39 |
| 4    | 124          | 1.85 |
| 5    | 79           | 2.31 |

MT70SW

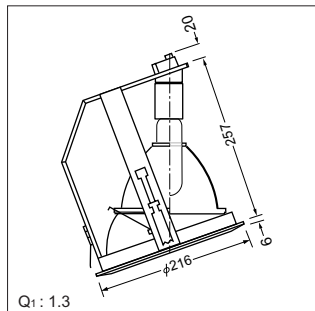
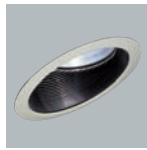
## HDW17017

### Lamps

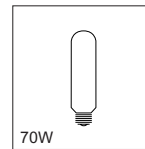
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70SDW, MT70FSW  
MT70SW, MT70FD, MT70D

### Finish

Body : Steel plate  
Frame : Aluminium die cast (Semi-white colour)  
Reflector : Aluminium polishing finish with black baffle  
Weight : 1.1kg



Adaptable ceiling slope angle : 15~25°



| h(m) | 52°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1000         | 0.97 |
| 2    | 250          | 1.94 |
| 3    | 110          | 2.91 |
| 4    | 62           | 3.88 |
| 5    | 40           | 4.86 |

NHT70SDX

| h(m) | 43°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1400         | 0.79 |
| 2    | 350          | 1.58 |
| 3    | 156          | 2.36 |
| 4    | 88           | 3.15 |
| 5    | 56           | 3.94 |

NHT70FSDX

**PAR36 150W**

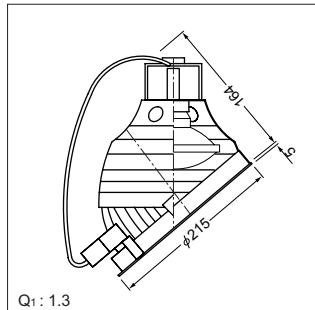
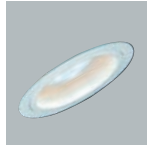
## CASTOOL Multi HDW31108

### Lamps

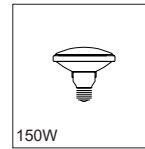
M150P36SSDW, M150P36FSDW,  
M150P36SSW, M150P36FSW,  
M150P36SD, M150P36FD

### Finish

Body : Aluminium die cast (Metallic grey)  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (White colour, metallic grey)  
Weight : 0.6kg



Adaptable ceiling slope angle : 0~40°



| h(m) | 26°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

M150P36SSW

| h(m) | 45°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

M150P36FSW

**PAR36 70W**

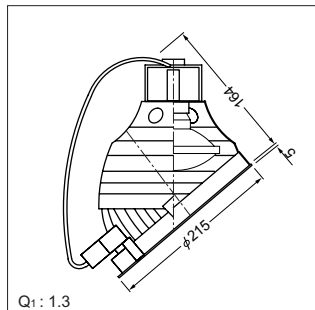
## CASTOOL Multi HDW171108

### Lamps

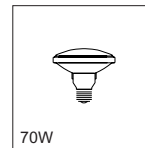
M70P36SSDW, M70P36FSDW,  
M70P36SSW, M70P36FSW,  
M70P36SD, M70P36FD

### Finish

Body : Aluminium die cast (Metallic grey)  
Frame : Aluminium die cast (White colour)  
Reflector : Aluminium (White colour, metallic grey)  
Weight : 0.6kg



Adaptable ceiling slope angle : 0~40°



| h(m) | 22°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7800         | 0.39 |
| 2    | 1950         | 0.78 |
| 3    | 870          | 1.18 |
| 4    | 490          | 1.57 |
| 5    | 310          | 1.96 |

M70P36SSW

| h(m) | 44°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2000         | 0.81 |
| 2    | 500          | 1.62 |
| 3    | 220          | 2.44 |
| 4    | 130          | 3.25 |
| 5    | 80           | 4.06 |

M70P36FSW

# Down light

## HID lamp 250W

### HDW2167

#### Lamps

Eye specialux: NH250FDX

Mercury lamp: HF250PD

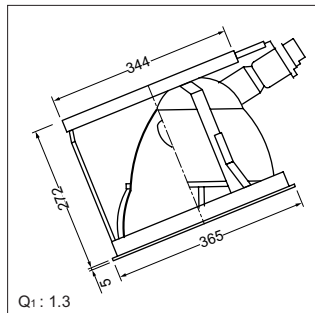
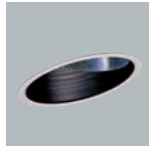
#### Finish

Body : Steel plate

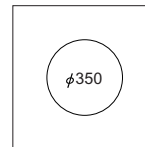
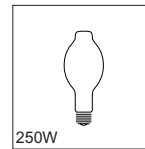
Frame : Steel plate, semi -white

Reflector : Aluminium mirror finish, with black baffle

Weight : 2.9kg



Adaptable ceiling slope angle : 15~25°



| h(m) | 49°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 6426         | 0.93 |
| 2    | 1606         | 1.86 |
| 3    | 714          | 2.76 |
| 4    | 402          | 3.71 |
| 5    | 257          | 4.64 |

HF250PD

## HID lamp 100W

### HDW1167

#### Lamps : Mercury lamp

HF100PD

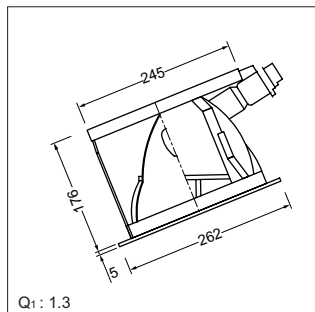
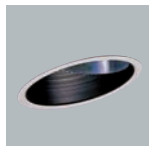
#### Finish

Body : Steel plate

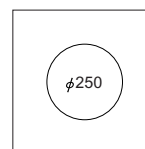
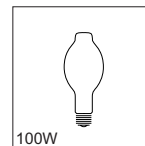
Frame : Steel plate, semi -white

Reflector : Aluminium mirror finish, with black baffle

Weight : 1.5kg



Adaptable ceiling slope angle : 15~25°



| h(m) | 51°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1640         | 0.96 |
| 2    | 410          | 1.92 |
| 3    | 180          | 2.87 |
| 4    | 100          | 3.83 |
| 5    | 60           | 4.79 |

HF100PD

## Compact fluorescent lamp triple 42W

### CASTOOL Multi-Shallow

### FHDW4254ERH1 (100V)

### FHDW4254ERH2 (200V)

#### Lamps : EYE compact fluorescent lamp triple

FHT42EX-L( Incandescent colour)

FHT42EX-N (Neutral white colour)

#### Finish

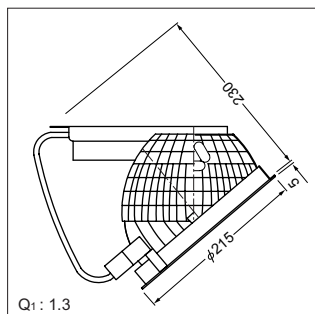
Body : Steel plate

Frame : Aluminium die cast (Semi-white colour)

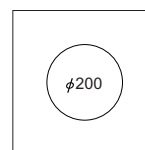
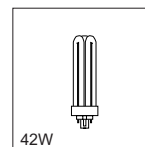
Reflector : Aluminium fine matt finish

Socket : GX24q-4

Weight : 1.1kg



Adaptable ceiling slope angle : 0~40°



| h(m) | 59°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 1027         | 1.14 |
| 2    | 257          | 2.27 |
| 3    | 114          | 3.41 |
| 4    | 64           | 4.54 |
| 5    | 41           | 5.68 |

FHT42EX-N

#### EYE Specialux

Warm light colour similar to that of an incandescent lamp illuminates object vividly. Its life is much longer than that of an incandescent lamp.

#### Mercury lamp

The light flux of each lamp is four times as large as that of an incandescent lamp. Its life as long as 24,000 hours dispenses you from frequent maintenance work. You can select one from clear type and phosphor coated type.

#### EYE Compact fluorescent lamp, Triple

A compact but intense light (42 W or 32 W) set of 3 U-shaped fluorescent lamp. If you use it with an electronic ballast for it, the power consumption will be further reduced, the brightness will increase, the life will become longer, and so the running cost will be reduced.

# Down light

## Compact fluorescent lamp triple 32W

### CASTOOL Multi-Shallow

**FHDW3254ERH1**  
(100V)

**FHDW3254ERH2**  
(200V)

**Lamps** : EYE compact fluorescent lamp triple  
FHT32EX-L ( Incandescent colour)  
FHT32EX-N ( Natural white colour)

**Finish**

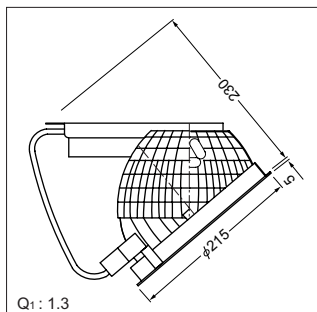
Body : Steel plate

Frame : Aluminium die cast (White colour)

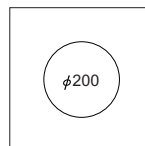
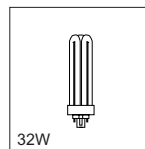
Reflector : Aluminium (Fine matt finish)

Socket : GX24q-3

Weight : 0.95kg



Adaptable ceiling slope angle : 0~40°



| h(m) | 58°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 917          | 1.11 |
| 2    | 229          | 2.22 |
| 3    | 102          | 3.33 |
| 4    | 57           | 4.43 |
| 5    | 37           | 5.54 |

FHT32EX-N

## Compact fluorescent lamp double 27W

**FDW12735EL1**  
(Electronic starter type)

**Lamps** : EYE compact fluorescent lamp double  
FDL27EL-L (Incandescent colour)

**Finish**

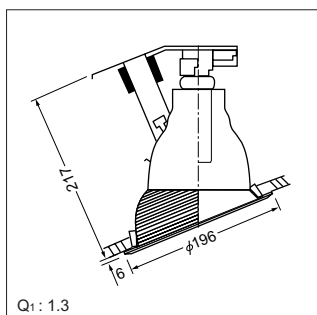
Body : Steel plate

Frame : Resin (Semi-white colour)

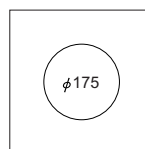
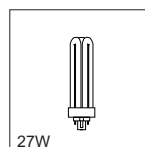
Reflector : Aluminium mirror finish  
with black baffle

Socket : GX10q-4

Weight : 1.2kg



Adaptable ceiling slope angle : 15~25°



| h(m) | 60°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 320          | 1.16 |
| 2    | 80           | 2.32 |
| 3    | 36           | 3.48 |

FDL27EX-L

## Compact fluorescent lamp double 18W

**FDW11835EL1**  
(Electronic starter type)

**Lamps** : EYE compact fluorescent lamp double  
FDL18EX-L (Incandescent colour)

**Finish**

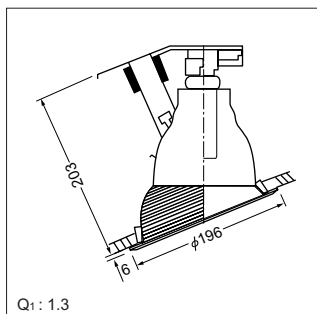
Body : Steel plate

Frame : Resin (Semi-white colour)

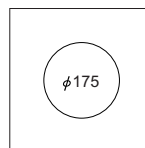
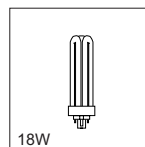
Reflector : Aluminium mirror finish  
with black baffle

Socket : GX10q-3

Weight : 1.1kg



Adaptable ceiling slope angle : 15~25°



| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 220          | 1.24 |
| 2    | 55           | 2.49 |
| 3    | 25           | 3.73 |

FDL18EX-L

# Down light

**For Color Arc & SDX 150W**

## Drip-proof downlight for eaves

The special structure of front glass cover and the rubber packing prevent the invasion of insects and dust even when the lamp is used under eaves.

### HDW3012

#### Lamps

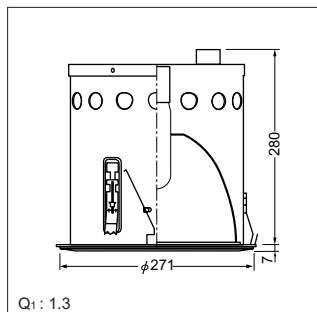
NHT150FSDX, NHT150SDX  
MT150FSLW, MT150SLW  
MT150FSDW, MT150SDW  
MT150FSW, MT150SW  
MT150FD, MT150D

#### Finish

Body : Steel plate  
Frame : Aluminium die cast  
(Semi-white colour with front glass)

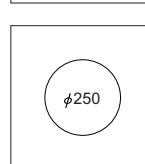
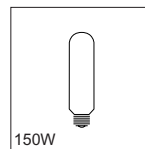
Reflector : Aluminium polishing finish

Weight : 2.3kg



Q1 : 1.3

Light source shielding angle : 35°



| h(m) | 37°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 9200         | 0.67 |
| 2    | 2300         | 1.35 |
| 3    | 1000         | 2.02 |
| 4    | 570          | 2.69 |
| 5    | 370          | 3.37 |

NHT150SDX

| h(m) | 31°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 12000        | 0.55 |
| 2    | 3000         | 1.10 |
| 3    | 1300         | 1.65 |
| 4    | 750          | 2.20 |
| 5    | 480          | 2.75 |

MT150SW

**For Color Arc & SDX 70W**

### HDW17012

#### Lamps

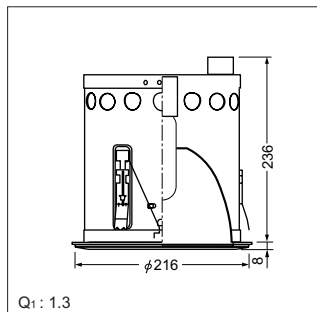
NHT70FSDX, NHT70SDX  
MT70FSDW, MT70SDW  
MT70FSW, MT70SW  
MT70FD, MT70D

#### Finish

Body : Steel plate  
Frame : Aluminium die cast  
(Semi-white colour with front glass)

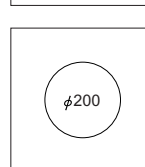
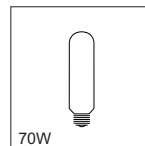
Reflector : Aluminium polishing finish

Weight : 1.4kg



Q1 : 1.3

Light source shielding angle : 35°



| h(m) | 34°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4700         | 0.60 |
| 2    | 1175         | 1.21 |
| 3    | 520          | 1.81 |
| 4    | 290          | 2.42 |
| 5    | 200          | 3.02 |

MT70SW

| h(m) | 37°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3400         | 0.67 |
| 2    | 850          | 1.35 |
| 3    | 380          | 2.02 |
| 4    | 210          | 2.69 |
| 5    | 136          | 3.37 |

MT70FSW

**For SDX 50W**

### HDW1012

#### Lamps

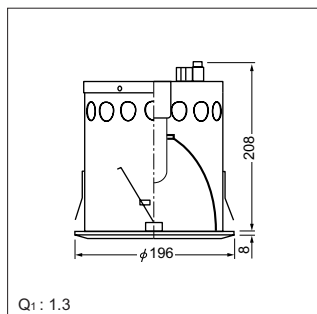
NHT50FSDX, NHT50SDX

#### Finish

Body : Steel plate  
Frame : Resin (Semi white colour, with front glass)

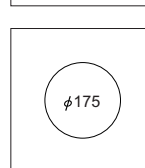
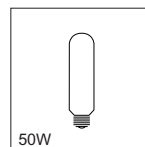
Reflector : Aluminium mirror finish

Weight : 1.2kg



Q1 : 1.3

Light source shielding angle : 35°



| h(m) | 48°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3300         | 0.88 |
| 2    | 825          | 1.76 |
| 3    | 360          | 2.65 |
| 4    | 200          | 3.53 |
| 5    | 130          | 4.41 |

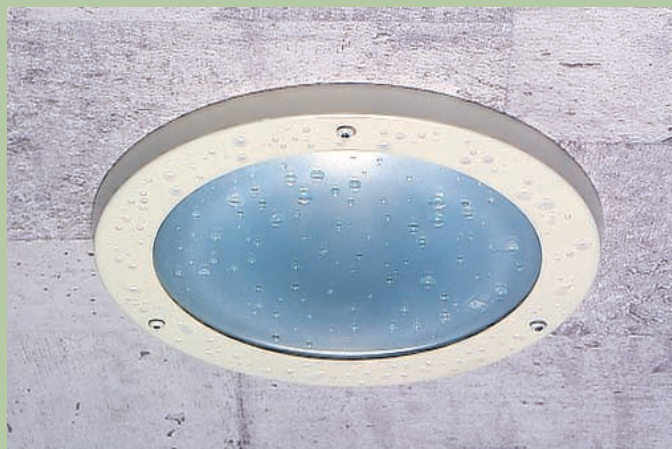
NHT50SDX

# Vapour-proof Down Light

The vapour-proof down light that features safety, vapour-proof characteristics and endurance is good lighting for gymnasiums, indoor pools including Kurhaus and bath rooms as well as the space under the eaves.

## Features

- The film of Teflon coating on the front glass prevents the glass pieces from scattering even when the front glass is broken.
- The closed structure prevents the invasion of moisture and insects and keeps the inner surface of glass and reflector clean.
- The aluminum body is light and the stainless steel frame is rustproof.
- You can select three types of light source according to the requirements.

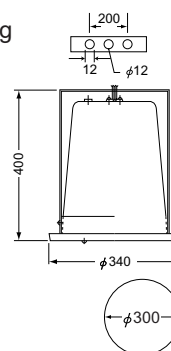


## HDW2185P

**Specification**  
 ■ Frame : Stainless steel  
 ■ Reflector : Aluminium  
 With Teflon-coated clear tempered glass  
 ■ Ceiling aperture :  $\phi$  300mm  
 ■ Weight : 3.5 kg

Optical data p.212

drawing



**Suitable lamps**  
 MT250SW  
 MT250SDW

(High colour rendition lamps)

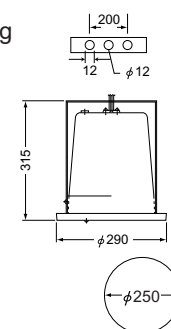


## HDW3019P

**Specification**  
 ■ Frame : Stainless steel  
 ■ Reflector : Aluminium  
 With Teflon-coated clear tempered glass  
 ■ Ceiling aperture :  $\phi$  250mm  
 ■ Weight : 2.3 kg

Optical data p.212

drawing



**Suitable lamps**  
 NHT150FSDX, NHT150SDX  
 MT150FSLW, MT150SLW  
 MT150FSDW, MT150SDW  
 MT150FSW, MT150SW  
 MT150FD, MT150D

(High colour rendition lamps)

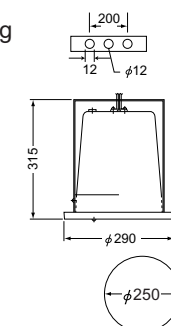


## Compact fluorescent lamp triple 32W FHDW3251PERH1

**Specification**  
 ■ Frame : Stainless steel  
 ■ Reflector : Aluminium  
 With Teflon-coated clear tempered glass  
 ■ Ceiling aperture :  $\phi$  250mm  
 ■ Weight : 3.1 kg

Optical data p.212

drawing



**Suitable lamps**  
 FHT32EX-L  
 (Incandescent colour)  
 (Compact fluorescent lamps)



# Spot light

## For Color Arc & SDX 150W

### CASTOOL

## HSP30010

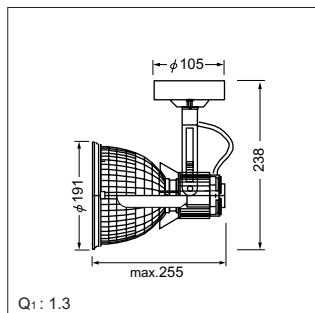
Light distribution  
controllable

#### Lamps

NHT150SDX, MT150SDW  
MT150SW, MT150D

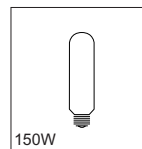
#### Finish

- Body : Aluminium die cast metallic grey colour
- Frame : Resin (metallic grey colour)
- Reflector : Aluminum (Fine matt finish)
- Weight : 0.8kg



Q1: 1.3

- a) Narrow  
Shield angle : 28°
- b) Medium  
Shield angle : 25°
- c) Wide  
Shield angle : 23°



|      | 41°   |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 11913 | 0.76 |
| 2    | 2978  | 1.52 |
| 3    | 1324  | 2.28 |
| 4    | 745   | 3.04 |
| 5    | 477   | 3.80 |

#### a) MT150SW

|      | 54°   |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 7370  | 1.02 |
| 2    | 1843  | 2.04 |
| 3    | 819   | 3.06 |
| 4    | 461   | 4.08 |
| 5    | 295   | 5.10 |

#### b) MT150SW

|      | 64°   |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 4586  | 1.26 |
| 2    | 1172  | 2.53 |
| 3    | 521   | 3.79 |
| 4    | 293   | 5.06 |
| 5    | 187   | 6.32 |

#### b) MT150SW

## For Color Arc & SDX 70W~150W

## HSP3001/N HSP3002/N

Narrow light distribution

#### Lamps

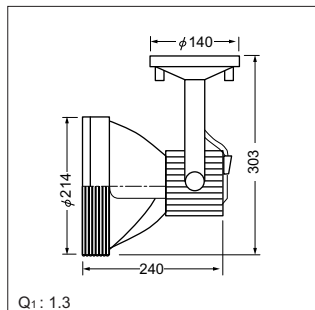
MT150SDW, MT150SW, MT150D  
MT70SDW, MT70SW, MT70D  
NHT150SDX, NHT100SDX  
NHT70SDX

#### Finish

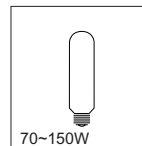
- Body :  
HSP3001/N : Aluminium die cast, Semi off white  
HSP3002/N : Aluminium die cast, Satin silver
- Reflector : Aluminium mirror finish
- Weight : 2.2kg



HSP3001/N



Q1: 1.3



|      | 6°    |      |
|------|-------|------|
| h(m) | E(Lx) | D(m) |
| 1    | 72500 | 0.11 |
| 2    | 18100 | 0.22 |
| 3    | 8000  | 0.34 |
| 4    | 4350  | 0.45 |
| 5    | 2900  | 0.56 |

#### MT150SW



HSP3002/N

# Spot light

## HSP3003/M HSP3004/M Medium light distribution

### Lamps

MT150SDW, MT150SW, MT150D  
MT70SDW, MT70SW, MT70D  
NHT150SDX, NHT100SDX  
NHT70SDX

### Finish

#### Body :

HSP3003/M : Aluminium die cast, Semi off white  
HSP3004/M : Aluminium die cast, Satin silver

Reflector : Aluminium mirror finish with black baffle

Lead wire length : 1m

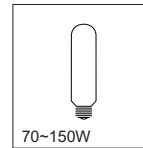
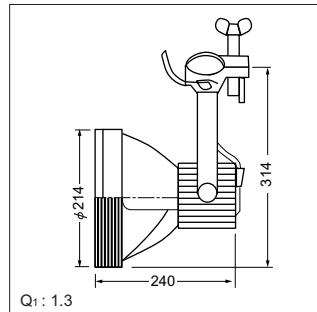
Weight : 2.5kg



HSP3003/M



HSP3004/M



70~150W

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 4000  | 0.29 |
| 2    | 1000  | 0.58 |
| 3    | 440   | 0.86 |
| 4    | 250   | 1.15 |
| 5    | 160   | 1.44 |

MT150SW

For Color Arc & SDX 100W

### CASTOOL

## HSP20010 Light distribution controllable

### Lamps

NHT100SDX, MT100SDW  
MT100SW, MT100D

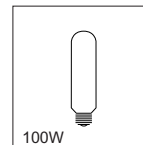
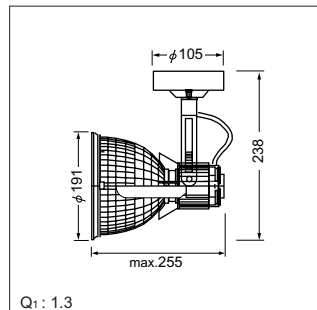
### Finish

Body : Aluminium die cast metallic grey colour

Frame : Resin (metallic grey colour)

Reflector : Aluminium fine matt finish

Weight : 0.8kg



100W

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 758   | 0.76 |
| 2    | 189   | 1.52 |
| 3    | 84    | 2.28 |
| 4    | 47    | 3.04 |
| 5    | 30    | 3.80 |

a) MT100SW

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 469   | 1.02 |
| 2    | 117   | 2.04 |
| 3    | 52    | 3.06 |
| 4    | 29    | 4.08 |
| 5    | 18    | 5.10 |

b) MT100SW

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 298   | 1.26 |
| 2    | 74    | 2.53 |
| 3    | 33    | 3.79 |
| 4    | 18    | 5.06 |
| 5    | 11    | 6.32 |

c) MT100SW

- a) Narrow  
Shield angle : 28°  
b) Medium  
Shield angle : 25°  
c) Wide  
Shield angle : 23°

For Color Arc & SDX 70W

### CASTOOL

## HSP17010 Light distribution controllable

### Lamps

NHT70SDX  
MT70SDW, MT70SW, MT70D

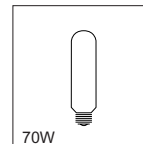
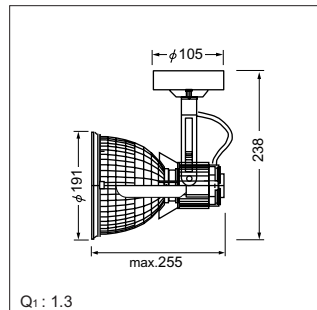
### Finish

Body : Aluminium die cast metallic grey colour

Frame : Resin (metallic grey colour)

Reflector : Aluminium fine matt finish

Weight : 0.8kg



70W

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 541   | 0.76 |
| 2    | 135   | 1.52 |
| 3    | 60    | 2.28 |
| 4    | 33    | 3.04 |
| 5    | 21    | 3.80 |

a) MT70SW

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 335   | 1.02 |
| 2    | 83    | 2.04 |
| 3    | 37    | 3.06 |
| 4    | 20    | 4.08 |
| 5    | 13    | 5.10 |

b) MT70SW

| h(m) | E(Lx) | D(m) |
|------|-------|------|
| 1    | 213   | 1.26 |
| 2    | 53    | 2.53 |
| 3    | 23    | 3.79 |
| 4    | 13    | 5.06 |
| 5    | 8     | 6.32 |

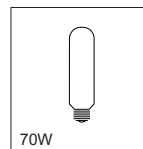
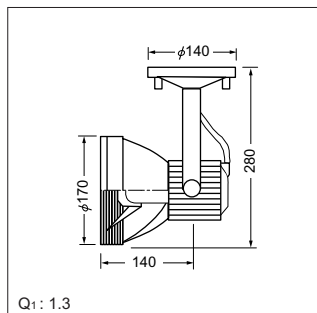
c) MT70SW

- a) Narrow  
Shield angle : 28°  
b) Medium  
Shield angle : 25°  
c) Wide  
Shield angle : 23°

# Spot light

## HSP17001/M HSP17002/M Medium light distribution

**Lamps**  
NHT70(F)SDX  
MT70(F)SDW, MT70(F)SW, MT70(F)D  
**Finish**  
■ Body :  
HSP17001/M : Aluminium die cast, Semi off white  
HSP17002/M : Aluminium die cast, Satin silver  
■ Reflector : Aluminium mirror finish with black baffle, anti-glare shield



| h(m) | 18°<br>E(Lx) | D(m) |
|------|--------------|------|
| 1    | 15500        | 0.32 |
| 2    | 3870         | 0.85 |
| 3    | 1700         | 0.97 |
| 4    | 900          | 1.30 |
| 5    | 620          | 1.62 |

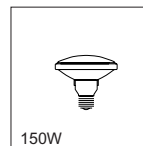
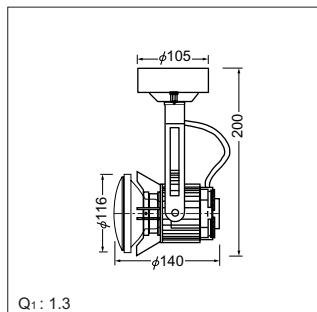
MT70FSW



For Color Arc PAR36 150W

## CASTOOL HSP31010

**Lamps**  
M150P36SSDW, M150P36FSDW,  
M150P36SSW, M150P36FSW,  
M150P36SD, M150P36FD  
**Finish**  
■ Body : Aluminium die cast metallic grey colour  
■ Frame : Resin (metallic grey colour)  
■ Weight : 0.7kg



| h(m) | 26°<br>E(Lx) | D(m) |
|------|--------------|------|
| 1    | 13000        | 0.46 |
| 2    | 3250         | 0.92 |
| 3    | 1440         | 1.39 |
| 4    | 810          | 1.85 |
| 5    | 520          | 2.31 |

M150P36SSW

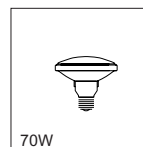
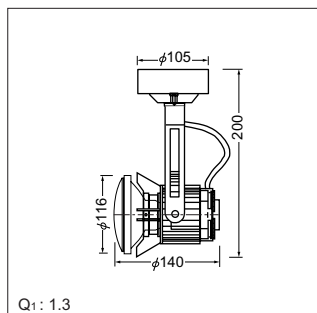
| h(m) | 45°<br>E(Lx) | D(m) |
|------|--------------|------|
| 1    | 4800         | 0.83 |
| 2    | 1200         | 1.66 |
| 3    | 530          | 2.49 |
| 4    | 300          | 3.31 |
| 5    | 190          | 4.14 |

M150P36FSW

For Color Arc PAR36 70W

## CASTOOL HSP171010

**Lamps**  
M70P36SSDW, M70P36FSDW,  
M70P36SSW, M70P36FSW,  
M70P36SD, M70P36FD  
**Finish**  
■ Body : Aluminium die cast metallic grey colour  
■ Frame : Resin (metallic grey colour)  
■ Weight : 0.7kg



| h(m) | 22°<br>E(Lx) | D(m) |
|------|--------------|------|
| 1    | 7800         | 0.39 |
| 2    | 1950         | 0.78 |
| 3    | 870          | 1.18 |
| 4    | 490          | 1.57 |
| 5    | 310          | 1.96 |

M70P36SSW

| h(m) | 44°<br>E(Lx) | D(m) |
|------|--------------|------|
| 1    | 2000         | 0.81 |
| 2    | 500          | 1.62 |
| 3    | 220          | 2.44 |
| 4    | 130          | 3.25 |
| 5    | 80           | 4.06 |

M70P36FSW

# Pendant / Ceiling light

For Color Arc & SDX 150W

CASTOOL

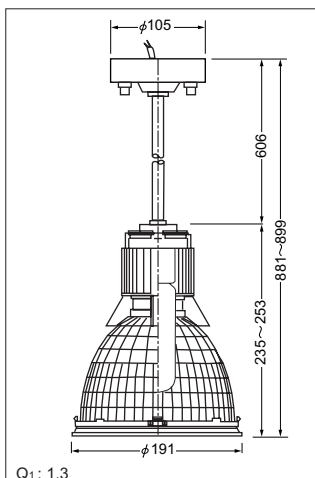
## HPP3001

### Lamps

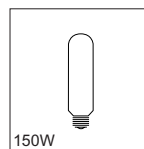
NHT150SDX  
MT150SDW, MT150SW  
MT150D

### Finish

■ Body : Aluminium die cast metallic grey colour  
■ Frame : ABS metallic grey colour  
■ Weight : 0.95kg



Q1: 1.3



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 11913        | 0.76 |
| 2    | 2978         | 1.52 |
| 3    | 1324         | 2.28 |
| 4    | 745          | 3.04 |
| 5    | 477          | 3.80 |

a) Narrow  
Shield angle 29°

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7370         | 1.02 |
| 2    | 1843         | 2.04 |
| 3    | 819          | 3.06 |
| 4    | 461          | 4.08 |
| 5    | 295          | 5.10 |

b) Medium  
Shield angle 27°

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4586         | 1.26 |
| 2    | 1172         | 2.53 |
| 3    | 521          | 3.79 |
| 4    | 293          | 5.06 |
| 5    | 187          | 6.32 |

c) Wide  
Shield angle 25°

c) MT150SW

The factory setting is 'medium'.

CASTOOL

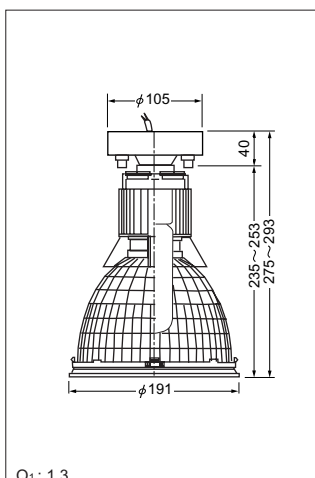
## HSL3003

### Lamps

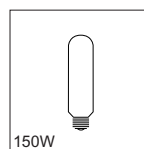
NHT150SDX  
MT150SDW, MT150SW  
MT150D

### Finish

■ Body : Aluminium die cast metallic grey colour  
■ Frame : ABS metallic grey colour  
■ Weight : 0.7kg



Q1: 1.3



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 11913        | 0.76 |
| 2    | 2978         | 1.52 |
| 3    | 1324         | 2.28 |
| 4    | 745          | 3.04 |
| 5    | 477          | 3.80 |

a) Narrow  
Shield angle 29°

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7370         | 1.02 |
| 2    | 1843         | 2.04 |
| 3    | 819          | 3.06 |
| 4    | 461          | 4.08 |
| 5    | 295          | 5.10 |

b) Medium  
Shield angle 27°

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4586         | 1.26 |
| 2    | 1172         | 2.53 |
| 3    | 521          | 3.79 |
| 4    | 293          | 5.06 |
| 5    | 187          | 6.32 |

c) Wide  
Shield angle 25°

c) MT150SW

The factory setting is 'medium'.

For HID lamps

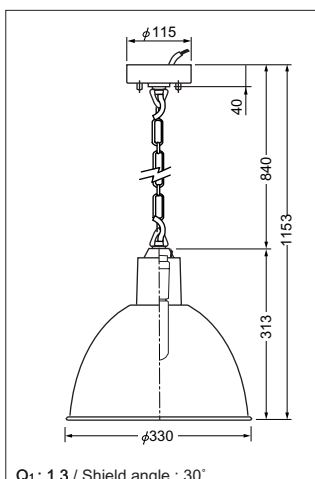
## HCP105

### Lamps

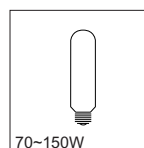
Color Arc 70~150W  
SDX 70~150W  
Multi-Hi Ace 100W, 125W (BUP)

### Finish

■ Body : Aluminium (White colour)  
■ Frame : Aluminium  
■ Weight : 1.3kg

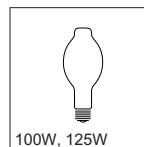


Q1: 1.3 / Shield angle : 30°



| h(m) | 68°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2530         | 1.35 |
| 2    | 630          | 2.71 |
| 3    | 280          | 4.06 |
| 4    | 150          | 5.42 |
| 5    | 100          | 6.77 |

MT150FSW



### Color Arc and SDX (HYLUX)

The compact HID lamp features high colour rendering that makes the natural colours of the objects illuminated more vivid. Depending on the usage and purpose of the space, you can select a desired colour from five with different colour temperatures. Its high luminous efficacy and long life greatly reduces the maintenance work and cost.

### CASTOOL

The fixture features highly luminous efficacy, sophisticated design, variable colour rendering level and user-friendliness.

### Multi Super Ace

The built-in FEC starter of the metal halide lamp controls the pulse to shorten the start-up time. It also features the high luminous efficacy, long life and the impressive whitish colour has high colour rendering performance.

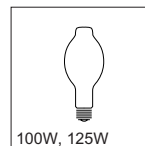
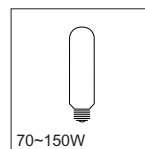
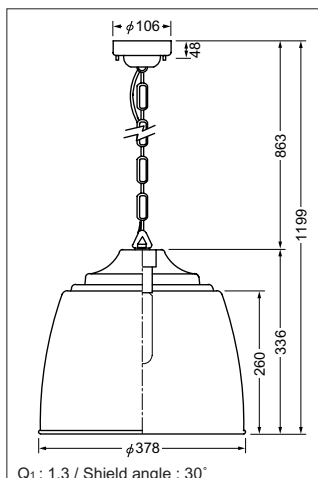
### Caution

Do not use the electronic ballast if the wire length of the ballast secondary circuit exceeds 2m due to the length of the lifting tool.

# Pendant / Ceiling light

## HCP104

**Lamps**  
Color Arc 70~150W  
SDX 70~150W  
Multi-Hi Ace 100W, 125W (BUP)  
**Finish**  
■ Body : Steel plate (White colour)  
■ Reflector : Acrylic resin (White Colour)  
■ Weight : 2.6kg



| h(m) | 72°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 600          | 1.46 |
| 2    | 150          | 2.92 |
| 3    | 65           | 4.38 |
| 4    | 35           | 5.83 |
| 5    | 20           | 7.29 |

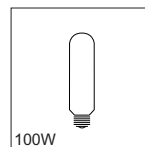
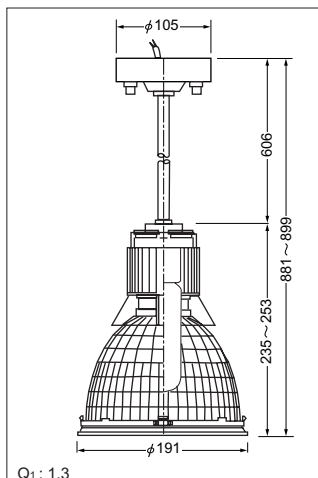
MT150FSW

**For Color Arc & SDX 100W**

**CASTOOL**

## HPP2001

**Lamps**  
NHT100SDX  
MT100SDW, MT100SW  
MT100D  
**Finish**  
■ Body : Aluminium die cast metallic grey colour  
■ Frame : ABS metallic grey colour  
■ Reflector : Aluminium fine matt finish  
■ Weight : 0.95kg



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7581         | 0.76 |
| 2    | 1895         | 1.52 |
| 3    | 842          | 2.28 |
| 4    | 474          | 3.04 |
| 5    | 303          | 3.80 |

a) MT100SW

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4690         | 1.02 |
| 2    | 1173         | 2.04 |
| 3    | 521          | 3.06 |
| 4    | 293          | 4.08 |
| 5    | 188          | 5.10 |

b) MT100SW

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2982         | 1.26 |
| 2    | 746          | 2.53 |
| 3    | 331          | 3.79 |
| 4    | 186          | 5.06 |
| 5    | 119          | 6.32 |

c) MT100SW

a) Narrow  
Shield angle 29°

b) Medium  
Shield angle 27°

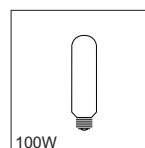
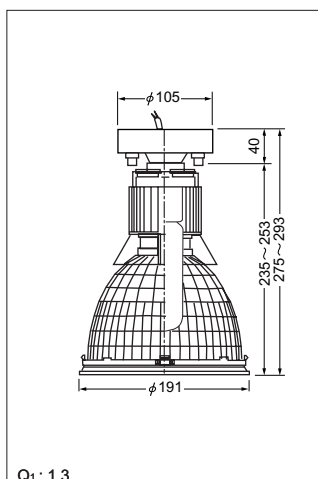
c) Wide  
Shield angle 25°

The factory setting  
is 'medium'.

**CASTOOL**

## HSL2003

**Lamps**  
NHT100SDX  
MT100SDW, MT100SW  
MT100D  
**Finish**  
■ Body : Aluminium die cast metallic grey colour  
■ Frame : ABS metallic grey colour  
■ Reflector : Aluminium fine matt finish  
■ Weight : 0.7kg



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 7581         | 0.76 |
| 2    | 1895         | 1.52 |
| 3    | 842          | 2.28 |
| 4    | 474          | 3.04 |
| 5    | 303          | 3.80 |

a) MT100SW

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4690         | 1.02 |
| 2    | 1173         | 2.04 |
| 3    | 521          | 3.06 |
| 4    | 293          | 4.08 |
| 5    | 188          | 5.10 |

b) MT100SW

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2982         | 1.26 |
| 2    | 746          | 2.53 |
| 3    | 331          | 3.79 |
| 4    | 186          | 5.06 |
| 5    | 119          | 6.32 |

c) MT100SW

a) Narrow  
Shield angle 29°

b) Medium  
Shield angle 27°

c) Wide  
Shield angle 25°

The factory setting  
is 'medium'.

### Variable light distribution

Even after an installation, you can change the light distribution to narrow, medium or wide, with raising or lowering the fixture using the adjusting screws without replacing the fixture. It fits diversified lighting plans.

### Caution

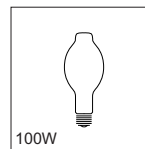
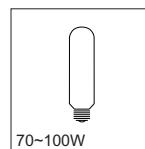
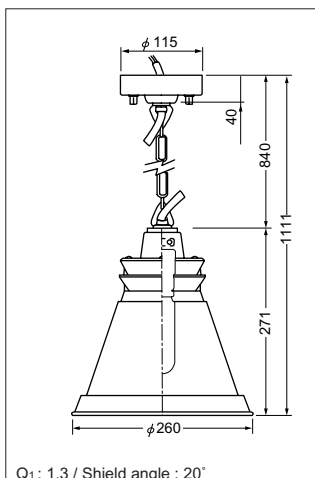
Do not use the electronic ballast if the wire length of the ballast secondary circuit exceeds 2m due to the length of the lifting tool.

# Pendant / Ceiling light

For HID lamps

## HCP101

**Lamps**  
Color Arc 70~100W  
SDX 70~100W  
Multi-Hi Ace 100W (BUP)  
**Finish**  
■ Body : Steel plate (White colour)  
■ Louver : Acrylic resin  
■ Reflector : Aluminium  
■ Weight : 1.35kg

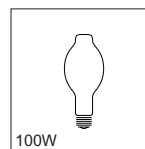
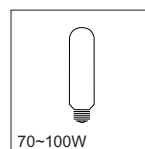
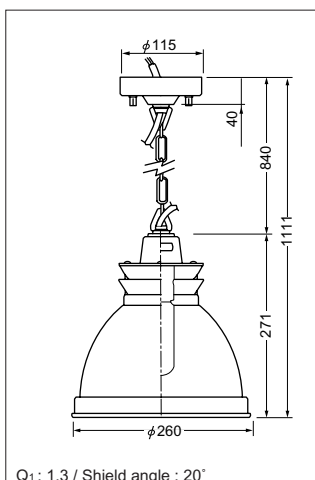


| h(m) | 70°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2380         | 1.39 |
| 2    | 590          | 2.78 |
| 3    | 260          | 4.17 |
| 4    | 140          | 5.56 |
| 5    | 95           | 6.95 |

MF100LS

## HCP102

**Lamps**  
Color Arc 70~100W  
SDX 70~100W  
Multi-Hi Ace 100W (BUP)  
**Finish**  
■ Body : Steel plate (White colour)  
■ Louver : Acrylic resin  
■ Reflector : Aluminium  
■ Weight : 1.4kg



| h(m) | 85°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 760          | 1.84 |
| 2    | 190          | 3.68 |
| 3    | 85           | 5.52 |
| 4    | 45           | 7.36 |
| 5    | 30           | 9.20 |

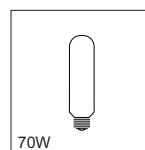
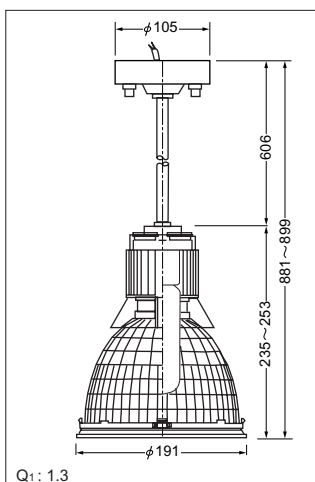
MF100LS

For Color Arc & SDX 70W

CASTOOL

## HPP17001

**Lamps**  
NHT70SDX  
MT70SDW, MT70SW  
MT70D  
**Finish**  
■ Body : Aluminium die cast metallic grey colour  
■ Frame : ABS metallic grey colour  
■ Reflector : Aluminium fine matt finish  
■ Weight : 0.95kg



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 5415         | 0.76 |
| 2    | 1354         | 1.52 |
| 3    | 602          | 2.28 |
| 4    | 338          | 3.04 |
| 5    | 217          | 3.80 |

a) Narrow  
Shield angle 29°

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3350         | 1.02 |
| 2    | 838          | 2.04 |
| 3    | 372          | 3.06 |
| 4    | 209          | 4.08 |
| 5    | 134          | 5.10 |

b) Medium  
Shield angle 27°

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2130         | 1.26 |
| 2    | 533          | 2.53 |
| 3    | 237          | 3.79 |
| 4    | 133          | 5.06 |
| 5    | 85           | 6.32 |

c) Wide  
Shield angle 25°

c) MT70SW

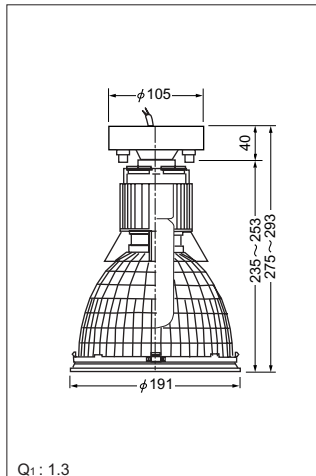
The factory setting  
is 'medium'.

# Pendant / Ceiling light

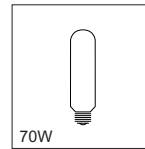
## CASTOOL

### HSL17003

**Lamps**  
NHT70SDX  
MT70SDW, MT70SW  
MT70D  
**Finish**  
■ Body : Aluminium die cast metallic grey colour  
■ Frame : ABS metallic grey colour  
■ Reflector : Aluminium fine matt finish  
■ Weight : 0.7kg



Q1: 1.3



| h(m) | 41°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 5415         | 0.76 |
| 2    | 1354         | 1.52 |
| 3    | 602          | 2.28 |
| 4    | 338          | 3.04 |
| 5    | 217          | 3.80 |

a) Narrow  
Shield angle 29°

| h(m) | 54°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3350         | 1.02 |
| 2    | 838          | 2.04 |
| 3    | 372          | 3.06 |
| 4    | 209          | 4.08 |
| 5    | 134          | 5.10 |

b) Medium  
Shield angle 27°

| h(m) | 64°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 2130         | 1.26 |
| 2    | 533          | 2.53 |
| 3    | 237          | 3.79 |
| 4    | 133          | 5.06 |
| 5    | 85           | 6.32 |

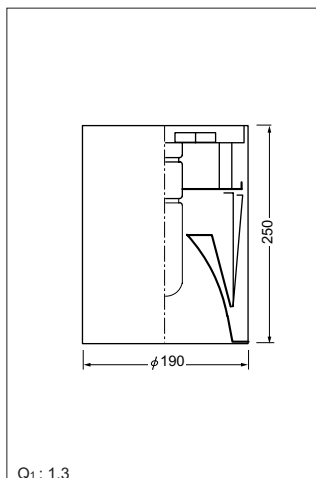
c) Wide  
Shield angle 25°

c) MT70SW

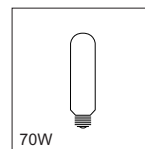
The factory setting  
is 'medium'.

### HSL17001

**Lamps**  
MT70FSDW, MT70SDW  
MT70FSW, MT70SW  
MT70FD, MT70D  
NHT70FSDX, NHT70SDX  
**Finish**  
■ Body : Steel plate (Semi-White colour)  
■ Reflector : Aluminium silver crepe finish  
■ Weight : 2.0kg



Q1: 1.3



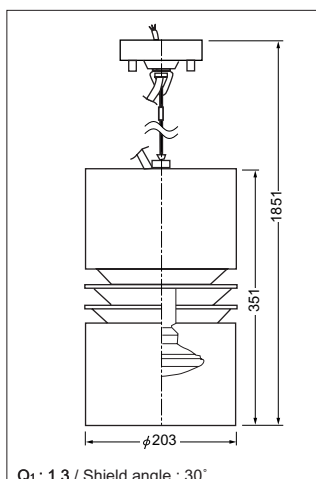
| h(m) | 48°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3200         | 0.90 |
| 2    | 800          | 1.80 |
| 3    | 356          | 2.70 |
| 4    | 200          | 3.60 |
| 5    | 128          | 4.49 |

MT70SW

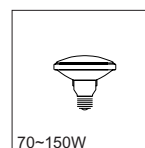
## For Color Arc PAR36 70~150W

### HCP107

**Lamps**  
Color Arc Par36 70~150W  
**Finish**  
■ Body : Steel plate (White colour)  
■ Reflector : Aluminium  
■ Weight : 2.2kg  
With adjustable wire length



Q1: 1.3 / Shield angle : 30°



| h(m) | 46°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 4148         | 0.84 |
| 2    | 1037         | 1.69 |
| 3    | 461          | 2.53 |
| 4    | 259          | 3.38 |
| 5    | 106          | 4.22 |

M150P36FSW

**EYE Color Arc PAR**  
EYE Color Arc PAR featuring high colour rendering performance is integrated with the reflector and lens to be a sealed beam type luminaire. You can select a colour temperature from 3,500K, 4,500K and 6,500K, and the light distribution from narrow angle and wide angle.

# Pendant / Ceiling light

Powerful and effective lamp also good for high bays. There are a variety of light colours.

## For HID lamps

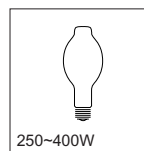
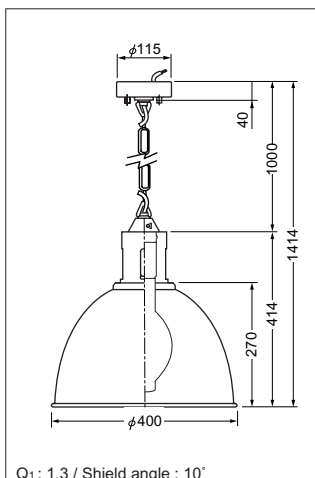
### HCP405

#### Lamps

Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W

#### Finish

- Body : Aluminium (White colour)
- Reflector : Aluminium
- Weight : 1.4kg



| 61°  |       |      |
|------|-------|------|
| h(m) | E lx  | D(m) |
| 1    | 10180 | 1.18 |
| 2    | 2540  | 2.36 |
| 3    | 1130  | 3.53 |
| 4    | 660   | 4.71 |
| 5    | 400   | 5.89 |

MF400LS

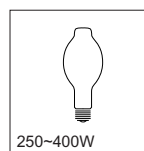
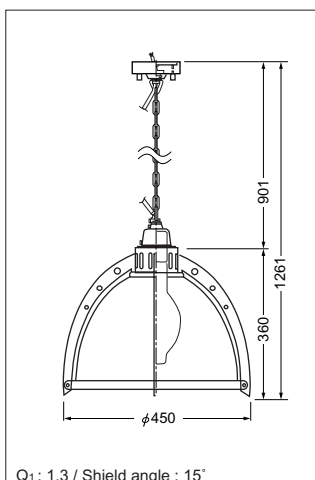
### HCP406

#### Lamps

Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W

#### Finish

- Body : Steel plate (Black colour except shade)
- Reflector : Aluminium
- Weight : 2.8kg



| 63°  |       |      |
|------|-------|------|
| h(m) | E lx  | D(m) |
| 1    | 12190 | 1.23 |
| 2    | 3040  | 2.46 |
| 3    | 1350  | 3.69 |
| 4    | 760   | 4.92 |
| 5    | 480   | 6.15 |

MF400LS

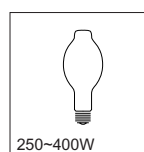
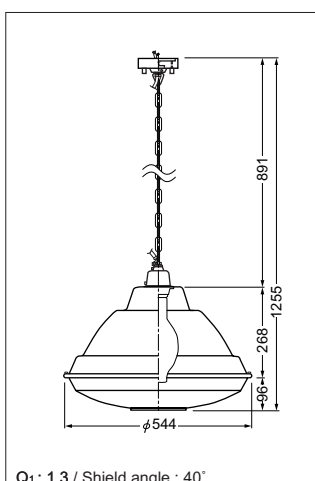
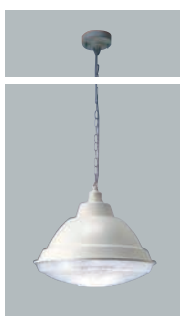
### HCP403

#### Lamps

Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W

#### Finish

- Body : Aluminium (White colour)
- Reflector : Aluminium
- Globe : Acrylic resin
- Adaptable accessories
- Suspensions :  
Pipe type : AHSLCP1, AHSLCP2  
Chain type : AHSLCC1  
Shade : HSC403  
Holder : AHCP391  
■ Weight : 3.2kg



| 71°  |      |      |
|------|------|------|
| h(m) | E lx | D(m) |
| 1    | 4540 | 1.42 |
| 2    | 1130 | 2.84 |
| 3    | 500  | 4.26 |
| 4    | 280  | 5.69 |
| 5    | 180  | 7.11 |

MF400LS

#### Multi Super Ace

The built-in FEC starter of the metal halide lamp controls the pulse to shorten the start-up time. It also features the high luminous efficacy, long life and the impressive whitish colour has high colour rendering performance.

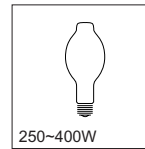
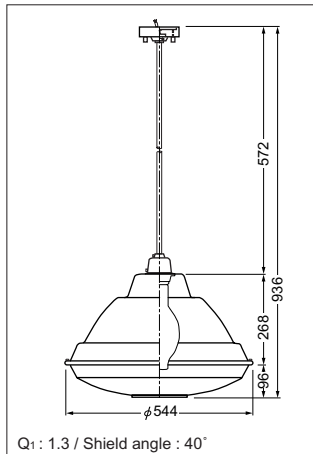
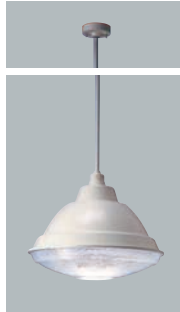
#### EYE Specialux

The white high pressure sodium lamp featuring high colour rendering performance makes colours more vivid. Having the warmth of incandescent bulbs, it has longer life and higher lighting efficacy comparing to them.

# Pendant / Ceiling light

## HPP403

- Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W
- Finish**  
■ Body : Aluminium (White colour)  
■ Reflector : Aluminium  
■ Glove : Acrylic resin  
■ Adaptable accessories  
Shade : HSC403  
Holder : AHPP391  
■ Weight : 3.3kg

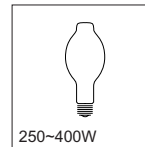
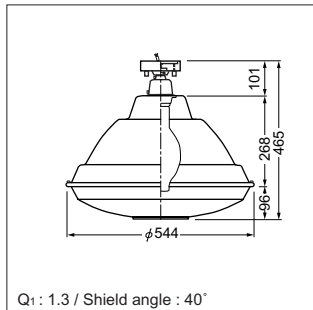


| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 8810  | 1.42 |
| 2    | 2200  | 2.84 |
| 3    | 970   | 4.26 |
| 4    | 550   | 5.69 |
| 5    | 260   | 7.11 |

MF400LS

## HSL403

- Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W
- Finish**  
■ Body : Aluminium (White colour)  
■ Reflector : Aluminium  
■ Glove : Acrylic resin  
■ Adaptable accessories  
Shade : HSC403  
Holder : AHSL391  
■ Weight : 3.0kg

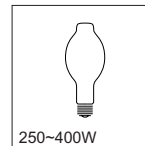
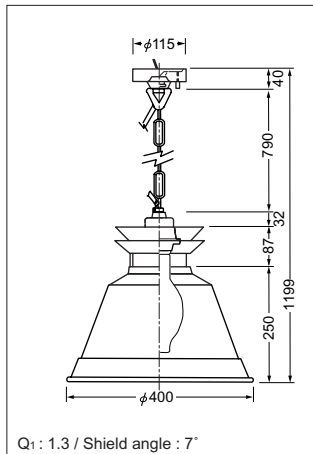


| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 8810  | 1.42 |
| 2    | 2200  | 2.84 |
| 3    | 970   | 4.26 |
| 4    | 550   | 5.69 |
| 5    | 260   | 7.11 |

MF400LS

## HCP401

- Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W
- Finish**  
■ Body : Aluminium (White colour)  
■ Louver : Steel plate  
■ Reflector : Aluminium  
■ Adaptable accessories  
Shade : HSC401  
Holder : AHCP391  
■ Weight : 1.8kg

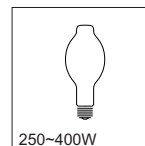
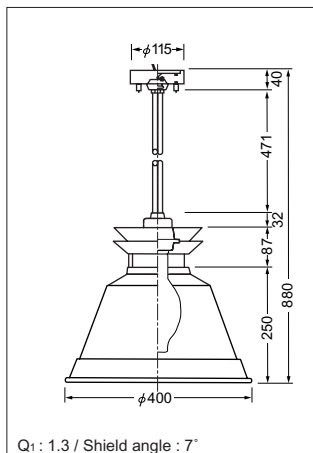


| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 12000 | 1.13 |
| 2    | 3000  | 2.25 |
| 3    | 1330  | 3.38 |
| 4    | 750   | 4.51 |
| 5    | 480   | 5.63 |

MF400LS

## HPP401

- Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W
- Finish**  
■ Body : Aluminium (White colour)  
■ Louver : Steel plate  
■ Reflector : Aluminium  
■ Adaptable accessories  
Shade : HSC401  
Holder : AHPP391  
■ Weight : 1.9kg



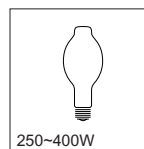
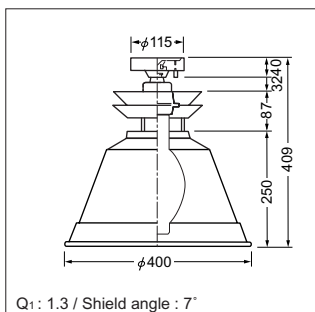
| h(m) | E(lx) | D(m) |
|------|-------|------|
| 1    | 12000 | 1.13 |
| 2    | 3000  | 2.25 |
| 3    | 1330  | 3.38 |
| 4    | 750   | 4.51 |
| 5    | 480   | 5.63 |

MF400LS

# Pendant / Ceiling light

## HSL401

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Aluminium (White colour)  
■ Louver : Steel plate  
■ Reflector : Aluminium  
■ Adaptable accessories  
Shade : HSC401  
Holder : AHSL391  
■ Weight : 1.6kg

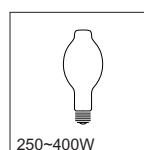
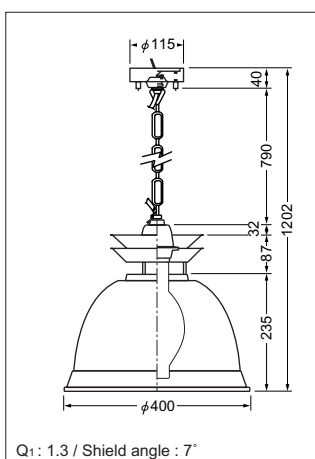


| 59°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 12000 | 1.13 |
| 2    | 3000  | 2.25 |
| 3    | 1330  | 3.38 |
| 4    | 750   | 4.51 |
| 5    | 480   | 5.63 |

MF400LS

## HCP402

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Aluminium (White colour)  
■ Louver : Steel plate  
■ Reflector : Aluminium  
■ Adaptable accessories  
Shade : HSC402  
Holder : AHCP391  
■ Weight : 2.1kg

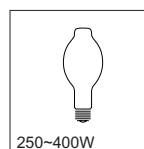
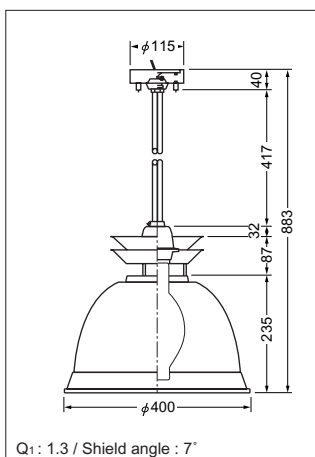


| 65°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 9420  | 1.28 |
| 2    | 2350  | 2.57 |
| 3    | 1040  | 3.85 |
| 4    | 580   | 5.14 |
| 5    | 370   | 6.42 |

MF400LS

## HPP402

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Aluminium (White colour)  
■ Louver : Steel plate  
■ Reflector : Aluminium  
■ Adaptable accessories  
Shade : HSC402  
Holder : AHPP391  
■ Weight : 2.2kg

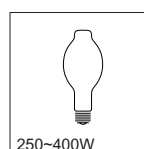
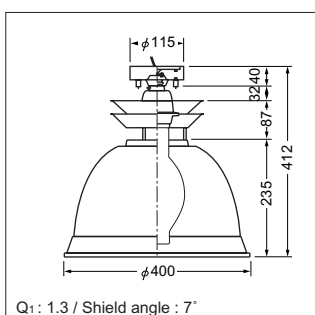


| 65°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 9420  | 1.28 |
| 2    | 2350  | 2.57 |
| 3    | 1040  | 3.85 |
| 4    | 580   | 5.14 |
| 5    | 370   | 6.42 |

MF400LS

## HSL402

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Aluminium (White colour)  
■ Louver : Steel plate  
■ Reflector : Aluminium  
■ Adaptable accessories  
Shade : HSC402  
Holder : AHSL391  
■ Weight : 1.9kg



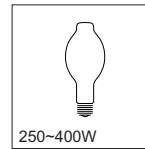
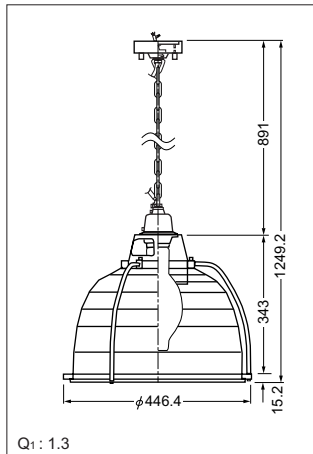
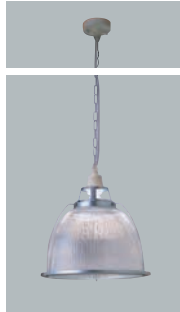
| 65°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 9420  | 1.28 |
| 2    | 2350  | 2.57 |
| 3    | 1040  | 3.85 |
| 4    | 580   | 5.14 |
| 5    | 370   | 6.42 |

MF400LS

# Pendant / Ceiling light

## HCP407

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Chrome plated steel plate  
■ Reflector : Acrylic resin  
■ Adaptable accessories  
Shade : HSC4071  
Holder : AHCP391  
■ Weight : 3.1kg

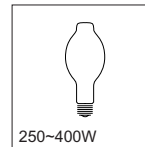
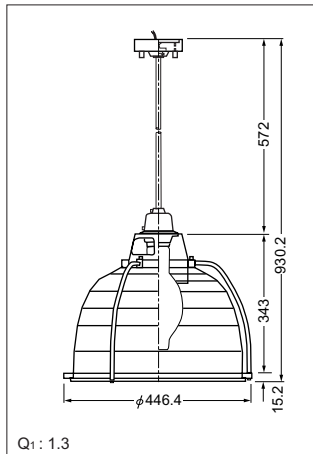
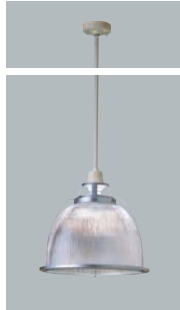


| h(m) | 80°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3760         | 1.68 |
| 2    | 940          | 3.37 |
| 3    | 410          | 5.05 |
| 4    | 230          | 6.74 |
| 5    | 150          | 8.42 |

MF400LS

## HPP407

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Chrome plated steel plate  
■ Reflector : Acrylic resin  
■ Adaptable accessories  
Shade : HSC407  
Holder : AHPP391  
■ Weight : 3.2kg

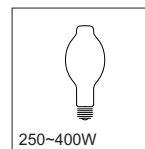
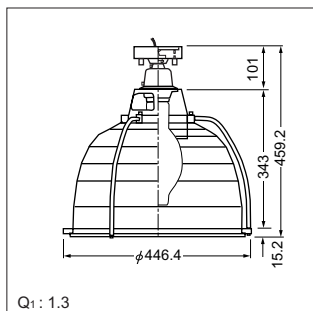


| h(m) | 80°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3760         | 1.68 |
| 2    | 940          | 3.37 |
| 3    | 410          | 5.05 |
| 4    | 230          | 6.74 |
| 5    | 150          | 8.42 |

MF400LS

## HSL407

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Chrome plated steel plate  
■ Reflector : Acrylic resin  
■ Adaptable accessories  
Shade : HSC407  
Holder : AHSL391  
■ Weight : 2.9kg

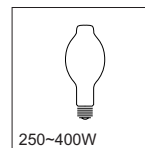
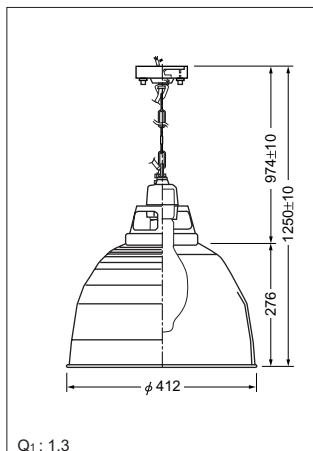


| h(m) | 80°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3760         | 1.68 |
| 2    | 940          | 3.37 |
| 3    | 410          | 5.05 |
| 4    | 230          | 6.74 |
| 5    | 150          | 8.42 |

MF400LS

## HCP408

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Steel plate (Semi-white colour)  
■ Reflector : Acrylic resin  
■ Adaptable accessories  
Shade : HSC408  
Holder : AHCP391  
■ Weight : 2.3kg



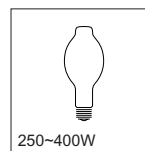
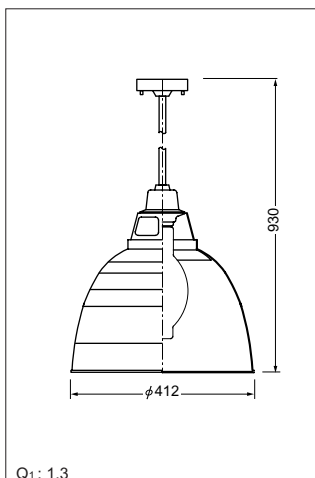
| h(m) | 80°<br>E(lx) | D(m) |
|------|--------------|------|
| 1    | 3760         | 1.68 |
| 2    | 940          | 3.37 |
| 3    | 410          | 5.05 |
| 4    | 230          | 6.74 |
| 5    | 150          | 8.42 |

MF400LS

# Pendant / Ceiling light

## HPP408

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Steel plate (Semi-white colour)  
■ Reflector : Acrylic resin  
■ Adaptable accessories  
Shade : HSC408  
Holder : AHPP391  
■ Weight : 2.4kg

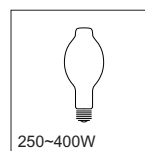
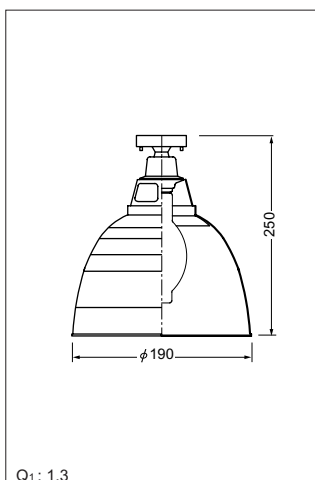


| 80°  |      |      |
|------|------|------|
| h(m) | E lx | D(m) |
| 1    | 3760 | 1.68 |
| 2    | 940  | 3.37 |
| 3    | 410  | 5.05 |
| 4    | 230  | 6.74 |
| 5    | 150  | 8.42 |

MF400LS

## HSL408

**Lamps**  
Multi Super Ace,  
Multi-Hi Ace 250~400W(BUP)  
Specialux 250~400W  
**Finish**  
■ Body : Steel plate (Semi-white colour)  
■ Reflector : Acrylic resin  
■ Adaptable accessories  
Shade : HSC408  
Holder : AHSL391  
■ Weight : 2.1kg

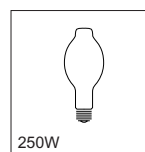
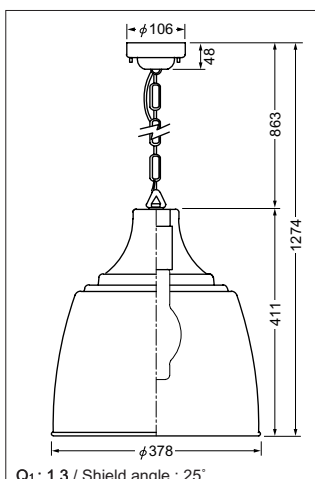


| 80°  |      |      |
|------|------|------|
| h(m) | E lx | D(m) |
| 1    | 3760 | 1.68 |
| 2    | 940  | 3.37 |
| 3    | 410  | 5.05 |
| 4    | 230  | 6.74 |
| 5    | 150  | 8.42 |

MF400LS

## HCP204

**Lamps**  
Multi-Hi Ace 250W(BUP)  
Specialux 250W  
**Finish**  
■ Body : Steel plate (White colour)  
■ Reflector : Acrylic resin  
■ Weight : 2.7kg



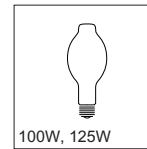
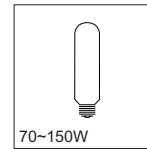
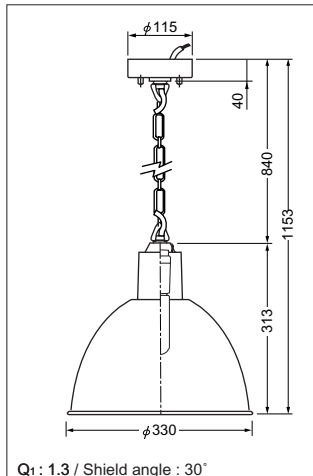
| 65°  |      |      |
|------|------|------|
| h(m) | E lx | D(m) |
| 1    | 3300 | 1.26 |
| 2    | 820  | 2.53 |
| 3    | 360  | 3.79 |
| 4    | 200  | 5.06 |
| 5    | 130  | 6.32 |

MF250LS

# Pendant / Ceiling light

## HCP105

**Lamps**  
 Color Arc 70~150W  
 SDX 70~150W  
 Multi-Hi Ace 100, 125W(BUP)  
**Finish**  
 ■ Body : Aluminium (White colour)  
 ■ Reflector : Aluminium  
 ■ Weight : 1.3kg

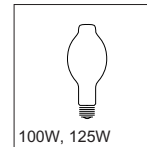
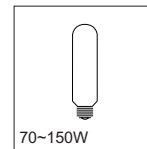
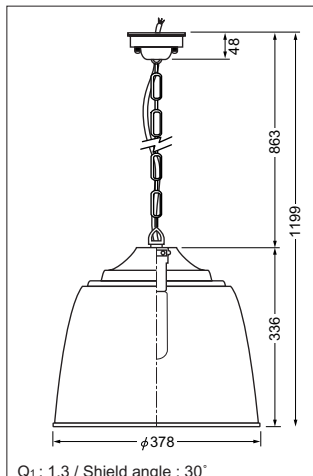


| 68°  |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 2530  | 1.35 |  |
| 2    | 630   | 2.71 |  |
| 3    | 280   | 4.06 |  |
| 4    | 150   | 5.42 |  |
| 5    | 100   | 6.77 |  |

MT150FSW

## HCP104

**Lamps**  
 Color Arc 70~150W  
 SDX 70~150W  
 Multi-Hi Ace 100, 125W(BUP)  
**Finish**  
 ■ Body : Steel plate (White colour)  
 ■ Reflector : Acrylic resin  
 ■ Weight : 2.6kg

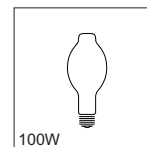
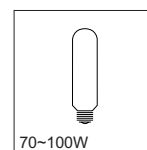
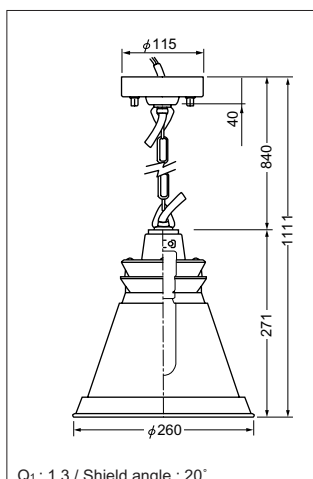
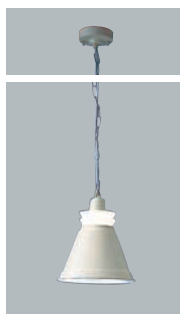


| 72°  |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 600   | 1.46 |  |
| 2    | 150   | 2.92 |  |
| 3    | 65    | 4.38 |  |
| 4    | 35    | 5.83 |  |
| 5    | 20    | 7.29 |  |

MT150FSW

## HCP101

**Lamps**  
 Color Arc 70~100W  
 SDX 70~100W  
 Multi-Hi Ace 100W(BUP)  
**Finish**  
 ■ Body : Steel plate (White colour)  
 Louver : Acrylic resin  
 ■ Reflector : Aluminium  
 ■ Weight : 1.35kg



| 70°  |       |      |  |
|------|-------|------|--|
| h(m) | E(lx) | D(m) |  |
| 1    | 2380  | 1.39 |  |
| 2    | 590   | 2.78 |  |
| 3    | 260   | 4.17 |  |
| 4    | 140   | 5.56 |  |
| 5    | 95    | 6.95 |  |

MF100LS

# Pendant / Ceiling light

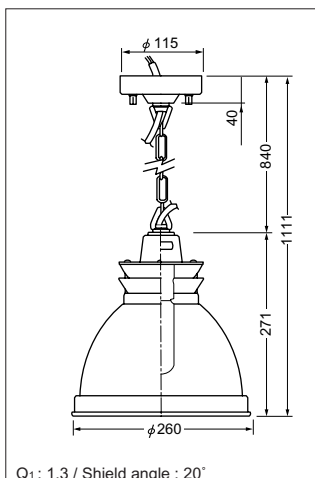
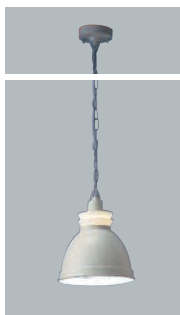
## HCP102

### Lamps

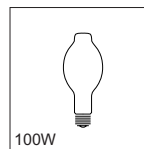
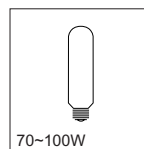
Color Arc 70~100W  
SDX 70~100W  
Multi-Hi Ace 100W(BUP)

### Finish

- Body : Steel plate (White colour)
- Louver : Acrylic resin
- Reflector : Aluminium
- Weight : 1.4kg



Q<sub>t</sub> : 1.3 / Shield angle : 20°



| 85°  |       |      |
|------|-------|------|
| h(m) | E(lx) | D(m) |
| 1    | 760   | 1.84 |
| 2    | 190   | 3.68 |
| 3    | 85    | 5.52 |
| 4    | 45    | 7.36 |
| 5    | 30    | 9.20 |

MF100LS

### For Halogen lamps

## CASTOOL

## PPD11001 PPD11002

### Lamps

EYE Dichro-cool Halogen lamps  
JDR110V40W-65W

### Finish

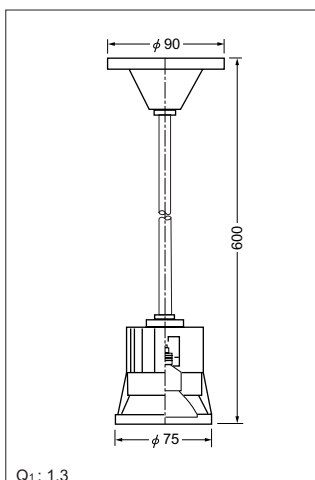
- Body : Aluminium die cast
- Colour :  
PPD11001 : White  
PPD11002 : Metallic grey
- Socket : E11
- Weight : 0.35kg



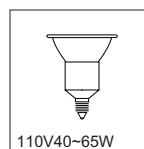
PPD11001



PPD11002



Q<sub>t</sub> : 1.3



### CASTOOL

The fixture features high efficiency, sophisticated design, high performance and user-friendly functions including light distribution selector.

# Bracket

For Color Arc & SDX 150W

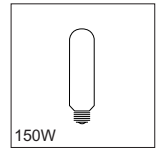
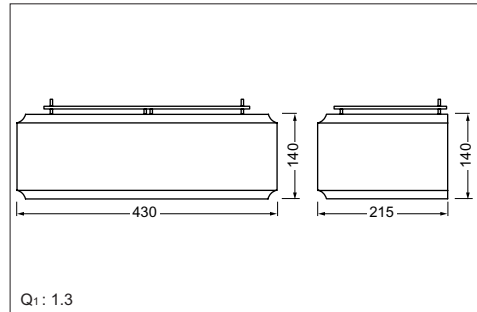
## HBL3001 HBL3002

### Lamps

NHT150(F)SDX  
MT150(F)SDW, MT150(F)SW  
MT150(F)D

### Finish

- Body : Steel plate
- HBL3001 : Off-white matt finish
- HBL3002 : Silver metallic finish
- Frosted hard glass



For Color Arc & SDX 70W~150W

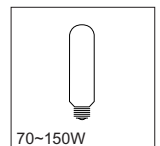
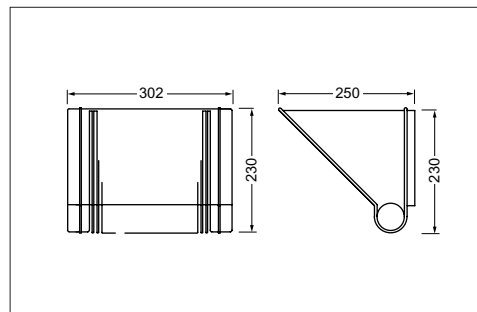
## Concord LC17301

### Lamps

NHT70FSDX, MT70FSDW, FSW, FD  
NHT100FSDX, MT100FSDW, FSW, FD  
NHT150FSDX, MT150FSDW, FSW, FD

### Finish

- Body : Aluminium and Aluminium die cast, White colour
- Reflector : Aluminium, hammer tone finish with front glass
- Weight : 2.7kg



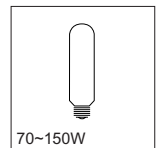
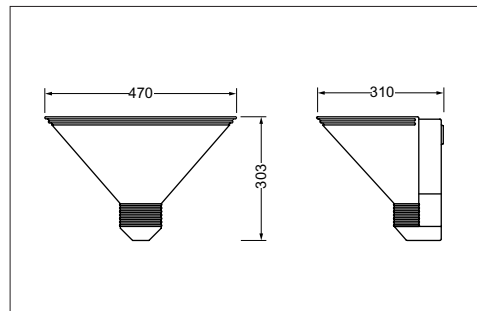
## Concord LC17303

### Lamp

NHT70FSDX, MT70FSDW, FSW, FD  
NHT100FSDX, MT100FSDW, FSW, FD  
NHT150FSDX, MT150FSDW, FSW, FD

### Finish

- Body : Aluminium die cast, White colour
- Reflector : Aluminium, hammer tone finish with front glass
- Weight : 4.9kg



# Bracket

## Concord

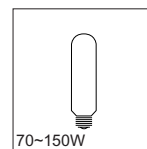
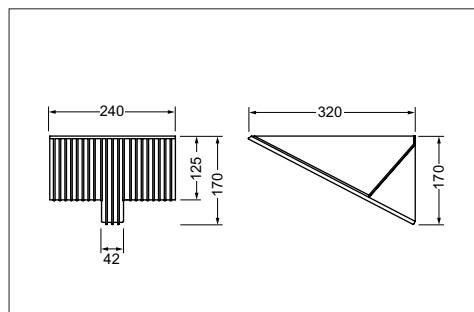
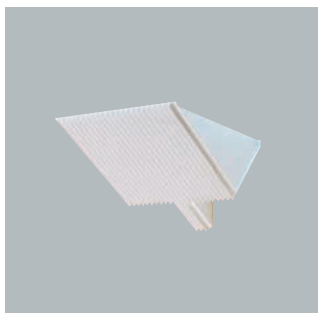
### LC17302

#### Lamps

NHT70FSDX, MT70FSDW, FSW, FD  
NHT100FSDX, MT100FSDW, FSW, FD  
MT150FSDW, FSW, FD

#### Finish

- Body : Aluminium die cast, White colour
- Reflector : Aluminium, hammer tone finish with front glass
- Weight : 2.7 kg



For Color Arc & SDX 70W

### HBL17001- E1

Built-in ballast type  
(Rated voltage:100V)

### HBL17001- E2

Built-in ballast type  
(Rated voltage:200V)

#### Lamps

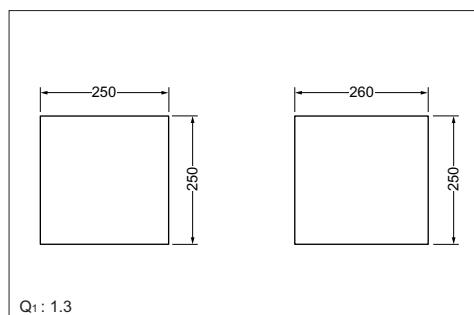
NHT70FSDX, NHT70SDX,  
MT70FSDW, MT70SDW,  
MT70FSW, MT70SW  
MT70FD, MT70D

#### Finish

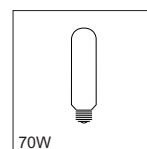
- Body : Steel plate, Off-white matt finish  
With frosted tempered glass
- Ballast : Electronic ballast
- Weight : 4.7 kg



HBL17001-E2



Q1 : 1.3



### HBL17002- E1

Built-in ballast type  
(Rated voltage:100V)

### HBL17002- E2

Built-in ballast type  
(Rated voltage:200V)

#### Lamps

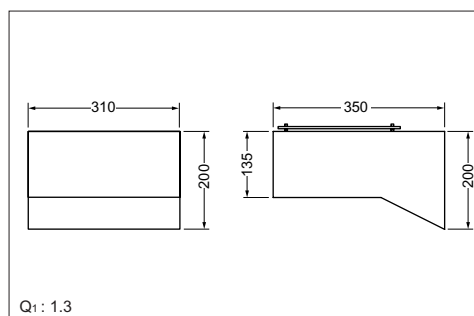
NHT70FSDX, NHT70SDX,  
MT70FSDW, MT70SDW,  
MT70FSW, MT70SW  
MT70FD, MT70D

#### Finish

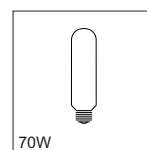
- Body : Steel plate, Off-white matt finish  
With frosted tempered glass
- Ballast : Electronic ballast
- Weight : 5.6 kg



HBL17002-E2



Q1 : 1.3



# Bracket

## HBL17003- E1

Built-in ballast type  
(Rated voltage:100V)

## HBL17003- E2

Built-in ballast type  
(Rated voltage:200V)

### Lamps

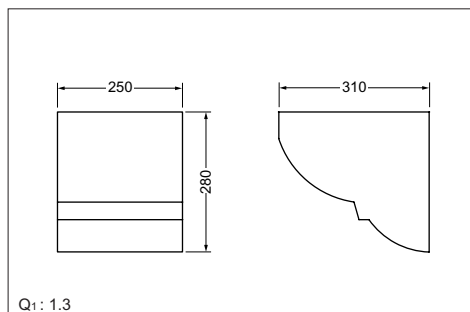
NHT70FSDX, NHT70SDX,  
MT70FSDW, MT70SDW,  
MT70FSW, MT70SW  
MT70FD, MT70D

### Finish

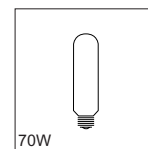
- Body : Steel plate, Off-white matt finish  
With frosted tempered glass
- Ballast : Electronic ballast
- Weight : 5.0 kg



HBL17003-E2



Q1 : 1.3



70W

For SDX 50W

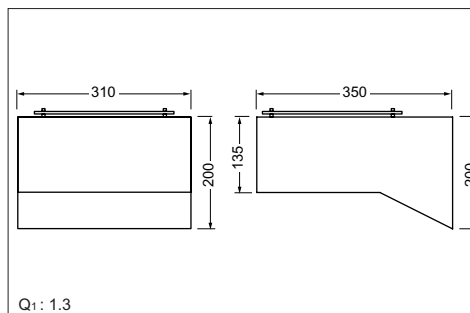
## HBL1104

### Lamps

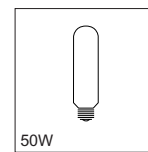
NHT50FSDX, NHT50SDX,

### Finish

- Body : Steel plate, Off-white matt finish  
With frosted tempered glass



Q1 : 1.3



50W

For Halogen lamp JD 110V85W

## BL1430 BL1431

### Lamps

Halogen lamps JD110V85WN/ M

### Finish

- For BL1430
- Body : Aluminium die cast,  
Off-white leather tone

For BL1431

- Body : Aluminium die cast,  
Black leather tone

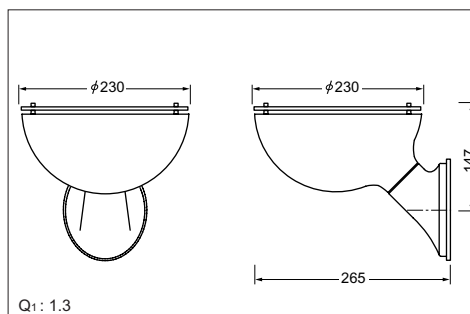
- Front glass: Frosted tempered glass
- Weight : 2.0 kg



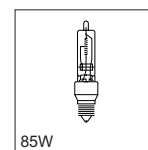
BL1430



BL1431



Q1 : 1.3



85W

# Cold atmosphere lighting (Built-in ballast type)

## For HID lamps

For 100W Metal halide lamp  
For 70W HPS lamp  
Fixture for C grade & F grade condition



with emergency light

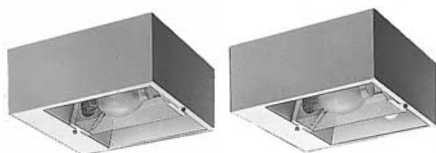
+10°C ~ - 60°C

| Fixture type # | Lamp type  | Supply voltage | Frequency | Weight |
|----------------|------------|----------------|-----------|--------|
| HQS101B-2A     | MF100LE/BU | 200V           | 50Hz      | 5.5kg  |
| HQS101B-2B     |            |                | 60Hz      |        |
| HQS103B-2A     | NH70FN     | 200V           | 50Hz      | 6.2kg  |
| HQS103B-2B     |            |                | 60Hz      |        |

+10°C ~ - 40°C ( With emergency light type )

| Fixture type # | Lamp type  | Supply voltage | Frequency | Weight |
|----------------|------------|----------------|-----------|--------|
| HQS102B-2A     | MF100LE/BU | 200V           | 50Hz      | 7.0kg  |
| HQS102B-2B     |            |                | 60Hz      |        |
| HQS104B-2A     | NH70FN     | 200V           | 50Hz      | 7.7kg  |
| HQS104B-2B     |            |                | 60Hz      |        |

For 250W Metal halide lamp  
Fixture for C grade & F grade condition



with emergency light

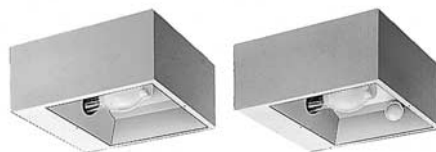
+10°C ~ - 60°C

| Fixture type # | Lamp type   | Supply voltage | Frequency | Weight |
|----------------|-------------|----------------|-----------|--------|
| HQS201B-2A     | MF250LE/BUH | 200V           | 50Hz      | 7.5kg  |
| HQS201B-2B     |             |                | 60Hz      |        |

+10°C ~ - 40°C ( With emergency light type )

| Fixture type # | Lamp type   | Supply voltage | Frequency | Weight |
|----------------|-------------|----------------|-----------|--------|
| HQS202B-2A     | MF250LE/BUH | 200V           | 50Hz      | 9.0kg  |
| HQS202B-2B     |             |                | 60Hz      |        |

For 180W HPS lamp  
Fixture for C grade & F grade condition



with emergency light

+10°C ~ - 60°C

| Fixture type # | Lamp type | Supply voltage | Frequency | Weight |
|----------------|-----------|----------------|-----------|--------|
| HQS203B-2A     | NH180FLX  | 200V           | 50Hz      | 7.4kg  |
| HQS203B-2B     |           |                | 60Hz      |        |

+10°C ~ - 40°C ( With emergency light type )

| Fixture type # | Lamp type | Supply voltage | Frequency | Weight |
|----------------|-----------|----------------|-----------|--------|
| HQS204B-2A     | NH180FLX  | 200V           | 50Hz      | 8.9kg  |
| HQS204B-2B     |           |                | 60Hz      |        |

### Instructions for Use

Use the luminaires at the temperature range specified. Use of them at lower or higher temperature may cause their failure.

You cannot use Multi Super Ace or FEC Sunlux Ace.

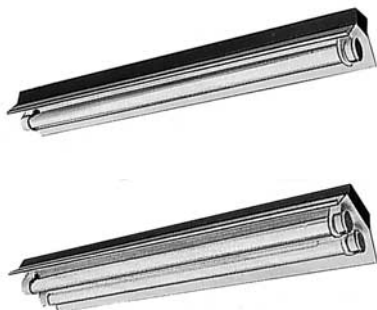
The direction of installation of metal halide lamp is restricted. For a round type, select a light bulb whose model number ends with "BU" (base up operation type), and for a square type, choose a bulb ending with "BH" (horizontal type), or "BUH" type

For the square type fixtures of the metal halide lamp, make sure to attach the protective net that comes with the fixture.

The HQS series products are not water-proof or vapor-proof types. Do not use them where a condensation may occur.

For more specifications of luminaires and lamps, please contact us.

For fluorescent lamps  
Fixture for C grade condition



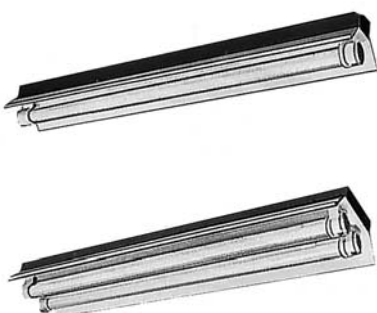
+10°C ~ -20°C

| Fixture type #     | Lamp type      | Supply voltage | Frequency | Weight |
|--------------------|----------------|----------------|-----------|--------|
| <b>FRQ4101RH15</b> | FLR40S/M<br>x1 | 100V           | 50Hz      | 7.2kg  |
| <b>FRQ4101RH16</b> |                |                | 60Hz      |        |
| <b>FRQ4101RH25</b> |                | 200V           | 50Hz      |        |
| <b>FRQ4101RH26</b> |                |                | 60Hz      |        |

Fixture  
Body : Steel plate  
Grey colour  
Reflector : Steel plate  
White  
Globe : Acrylic resin  
Ballast : With thermal  
protection

| Fixture type #     | Lamp type      | Supply voltage | Frequency | Weight |
|--------------------|----------------|----------------|-----------|--------|
| <b>FRQ4201RH15</b> | FLR40S/M<br>x2 | 100V           | 50Hz      | 13.5kg |
| <b>FRQ4201RH16</b> |                |                | 60Hz      |        |
| <b>FRQ4201RH25</b> |                | 200V           | 50Hz      |        |
| <b>FRQ4201RH26</b> |                |                | 60Hz      |        |

For fluorescent lamps  
Fixture for C grade & F grade condition



0°C ~ -60°C

| Fixture type #     | Lamp type          | Supply voltage | Frequency | Weight |
|--------------------|--------------------|----------------|-----------|--------|
| <b>FRQ7101RL15</b> | FLR65SH/M/LT<br>x1 | 100V           | 50Hz      | 7.5kg  |
| <b>FRQ7101RL16</b> |                    |                | 60Hz      |        |
| <b>FRQ7101RL25</b> |                    | 200V           | 50Hz      |        |
| <b>FRQ7101RL26</b> |                    |                | 60Hz      |        |

Fixture  
Body : Steel plate  
Grey colour  
Reflector : Steel plate  
White  
Globe : Acrylic resin  
Ballast : With thermal  
protection

| Fixture type #     | Lamp type          | Supply voltage | Frequency | Weight |
|--------------------|--------------------|----------------|-----------|--------|
| <b>FRQ7201RL15</b> | FLR65SH/M/LT<br>x2 | 100V           | 50Hz      | 13.9kg |
| <b>FRQ7201RL16</b> |                    |                | 60Hz      |        |
| <b>FRQ7201RL25</b> |                    | 200V           | 50Hz      |        |
| <b>FRQ7201RL26</b> |                    |                | 60Hz      |        |

For incandescent lamps  
Fixture for C grade



+40°C ~ -20°C

| Fixture type # | Lamp type | Supply voltage |
|----------------|-----------|----------------|
| <b>EV1200</b>  | 60 ~ 200W | 3.0kg          |

Fixture  
Body : Aluminium die cast  
Grey colour  
Globe : Hard glass  
Guard : Zinc die cast  
White colour  
Shade : Iron steel  
Enamel finish  
White colour

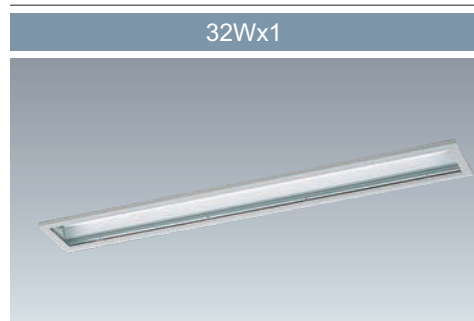
With shade  
+40°C ~ -20°C

| Fixture type # | Lamp type | Supply voltage |
|----------------|-----------|----------------|
| <b>EV1210</b>  | 60 ~ 200W | 3.4kg          |

# Clean room lighting

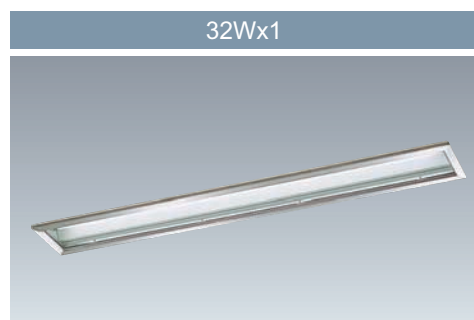
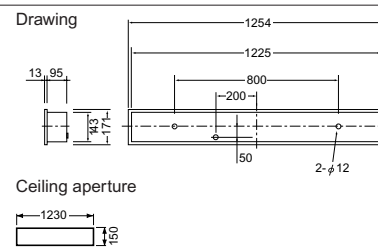
Hf type fluorescent lamp luminaires for clean room  
Surface type luminaire, Built in ballast luminaire, Rated voltage 100V or 200V, Class : 1,000~100,000

The luminaires provide high air-tightness to keep the room cleanest and the best visual environment for comfortable precision works.



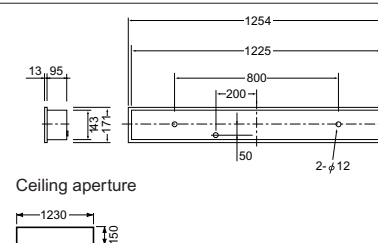
## FHEZ4100A

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Steel plate, White colour  
Reflector : Steel plate, White colour  
Front glass : Laminated glass t4.1mm  
Shattered proof front glass available  
Socket : T81  
Weight : 7.1 kg



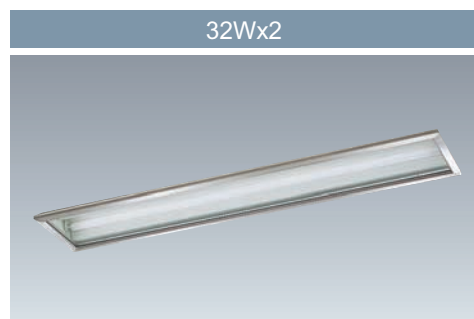
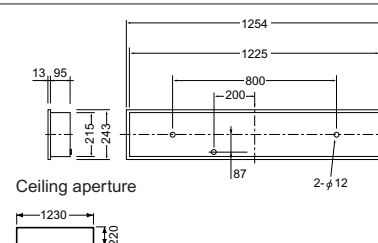
## FHEZ4150A

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Stainless steel (SUS304)  
Hairline clear coating  
Reflector : Steel plate, White colour  
Front glass : Laminated glass t4.1 mm  
Shattered proof front glass available  
Socket : T81  
Weight : 7.1 kg



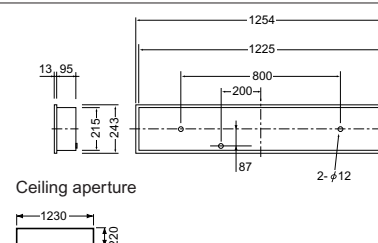
## FHEZ4200A

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Steel plate, White colour  
Reflector : Steel plate, White colour  
Front glass : Laminated glass t4.1mm  
Shattered proof front glass available  
Socket : T81  
Weight : 10.3 kg



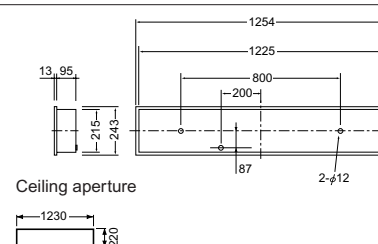
## FHEZ4250A

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Stainless steel (SUS304)  
Hairline clear coating  
Reflector : Steel plate, White colour  
Front glass : Laminated glass t4.1 mm  
Shattered proof front glass available  
Socket : T81  
Weight : 10.3 kg



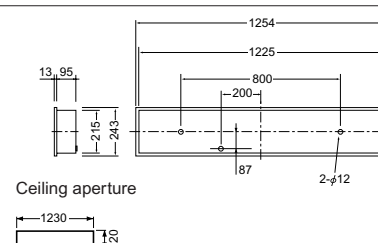
## FHEZ4300A

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Steel plate, White colour  
Reflector : Steel plate, White colour  
Front glass : Laminated glass t4.1mm  
Shattered proof front glass available  
Socket : T81  
Weight : 10.9 kg

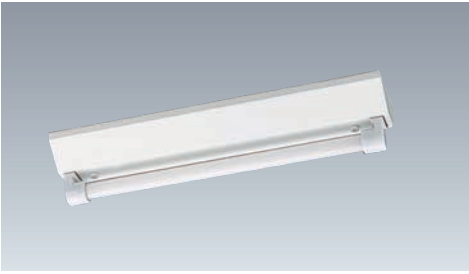
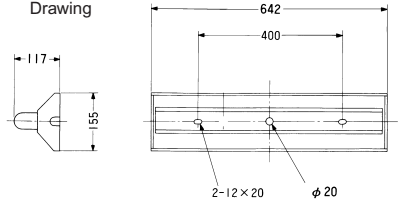
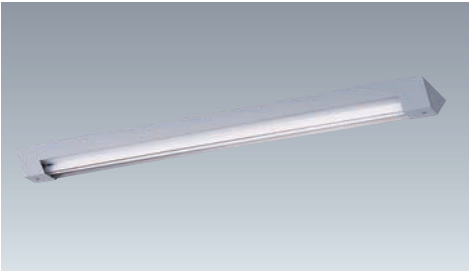
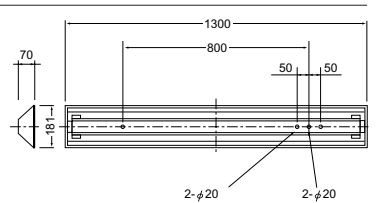
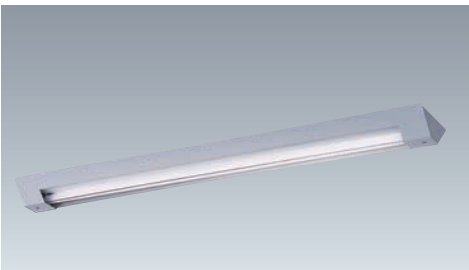
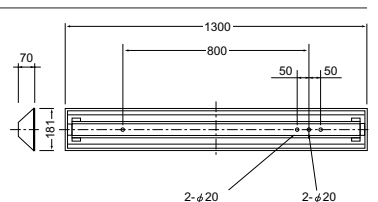
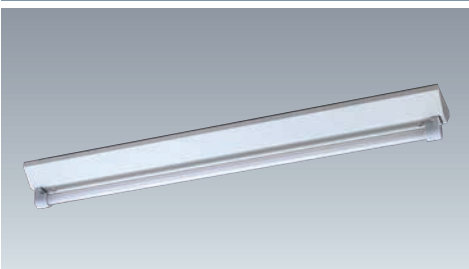
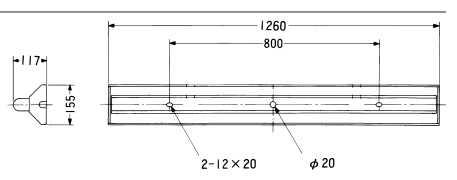
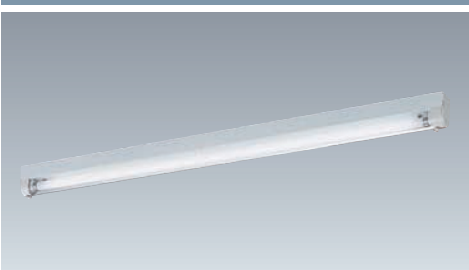
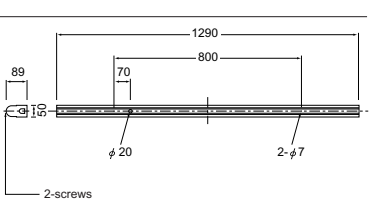
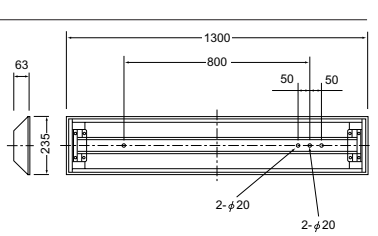


## FHEZ4350A

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Stainless steel (SUS304)  
Hairline clear coating  
Reflector : Steel plate, White colour  
Front glass : Laminated glass t4.1 mm  
Shattered proof front glass available  
Socket : T81  
Weight : 10.9 kg



# Clean room lighting

|                                                                                                  |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                    |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| <p>20Wx1</p>    | <p><b>FVZ2102</b> Class : 100,000</p> <p>Lamp : FL20SW</p> <p>Body : Galvanized steel plate, White colour</p> <p>Reflector : Steel plate, White colour</p> <p>Socket : T66</p> <p>Weight : 1.6 kg</p>                                                                                                                                              | <p>Drawing</p>  |
| <p>32Wx1</p>    | <p><b>FHDZ4100</b> Class : 1,000~100,000</p> <p>Lamp : FHF32EX-N-H</p> <p>Body : Steel plate, White colour</p> <p>Frame : Stainless steel, White colour (SUS304)</p> <p>Reflector : Steel plate, White colour</p> <p>Panel : Anti-charged acrylic resin ( clear )</p> <p>Socket : T78,T79</p> <p>Weight : 5.2 kg</p> <p>High power output type</p> |                 |
| <p>32Wx1</p>   | <p><b>FHDZ4150</b> Class : 1,000~100,000</p> <p>Lamp : FHF32EX-N-H</p> <p>Body : Steel plate, White colour</p> <p>Frame : Stainless steel, White colour (SUS304)</p> <p>Reflector : Steel plate, White colour</p> <p>Panel : Anti-charged acrylic resin ( clear )</p> <p>Socket : T78,T79</p> <p>Weight : 5.2 kg</p> <p>High power output type</p> |                |
| <p>40Wx1</p>  | <p><b>FVZ4102</b> Class : 100,000</p> <p>Lamp : FLR40SW / M/36</p> <p>Body : Galvanized steel plate, White colour</p> <p>Reflector : Steel plate, White colour</p> <p>Socket : T66</p> <p>Weight : 3.8 kg</p> <p>Ballast with safety function</p>                                                                                                  |               |
| <p>32Wx1</p>  | <p><b>FHDZ4103</b> Class : 100 or more</p> <p>Lamp : FHF32EX-N-H</p> <p>Body : Steel plate, White colour</p> <p>Terminal assembly : ABS resin white</p> <p>Panel : Anti-charged acrylic resin ( clear )</p> <p>Socket : T81</p> <p>Weight : 3.2 kg</p> <p>High power output type</p> <p>With compact type panel</p>                                |               |
| <p>32Wx2</p>  | <p><b>FHDZ4200</b> Class : 1,000~100,000</p> <p>Lamp : FHF32EX-N-H</p> <p>Body : Steel plate, White colour</p> <p>Frame : Steel plate</p> <p>Reflector : Steel plate, White colour</p> <p>Panel : Anti-charged acrylic resin ( clear )</p> <p>Socket : T78,T79</p> <p>Weight : 6.5 kg</p> <p>With panel, thin type</p>                             |               |

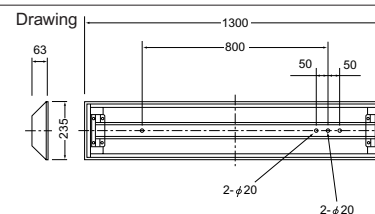
# Clean room lighting

32Wx2

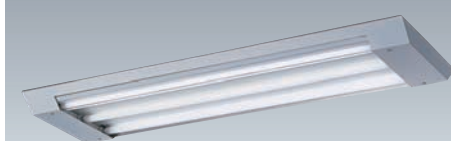


## FHDZ4250

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Stainless steel, White colour (SUS304)  
Reflector : Steel plate, White colour  
Panel : Anti-charged acrylic resin ( clear )  
Socket : T78,T79  
Weight : 6.5 kg  
High power output type  
With panel, thin type

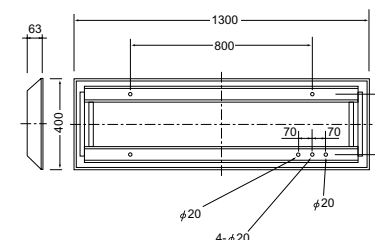


32Wx3

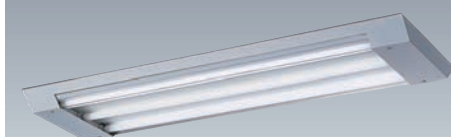


## FHDZ4300

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Steel plate, White colour  
Reflector : Steel plate, White colour  
Panel : Anti-charged acrylic resin ( clear )  
Socket : T78,T79  
Weight : 9.4 kg  
High power output type  
With panel, thin type

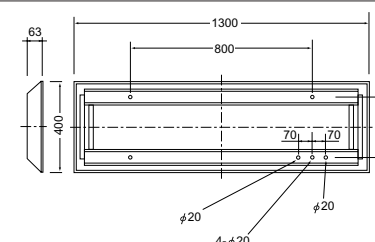


32Wx3

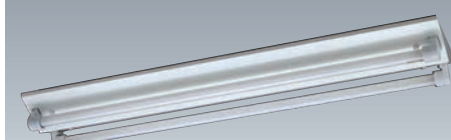


## FHDZ4350

Lamp : FHF32EX-N-H  
Body : Steel plate, White colour  
Frame : Stainless steel, White colour (SUS304)  
Reflector : Steel plate, White colour  
Panel : Anti-charged acrylic resin ( clear )  
Socket : T78,T79  
Weight : 9.4 kg  
High power output type  
With panel, thin type



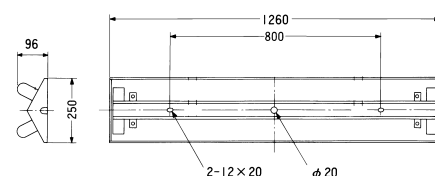
40Wx2



## FVZ4202

Class : 100,000

Lamp : FLR40SW / M/36  
Body : Galvanized steel plate, White colour  
Reflector : Steel plate, White colour  
Socket : T67  
Weight : 5.1 kg  
Ballast with safety function

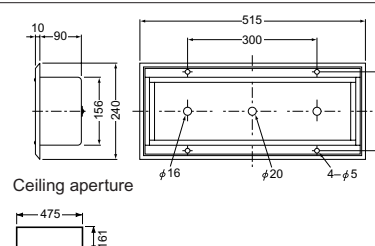


15Wx1



## FES1151

with 15W sterilization lamp  
Body : Steel plate, White colour  
Frame : Stainless steel, White colour (SUS304)  
Reflector : Steel plate, White colour  
Panel : Quartz glass  
Socket : T48  
Weight : 3.1 kg

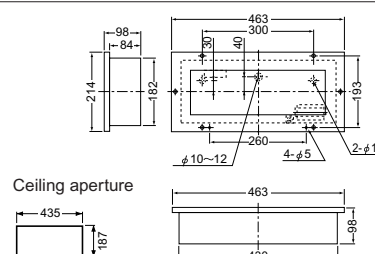


10Wx1



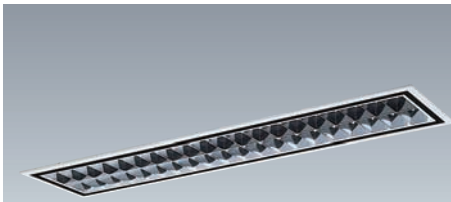
## MC132

Luminaires for emergency exit signs  
Lamp : FL10W  
Body : MC132A(B)  
Weight : 6.0 kg  
Indication panel : EPD10~14  
Battery : N2CS



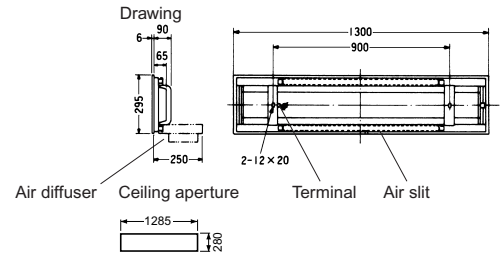
## Air conditioner type lighting

32Wx2

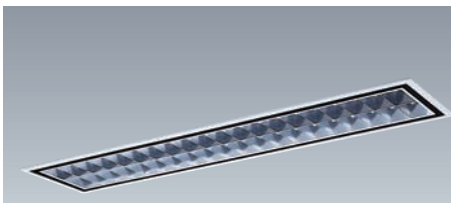


### FHEK4201

Lamp : FHF32EX-N-H  
Body : Steel plate, Matted black  
Louver: Galvanized steel plate mirror  
Reflector : Steel plate, White colour  
Socket : T78,T79  
Weight : 8.7 kg  
Adaptable air diffuser : PFK4201  
Include light output control function

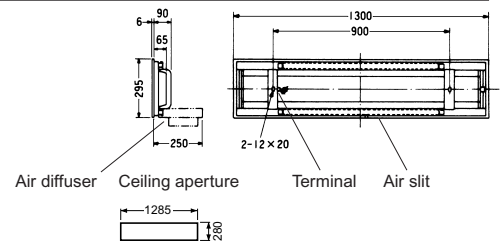


32Wx2



### FHEK4202

Lamp : FHF32EX-N-H  
Body : Steel plate, Matted black  
Reflector : Steel plate, White colour  
Louver: Galvanized steel plate mirror  
Socket : T78,T79  
Weight : 8.7 kg  
Adaptable air diffuser : PFK4201  
Include light output control function

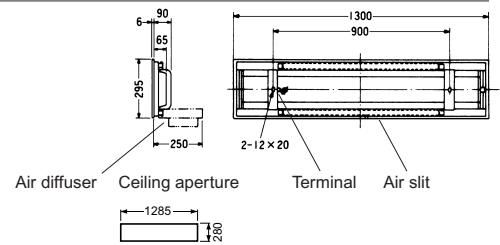


32Wx2



### FHEK4203

Lamp : FHF32EX-N-H  
Body : Steel plate, Matted black  
Louver: Aluminium, White colour  
Reflector : Steel plate, White colour  
Socket : T78,T79  
Weight : 7.6 kg  
Adaptable air diffuser : PFK4201  
Include light output control function

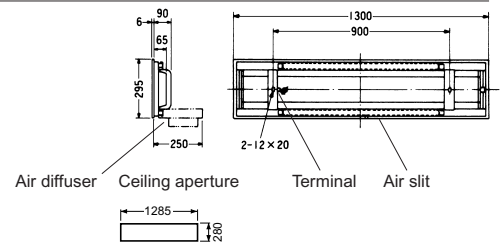


32Wx2



### FHEK4204

Lamp : FHF32EX-N-H  
Body : Galvanized sheet iron, White colour  
Reflector : Steel plate, White colour  
Panel : Clear acrylic prism  
Socket : T78,T79  
Weight : 5.1 kg  
Adaptable air diffuser : PFK4201  
Include light output control function

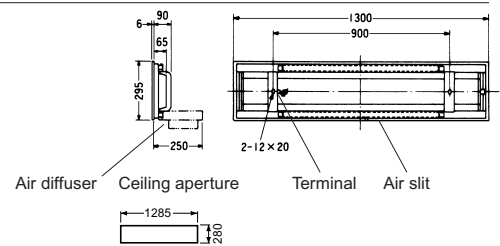


32Wx2



### FHEK4205

Body : Steel plate, Matted black  
Frame : Stainless steel, White colour  
Reflector : Steel plate, White colour  
Panel : Acrylic resin matt finish, Milk white colour  
Socket : T78,T79  
Weight : 8.6 kg  
Adaptable air diffuser : PFK4201  
Include light output control function

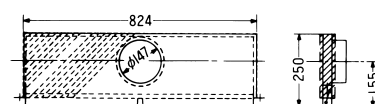


### Accessory



### PKF4201 Air diffuser

Adaptable luminaires : FHEK4201, FHEK4202, FHEK4203, FHEK4204  
Connectable duct diameter :  $\phi 147$ mm  
With heat insulator  
With louver for change the direction of the wind

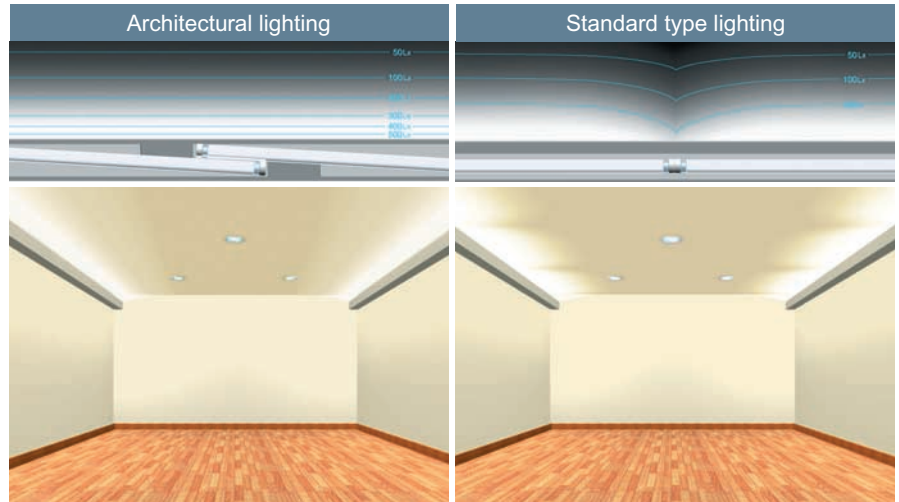


## Architectural lighting

Low cost architectural lighting that fits the architecture. Lamps at connections can be freely adjusted according to the lighting area.

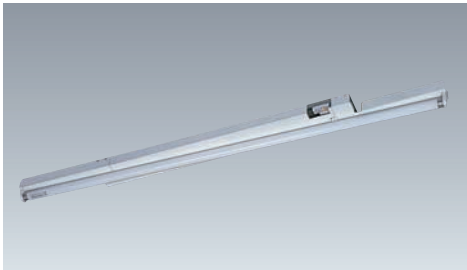
The Hf fluorescent architectural lighting provides seriate brightness without non-uniformity at junctions.

You can flexibly design the lighting according to the area to be lighted, because the length of overlapped lamp section can be adjusted freely.



Built-in ballast luminaire, Rated voltage 100V or 200V

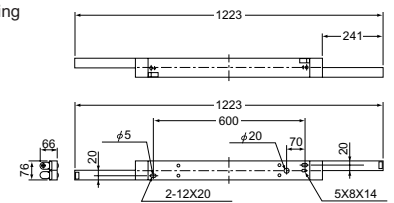
32Wx1



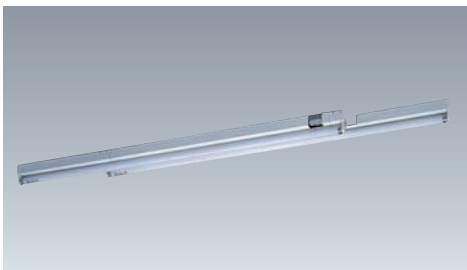
### FHIU4100A

Lamp : FHF32EX-N-H  
Body : Galvanized steel plate, White colour  
Reflector : Steel plate, White colour  
Socket : T81  
Weight : 3.0 kg  
High power output type

Drawing

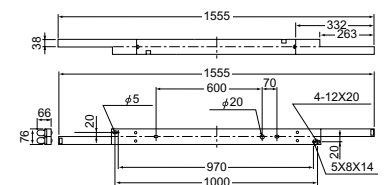


32Wx2

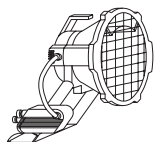


### FHIU4200A

Lamp : FHF32EX-N-H  
Body : Galvanized steel plate, White colour  
Reflector : Steel plate, White colour  
Socket : T81  
Weight : 3.9 kg  
High power output type



# EYE SUPA-FOCUS 2000W



## HSF222

Corrosion resistance

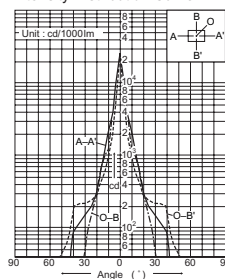
see p.15

Beam characteristics

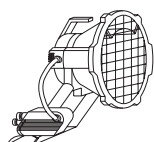
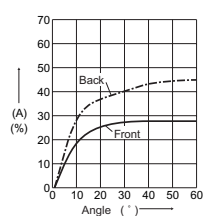
| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) (1/20) | Beam efficiency(%)<br>(1/10) (1/20) |
|--------------|----------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| MSD2000BED-I | 200,000                    | 24,883                               | V13 V19<br>H18 H26             | 39.0 52.5                           |

V = Vertical, H = Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



## HSF223

Corrosion resistance

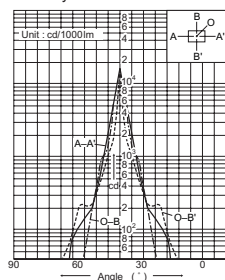
see p.15

Beam characteristics

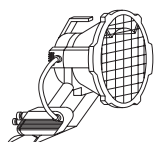
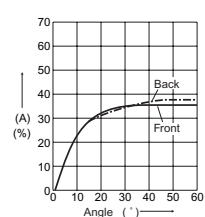
| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) (1/20) | Beam efficiency(%)<br>(1/10) (1/20) |
|--------------|----------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| MSD2000BED-I | 200,000                    | 16,176                               | V16 V28<br>H24 H30             | 41.5 56.0                           |

V = Vertical, H = Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



## HSF224

Corrosion resistance

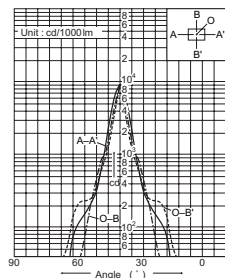
see p.15

Beam characteristics

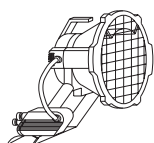
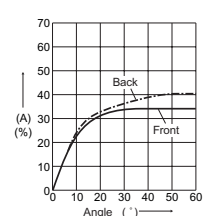
| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) (1/20) | Beam efficiency(%)<br>(1/10) (1/20) |
|--------------|----------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| MSD2000BED-I | 200,000                    | 9,149                                | V26 V37<br>H28 H36             | 45.0 56.0                           |

V = Vertical, H = Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



## HSF225

Corrosion resistance

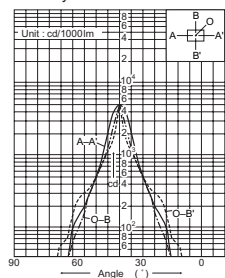
see p.15

Beam characteristics

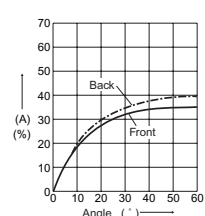
| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) (1/20) | Beam efficiency(%)<br>(1/10) (1/20) |
|--------------|----------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| MSD2000BED-I | 200,000                    | 4,733                                | V41 V62<br>H40 H56             | 50.5 60.5                           |

V = Vertical, H = Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE SPORTS-BEAM 2000W

(A)=Angular Cumulative lumens (%)



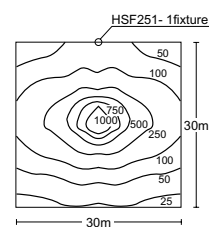
## HSF251 HSF254

see p.17

Lamp characteristics

| Lamp type    | Lamp lumens<br>( $\ell$ m) |
|--------------|----------------------------|
| MLD2000BED-I | 200,000                    |

Illuminance distribution



- Fixture height = 25m
- Aiming angle :  
30° from vertical  
0° from horizontal  
( right & left )



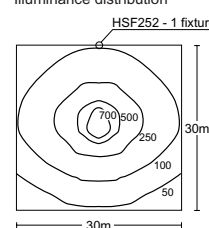
## HSF252 HSF255

see p.17

Lamp characteristics

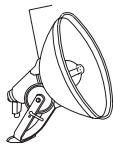
| Lamp type    | Lamp lumens<br>( $\ell$ m) |
|--------------|----------------------------|
| MLD2000BED-I | 200,000                    |

Illuminance distribution



- Fixture height = 25m
- Aiming angle :  
30° from vertical  
0° from horizontal  
( right & left )

# EYE Floodlight 1000W (1500)W



## H575SX

Anti - corrosion type

see

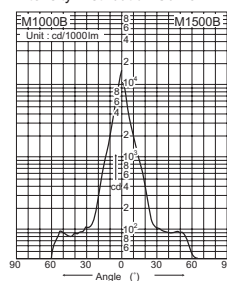
p.22

Beam characteristics

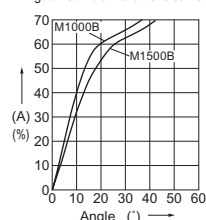
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |      | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|
| M1000B    | 109,250*                   | 15,532                               | (1/10)        | 21.2 | (1/10) 41.5        |
|           |                            |                                      | (1/20)        | 28.9 | (1/20) 51.5        |
| M1500B    | 160,000                    | 10,156                               | (1/10)        | 26.4 | (1/10) 40.5        |
|           |                            |                                      | (1/20)        | 36.0 | (1/20) 50.5        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H574SX

Corrosion resistance

see

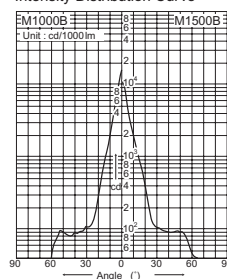
p.22

Beam characteristics

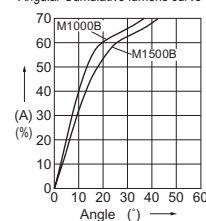
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |      | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|
| M1000B    | 109,250*                   | 15,532                               | (1/10)        | 21.2 | (1/10) 41.5        |
|           |                            |                                      | (1/20)        | 28.9 | (1/20) 51.5        |
| M1500B    | 160,000                    | 10,156                               | (1/10)        | 26.4 | (1/10) 40.5        |
|           |                            |                                      | (1/20)        | 36.0 | (1/20) 50.5        |

\* 95% of the initial lumens

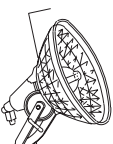
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight 1000W (1500)W



## H575DX

Anti - corrosion type

see

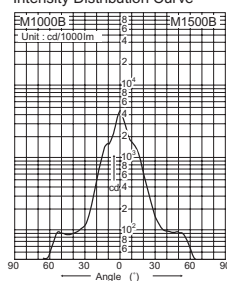
p.22

Beam characteristics

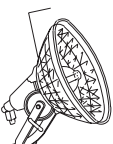
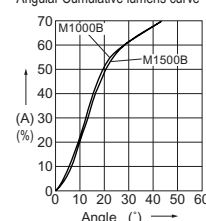
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |      | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|
| M1000B    | 109,250*                   | 4,561                                | (1/10)        | 40.4 | (1/10) 51.1        |
|           |                            |                                      | (1/20)        | 48.3 | (1/20) 56.3        |
| M1500B    | 160,000                    | 3,645                                | (1/10)        | 45.5 | (1/10) 52.8        |
|           |                            |                                      | (1/20)        | 54.7 | (1/20) 58.4        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H574DX

Corrosion resistance

see

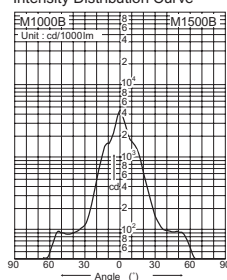
p.22

Beam characteristics

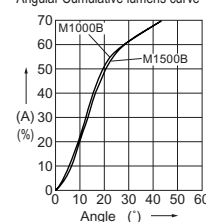
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |      | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|
| M1000B    | 109,250*                   | 4,561                                | (1/10)        | 40.4 | (1/10) 51.1        |
|           |                            |                                      | (1/20)        | 48.3 | (1/20) 56.3        |
| M1500B    | 160,000                    | 3,645                                | (1/10)        | 45.5 | (1/10) 52.8        |
|           |                            |                                      | (1/20)        | 54.7 | (1/20) 58.4        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight S 2000W



## H727SX

Anti - corrosion type

see

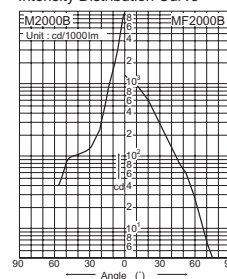
p.23

Beam characteristics

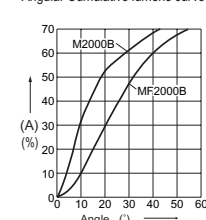
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |       | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|
| M2000B    | 175,750*                   | 9,810                                | (1/10)        | 26.5  | (1/10) 39.0        |
|           |                            |                                      | (1/20)        | 35.5  | (1/20) 48.5        |
| MF2000B   | 171,000*                   | 1,350                                | (1/10)        | 79.5  | (1/10) 63.5        |
|           |                            |                                      | (1/20)        | 101.0 | (1/20) 71.0        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



## H726SX

Corrosion resistance

see

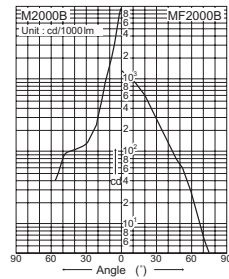
p.23

Beam characteristics

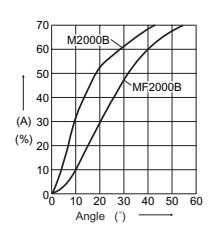
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M2000B    | 175,750*                   | 9,810                                | (1/10)        | 26.5  | (1/10)             | 39.0 |
|           |                            |                                      | (1/20)        | 35.5  | (1/20)             | 48.5 |
| MF2000B   | 171,000*                   | 1,350                                | (1/10)        | 79.5  | (1/10)             | 63.5 |
|           |                            |                                      | (1/20)        | 101.0 | (1/20)             | 71.0 |

\* 95% of the initial lumens

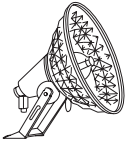
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight D 2000W



## H727DX

Anti - corrosion type

see

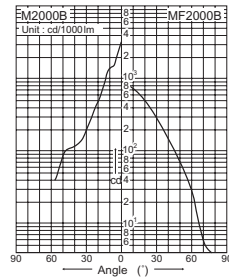
p.23

Beam characteristics

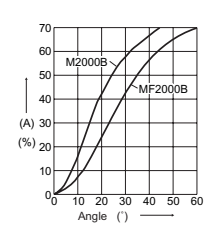
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M2000B    | 175,750*                   | 3,445                                | (1/10)        | 48.5  | (1/10)             | 49.8 |
|           |                            |                                      | (1/20)        | 62.6  | (1/20)             | 58.5 |
| MF2000B   | 171,000*                   | 882                                  | (1/10)        | 95.7  | (1/10)             | 63.0 |
|           |                            |                                      | (1/20)        | 111.0 | (1/20)             | 67.4 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H726DX

Corrosion resistance

see

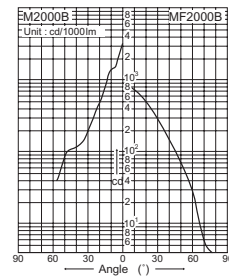
p.23

Beam characteristics

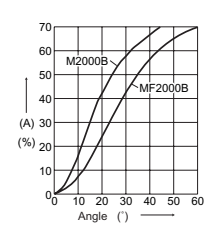
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M2000B    | 175,750*                   | 3,445                                | (1/10)        | 48.5  | (1/10)             | 49.8 |
|           |                            |                                      | (1/20)        | 62.6  | (1/20)             | 58.5 |
| MF2000B   | 171,000*                   | 882                                  | (1/10)        | 95.7  | (1/10)             | 63.0 |
|           |                            |                                      | (1/20)        | 111.0 | (1/20)             | 67.4 |

\* 95% of the initial lumens

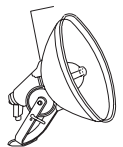
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight S 1000W (1500W)



## H567SX

Anti - corrosion type

see

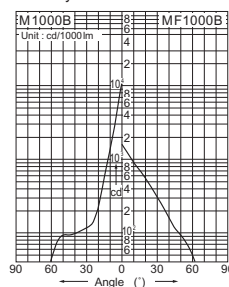
p.24

Beam characteristics

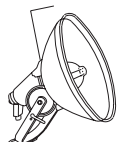
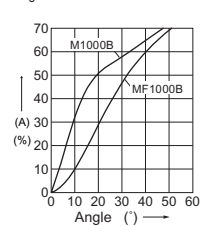
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 10,257                               | (1/10)        | 24.0  | (1/10)             | 38.5 |
|           |                            |                                      | (1/20)        | 32.0  | (1/20)             | 46.0 |
| MF1000B   | 106,400*                   | 1,513                                | (1/10)        | 80.0  | (1/10)             | 61.0 |
|           |                            |                                      | (1/10)        | 106.0 | (1/20)             | 72.5 |
| NH940LX   | 138,000                    | 10,485                               | (1/10)        | 24.0  | (1/10)             | 30.0 |
|           |                            |                                      | (1/20)        | 36.0  | (1/20)             | 41.5 |
| NH940FLX  | 131,000                    | 682                                  | (1/10)        | 108.0 | (1/10)             | 64.5 |
|           |                            |                                      | (1/20)        | 128.0 | (1/20)             | 69.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H566SX

Corrosion resistance

see

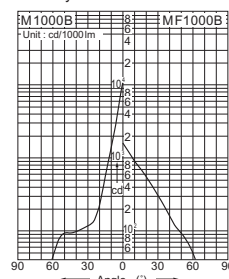
p.24

Beam characteristics

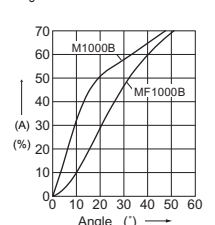
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 10,257                               | (1/10)        | 24.0  | (1/10)             | 38.5 |
|           |                            |                                      | (1/20)        | 32.0  | (1/20)             | 46.0 |
| MF1000B   | 106,400*                   | 1,513                                | (1/10)        | 80.0  | (1/10)             | 61.0 |
|           |                            |                                      | (1/10)        | 106.0 | (1/20)             | 72.5 |
| NH940LX   | 138,000                    | 10,485                               | (1/10)        | 24.0  | (1/10)             | 30.0 |
|           |                            |                                      | (1/20)        | 36.0  | (1/20)             | 41.5 |
| NH940FLX  | 131,000                    | 682                                  | (1/10)        | 108.0 | (1/10)             | 64.5 |
|           |                            |                                      | (1/20)        | 128.0 | (1/20)             | 69.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



## H590SX

Corrosion resistance

see

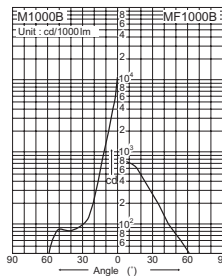
p.24

Beam characteristics

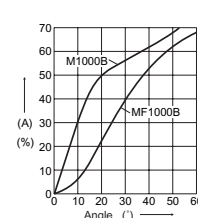
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 11,879                               | (1/10)        | 22.0  | (1/10)             | 34.5 |
|           |                            |                                      | (1/20)        | 30.0  | (1/20)             | 42.0 |
| MF1000B   | 106,400*                   | 830                                  | (1/10)        | 96.0  | (1/10)             | 61.5 |
|           |                            |                                      | (1/20)        | 120.0 | (1/20)             | 67.5 |

\* 95% of the initial lumens

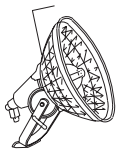
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight D 1000W (1500W)



## H567DX

Anti - corrosion type

see

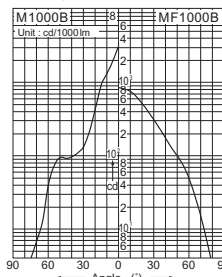
p.25

Beam characteristics

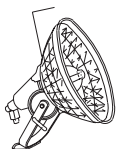
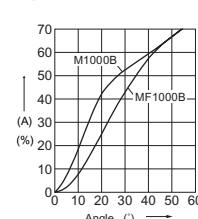
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 3,074                                | (1/10)        | 46.0  | (1/10)             | 45.0 |
|           |                            |                                      | (1/20)        | 56.0  | (1/20)             | 51.0 |
| MF1000B   | 106,400*                   | 828                                  | (1/10)        | 104.0 | (1/10)             | 69.0 |
|           |                            |                                      | (1/20)        | 122.0 | (1/20)             | 73.5 |
| NH940LX   | 138,000                    | 3,062                                | (1/10)        | 48.0  | (1/10)             | 45.0 |
|           |                            |                                      | (1/20)        | 64.0  | (1/20)             | 53.5 |
| NH940FLX  | 131,000                    | 611                                  | (1/10)        | 112.0 | (1/10)             | 65.5 |
|           |                            |                                      | (1/20)        | 130.0 | (1/20)             | 69.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H566DX

Corrosion resistance

see

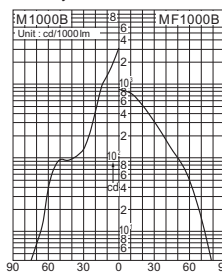
p.25

Beam characteristics

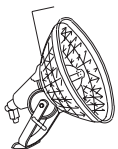
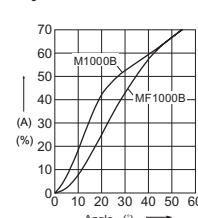
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 3,074                                | (1/10)        | 46.0  | (1/10)             | 45.0 |
|           |                            |                                      | (1/20)        | 56.0  | (1/20)             | 51.0 |
| MF1000B   | 106,400*                   | 828                                  | (1/10)        | 104.0 | (1/10)             | 69.0 |
|           |                            |                                      | (1/20)        | 122.0 | (1/20)             | 73.5 |
| NH940LX   | 138,000                    | 3,062                                | (1/10)        | 48.0  | (1/10)             | 45.0 |
|           |                            |                                      | (1/20)        | 64.0  | (1/20)             | 53.5 |
| NH940FLX  | 131,000                    | 611                                  | (1/10)        | 112.0 | (1/10)             | 65.5 |
|           |                            |                                      | (1/20)        | 130.0 | (1/20)             | 69.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H590DX

Corrosion resistance

see

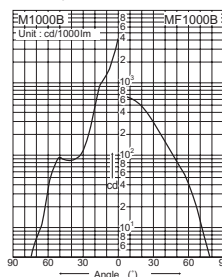
p.25

Beam characteristics

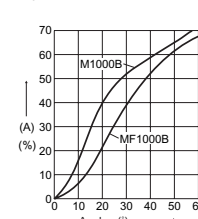
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 3,910                                | (1/10)        | 42.0  | (1/10)             | 43.5 |
|           |                            |                                      | (1/20)        | 50.0  | (1/20)             | 49.0 |
| MF1000B   | 106,400*                   | 665                                  | (1/10)        | 108.0 | (1/10)             | 64.5 |
|           |                            |                                      | (1/20)        | 126.0 | (1/20)             | 68.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight S 1000W



## H573S

Standard type

see

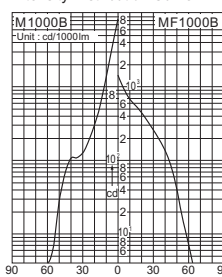
p.26

Beam characteristics

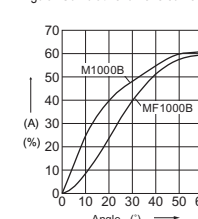
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 8,299                                | (1/10)        | 24.0  | (1/10)             | 29.0 |
|           |                            |                                      | (1/20)        | 34.0  | (1/20)             | 36.0 |
| MF1000B   | 106,400*                   | 1,411                                | (1/10)        | 78.0  | (1/10)             | 51.0 |
|           |                            |                                      | (1/20)        | 92.0  | (1/20)             | 56.0 |
| NH940LX   | 138,000                    | 7,907                                | (1/10)        | 26.0  | (1/10)             | 28.5 |
|           |                            |                                      | (1/20)        | 38.0  | (1/20)             | 38.0 |
| NH940FLX  | 131,000                    | 637                                  | (1/10)        | 94.0  | (1/10)             | 50.5 |
|           |                            |                                      | (1/20)        | 104.0 | (1/20)             | 52.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



## H580SX

Double corrosion resistance

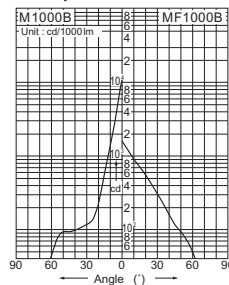
see p.26

Beam characteristics

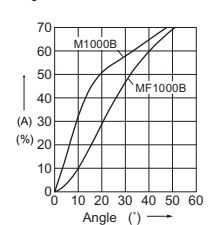
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 10,257                               | (1/10)        | 24.0  | (1/10)             | 38.5 |
|           |                            |                                      | (1/20)        | 32.0  | (1/20)             | 46.0 |
| MF1000B   | 106,400*                   | 1,513                                | (1/10)        | 80.0  | (1/10)             | 61.0 |
|           |                            |                                      | (1/20)        | 106.0 | (1/20)             | 72.5 |
| NH940LX   | 138,000                    | 10,485                               | (1/10)        | 24.0  | (1/10)             | 30.0 |
|           |                            |                                      | (1/20)        | 36.0  | (1/20)             | 41.5 |
| NH940FLX  | 131,000                    | 682                                  | (1/10)        | 108.0 | (1/10)             | 64.5 |
|           |                            |                                      | (1/20)        | 128.0 | (1/20)             | 69.0 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H565SX

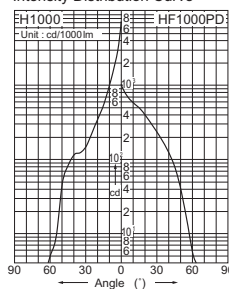
Vibration proof type

see p.26

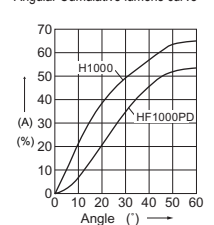
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |      | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|------|
| H1000     | 58,000                     | 7,450                                | (1/10)        | 26.0 | (1/10)             | 27.5 |
|           |                            |                                      | (1/20)        | 38.0 | (1/20)             | 38.0 |
| HF1000PD  | 64,000                     | 1,009                                | (1/10)        | 84.0 | (1/10)             | 47.5 |
|           |                            |                                      | (1/20)        | 96.0 | (1/20)             | 51.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight D 1000W



## H573D

[HPJ1M-660~1K(M.NH)]  
[HPJ1W-660~1K(M.NH)]  
Standard type

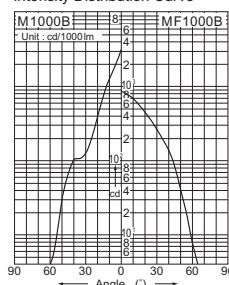
see p.27

Beam characteristics

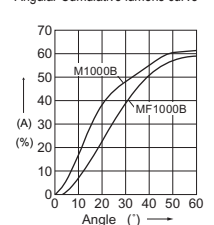
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M1000B    | 109,250*                   | 3,120                                | (1/10)        | 44.0  | (1/10)             | 41.0 |
|           |                            |                                      | (1/20)        | 56.0  | (1/20)             | 47.0 |
| MF1000B   | 106,400*                   | 865                                  | (1/10)        | 88.0  | (1/10)             | 55.0 |
|           |                            |                                      | (1/20)        | 98.0  | (1/20)             | 57.5 |
| NH940LX   | 138,000                    | 3,186                                | (1/10)        | 46.0  | (1/10)             | 41.0 |
|           |                            |                                      | (1/20)        | 58.0  | (1/20)             | 48.0 |
| NH940FLX  | 131,000                    | 577                                  | (1/10)        | 96.0  | (1/10)             | 51.5 |
|           |                            |                                      | (1/20)        | 106.0 | (1/20)             | 53.5 |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



## H565DX

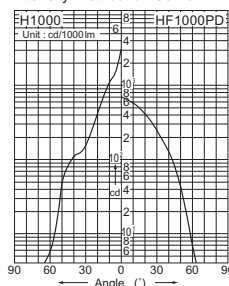
Vibration proof type

see p.27

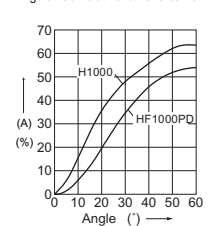
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| H1000     | 58,000                     | 2,986                                | (1/10)        | 46.0  | (1/10)             | 39.5 |
|           |                            |                                      | (1/20)        | 62.0  | (1/20)             | 48.5 |
| HF1000PD  | 64,000                     | 690                                  | (1/10)        | 92.0  | (1/10)             | 50.0 |
|           |                            |                                      | (1/20)        | 102.0 | (1/20)             | 52.5 |

Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight S 400W



## H367SX

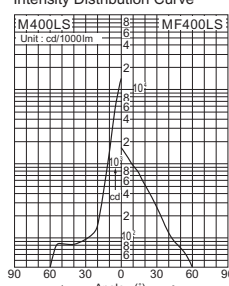
Anti - corrosion type

see p.28

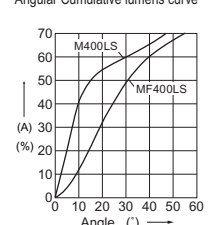
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 13,593                               | (1/10)        | 20.0  | (1/10)             | 41.5 |
|           |                            |                                      | (1/20)        | 26.0  | (1/20)             | 48.0 |
| MF400LS/U | 38,000                     | 1,668                                | (1/10)        | 64.0  | (1/10)             | 53.5 |
|           |                            |                                      | (1/20)        | 92.0  | (1/20)             | 64.5 |
| NH360LX   | 50,000                     | 12,415                               | (1/10)        | 22.0  | (1/10)             | 31.5 |
|           |                            |                                      | (1/20)        | 30.0  | (1/20)             | 41.5 |
| NH360FLX  | 46,000                     | 1,121                                | (1/10)        | 80.0  | (1/10)             | 54.5 |
|           |                            |                                      | (1/20)        | 110.0 | (1/20)             | 64.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



## H366SX

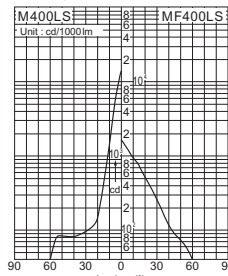
Corrosion resistance

see **p.28**

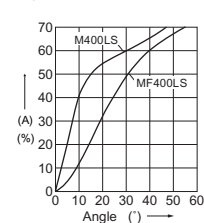
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 13,593                               | (1/10)        | 20.0  | (1/10)             | 41.5 |
|           |                            |                                      | (1/20)        | 26.0  | (1/20)             | 48.0 |
| MF400LS/U | 38,000                     | 1,668                                | (1/10)        | 64.0  | (1/10)             | 53.5 |
|           |                            |                                      | (1/20)        | 92.0  | (1/20)             | 64.5 |
| NH360LX   | 50,000                     | 12,415                               | (1/10)        | 22.0  | (1/10)             | 31.5 |
|           |                            |                                      | (1/20)        | 30.0  | (1/20)             | 41.5 |
| NH360FLX  | 46,000                     | 1,121                                | (1/10)        | 80.0  | (1/10)             | 54.5 |
|           |                            |                                      | (1/20)        | 110.0 | (1/20)             | 64.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



## H367SX/TA

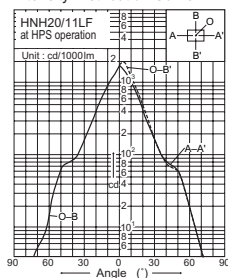
Anti - corrosion resistance

see **p.28**

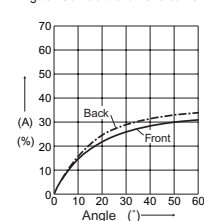
Beam characteristics

| Lamp type                      | Lamp lumens<br>( $\ell$ m) | Max. intensity<br>(cd/1000 $\ell$ m) |
|--------------------------------|----------------------------|--------------------------------------|
| HNH20/11LF<br>at HPS operation | 8,000                      | 1,843                                |

Intensity Distribution Curve



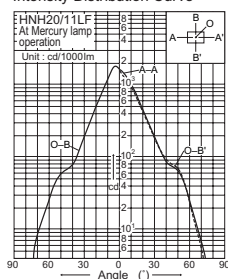
Angular Cumulative lumens curve



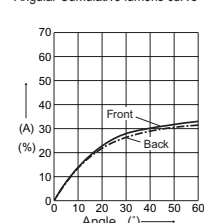
Beam characteristics

| Lamp type                               | Lamp lumens<br>( $\ell$ m) | Max. intensity<br>(cd/1000 $\ell$ m) |
|-----------------------------------------|----------------------------|--------------------------------------|
| HNH20/11LF<br>at Mercury lamp operation | 8,000                      | 1,735                                |

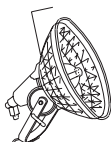
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight D 400W



## H367DX

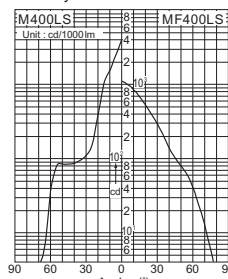
Anti - corrosion resistance

see **p.29**

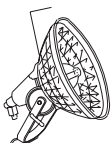
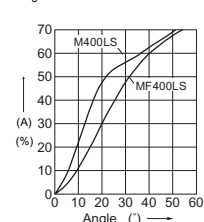
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 3,954                                | (1/10)        | 40.0  | (1/10)             | 47.0 |
|           |                            |                                      | (1/20)        | 48.0  | (1/20)             | 52.0 |
| MF400LS/U | 38,000                     | 1,071                                | (1/10)        | 84.0  | (1/10)             | 61.5 |
|           |                            |                                      | (1/20)        | 112.0 | (1/20)             | 70.0 |
| NH360LS   | 50,000                     | 4,332                                | (1/10)        | 40.0  | (1/10)             | 40.5 |
|           |                            |                                      | (1/20)        | 50.0  | (1/20)             | 47.0 |
| NH360FLS  | 46,000                     | 886                                  | (1/10)        | 90.0  | (1/10)             | 58.0 |
|           |                            |                                      | (1/20)        | 118.0 | (1/20)             | 66.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



## H366DX

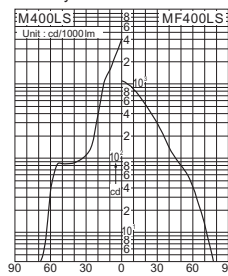
Corrosion resistance

see **p.29**

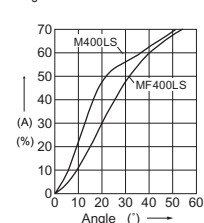
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 3,954                                | (1/10)        | 40.0  | (1/10)             | 47.0 |
|           |                            |                                      | (1/20)        | 48.0  | (1/20)             | 52.0 |
| MF400LS/U | 38,000                     | 1,071                                | (1/10)        | 84.0  | (1/10)             | 61.5 |
|           |                            |                                      | (1/20)        | 112.0 | (1/20)             | 70.0 |
| NH360LX   | 50,000                     | 4,332                                | (1/10)        | 40.0  | (1/10)             | 40.5 |
|           |                            |                                      | (1/20)        | 50.0  | (1/20)             | 47.0 |
| NH360FLX  | 46,000                     | 886                                  | (1/10)        | 90.0  | (1/10)             | 58.0 |
|           |                            |                                      | (1/20)        | 118.0 | (1/20)             | 66.0 |

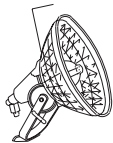
Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



## H367DX/TA

Anti corrosion resistance

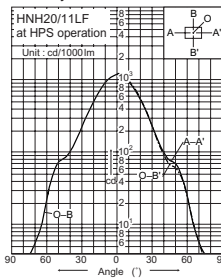
see **p.29**

Beam characteristics

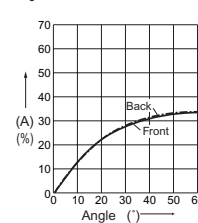
| Lamp type                      | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        | Beam efficiency(%) |        |
|--------------------------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|                                |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| HNH20/11LF<br>at HPS operation | 8,000                      | 1,169                                | V75           | V102   | 54.0               | 63.0   |
|                                |                            |                                      | H76           | H104   |                    |        |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve

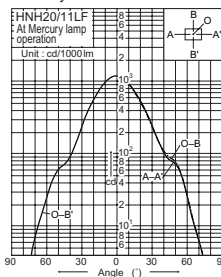


Beam characteristics

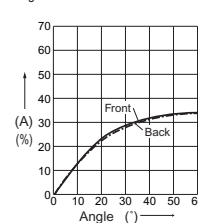
| Lamp type                         | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        | Beam efficiency(%) |        |
|-----------------------------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|                                   |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| HNH20/11LF<br>at H lamp operation | 8,000                      | 1,137                                | V77           | V105   | 54.5               | 64.5   |
|                                   |                            |                                      | H78           | H108   |                    |        |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight S 400W



## H373S

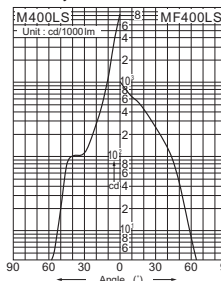
[HPJ1N-180~400(M.NH)]  
Standard type

see **p.30**

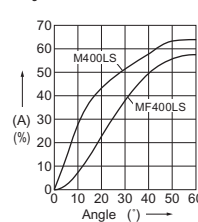
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        | Beam efficiency(%) |        |
|-----------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|           |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| M400LS/U  | 40,000                     | 8,172                                | (1/10)        | 24.0   | (1/10)             | 33.0   |
|           |                            |                                      | (1/20)        | 34.0   | (1/20)             | 40.0   |
| MF400LS/U | 38,000                     | 952                                  | (1/10)        | 88.0   | (1/10)             | 52.5   |
|           |                            |                                      | (1/20)        | 98.0   | (1/20)             | 55.5   |
| NH360LX   | 50,000                     | 8,158                                | (1/10)        | 22.0   | (1/10)             | 23.0   |
|           |                            |                                      | (1/20)        | 36.0   | (1/20)             | 32.5   |
| NH360FLX  | 46,000                     | 679                                  | (1/10)        | 94.0   | (1/10)             | 49.0   |
|           |                            |                                      | (1/20)        | 104.0  | (1/20)             | 51.0   |

Intensity Distribution Curve



Angular Cumulative lumens curve



## H380SX

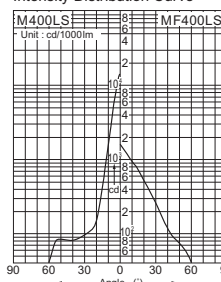
Double corrosion resistance

see **p.30**

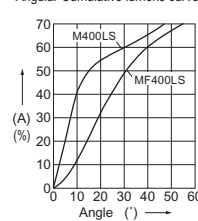
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        | Beam efficiency(%) |        |
|-----------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|           |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| M400LS/U  | 40,000                     | 13,593                               | (1/10)        | 20.0   | (1/10)             | 41.5   |
|           |                            |                                      | (1/20)        | 26.0   | (1/20)             | 48.0   |
| MF400LS/U | 38,000                     | 1,668                                | (1/10)        | 64.0   | (1/10)             | 53.5   |
|           |                            |                                      | (1/20)        | 92.0   | (1/20)             | 64.5   |
| NH360LX   | 50,000                     | 12,415                               | (1/10)        | 22.0   | (1/10)             | 31.5   |
|           |                            |                                      | (1/20)        | 30.0   | (1/20)             | 41.5   |
| NH360FLX  | 46,000                     | 1,121                                | (1/10)        | 80.0   | (1/10)             | 54.5   |
|           |                            |                                      | (1/20)        | 110.0  | (1/20)             | 64.0   |

Intensity Distribution Curve



Angular Cumulative lumens curve



## H365SX

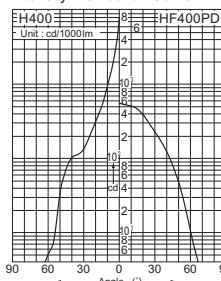
Vibration proof type

see **p.30**

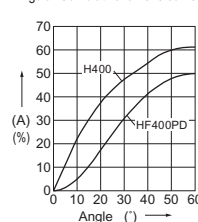
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        | Beam efficiency(%) |        |
|-----------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|           |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| H400      | 21,000                     | 8,787                                | (1/10)        | 22.0   | (1/10)             | 24.0   |
|           |                            |                                      | (1/20)        | 34.0   | (1/20)             | 33.0   |
| HF400PD   | 24,000                     | 534                                  | (1/10)        | 98.0   | (1/10)             | 47.5   |
|           |                            |                                      | (1/20)        | 108.0  | (1/20)             | 49.0   |

Intensity Distribution Curve

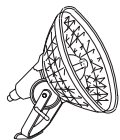


Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)

# EYE Floodlight D 400W



## H373D

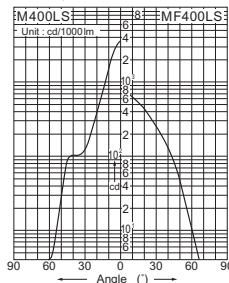
[HPJ1M-180~400K(M.NH)]  
[HPJ1W-180~400K(M.NH)]  
Standard type

see p.31

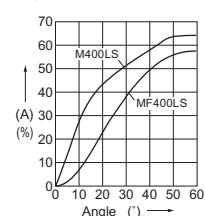
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 3,454                                | (1/10)        | 38.0  | (1/10)             | 40.5 |
|           |                            |                                      | (1/20)        | 52.0  | (1/20)             | 46.5 |
| MF400LS/U | 38,000                     | 772                                  | (1/10)        | 92.0  | (1/10)             | 54.5 |
|           |                            |                                      | (1/20)        | 104.0 | (1/20)             | 57.0 |
| NH360LX   | 50,000                     | 3,052                                | (1/10)        | 44.0  | (1/10)             | 37.5 |
|           |                            |                                      | (1/20)        | 58.0  | (1/20)             | 45.0 |
| NH360FLX  | 46,000                     | 594                                  | (1/10)        | 96.0  | (1/10)             | 50.0 |
|           |                            |                                      | (1/20)        | 108.0 | (1/20)             | 52.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



## H365DX

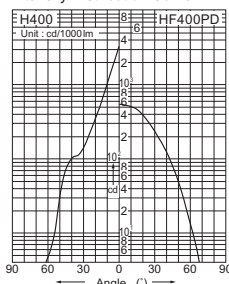
Vibration proof type

see p.31

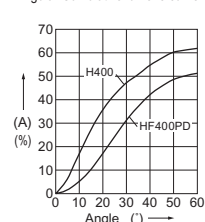
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| H400      | 21,000                     | 3,207                                | (1/10)        | 44.0  | (1/10)             | 38.5 |
|           |                            |                                      | (1/20)        | 58.0  | (1/20)             | 46.0 |
| HF400PD   | 24,000                     | 505                                  | (1/10)        | 100.0 | (1/10)             | 48.5 |
|           |                            |                                      | (1/20)        | 110.0 | (1/20)             | 50.0 |

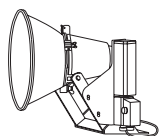
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight S 400W • D 400W



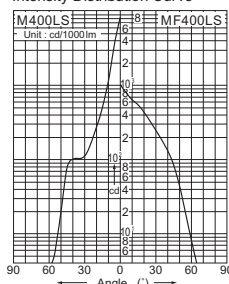
H373SB4CCA(50Hz)  
H373SB4CCB(60Hz)  
With ballast

see p.32

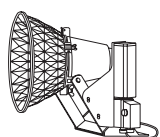
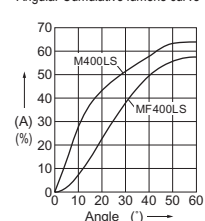
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 8,172                                | (1/10)        | 24.0  | (1/10)             | 33.0 |
|           |                            |                                      | (1/20)        | 34.0  | (1/20)             | 40.0 |
| MF400LS/U | 38,000                     | 952                                  | (1/10)        | 88.0  | (1/10)             | 52.5 |
|           |                            |                                      | (1/20)        | 98.0  | (1/20)             | 55.5 |
| NH360LX   | 50,000                     | 8,158                                | (1/10)        | 22.0  | (1/10)             | 23.0 |
|           |                            |                                      | (1/20)        | 36.0  | (1/20)             | 32.5 |
| NH360FLX  | 46,000                     | 679                                  | (1/10)        | 94.0  | (1/10)             | 49.0 |
|           |                            |                                      | (1/20)        | 104.0 | (1/20)             | 51.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



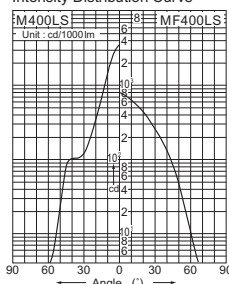
H373DB4CCA(50Hz)  
H373DB4CCB(60Hz)  
With ballast

see p.32

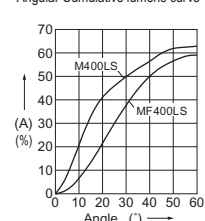
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |      |
|-----------|----------------------------|--------------------------------------|---------------|-------|--------------------|------|
| M400LS/U  | 40,000                     | 3,454                                | (1/10)        | 38.0  | (1/10)             | 40.5 |
|           |                            |                                      | (1/20)        | 52.0  | (1/20)             | 46.5 |
| MF400LS/U | 38,000                     | 772                                  | (1/10)        | 92.0  | (1/10)             | 54.5 |
|           |                            |                                      | (1/20)        | 104.0 | (1/20)             | 57.0 |
| NH360LX   | 50,000                     | 3,052                                | (1/10)        | 44.0  | (1/10)             | 37.5 |
|           |                            |                                      | (1/20)        | 58.0  | (1/20)             | 45.0 |
| NH360FLX  | 46,000                     | 594                                  | (1/10)        | 96.0  | (1/10)             | 50.0 |
|           |                            |                                      | (1/20)        | 108.0 | (1/20)             | 52.0 |

Intensity Distribution Curve

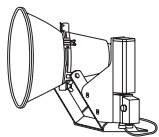


Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)

# EYE Floodlight S 250W • D 250W



**H373SB2.5CCA(50Hz)**  
**H373SB2.5CCB(60Hz)**  
 With ballast

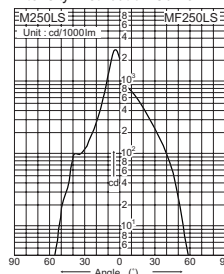
see p.33

Beam characteristics

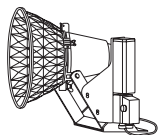
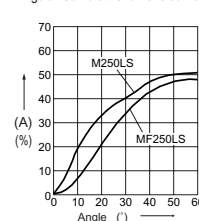
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |      | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|
| M250LS/U  | 20,000*                    | 2,587                                | —             |      | —                  |
| MF250LS/U | 19,000*                    | 882                                  | (1/10)        | 80.0 | (1/10) 43.5        |
|           |                            |                                      | (1/20)        | 92.0 | (1/20) 46.0        |
| NH220LX   | 28,000                     | 10,697                               | (1/10)        | 18.0 | (1/10) 23.0        |
|           |                            |                                      | (1/20)        | 28.0 | (1/20) 30.0        |
| NH220FLX  | 25,500                     | 1,253                                | (1/10)        | 68.0 | (1/10) 37.5        |
|           |                            |                                      | (1/20)        | 84.0 | (1/20) 42.0        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



**H373DB2.5CCA(50Hz)**  
**H373DB2.5CCB(60Hz)**  
 With ballast

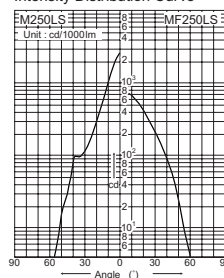
see p.33

Beam characteristics

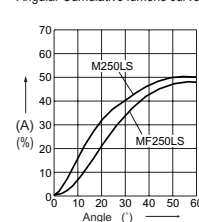
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |      | Beam efficiency(%) |
|-----------|----------------------------|--------------------------------------|---------------|------|--------------------|
| M250LS/U  | 20,000*                    | 2,654                                | (1/10)        | 42.0 | (1/10) 33.0        |
|           |                            |                                      | (1/20)        | 56.0 | (1/20) 39.0        |
| MF250LS/U | 19,000*                    | 764                                  | (1/10)        | 82.0 | (1/10) 43.5        |
|           |                            |                                      | (1/20)        | 94.0 | (1/20) 46.0        |
| NH220LX   | 28,000                     | 3,639                                | (1/10)        | 36.0 | (1/10) 32.5        |
|           |                            |                                      | (1/20)        | 46.0 | (1/20) 38.0        |
| NH220FLX  | 25,500                     | 873                                  | (1/10)        | 76.0 | (1/10) 41.0        |
|           |                            |                                      | (1/20)        | 90.0 | (1/20) 43.5        |

\* 95% of the initial lumens

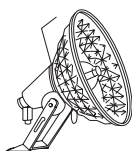
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE Floodlight M 1500W



**H567MGX**  
 Anti corrosion resistance

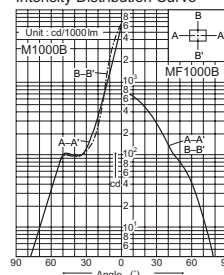
see p.34

Beam characteristics

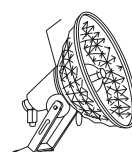
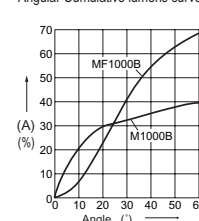
| Lamp type   | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |
|-------------|----------------------------|--------------------------------------|---------------|-------|--------------------|
| M1000B/BUH  | 109,250*                   | 6,430                                | (1/10)        | 34.0  | (1/10) 47.0        |
|             |                            |                                      | (1/20)        | 38.0  | (1/20) 49.0        |
| MF1000B/BUH | 106,400*                   | 777                                  | (1/10)        | 100.0 | (1/10) 64.0        |
|             |                            |                                      | (1/20)        | 122.0 | (1/20) 69.0        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



**H566MGX**  
 Corrosion resistance

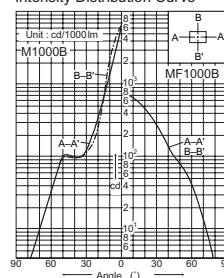
see p.34

Beam characteristics

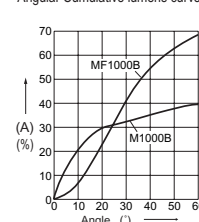
| Lamp type   | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |
|-------------|----------------------------|--------------------------------------|---------------|-------|--------------------|
| M1000B/BUH  | 109,250*                   | 6,430                                | (1/10)        | 34.0  | (1/10) 47.0        |
|             |                            |                                      | (1/20)        | 38.0  | (1/20) 49.0        |
| MF1000B/BUH | 106,400*                   | 777                                  | (1/10)        | 100.0 | (1/10) 64.0        |
|             |                            |                                      | (1/20)        | 122.0 | (1/20) 69.0        |

\* 95% of the initial lumens

Intensity Distribution Curve



Angular Cumulative lumens curve



# Double-coil type Halogen lamp Floodlight



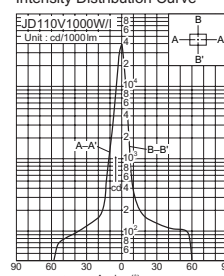
**JDF1003SX**  
**JDF1002SX**

see p.36

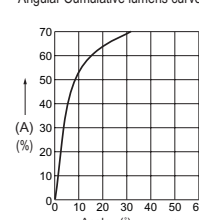
Beam characteristics

| Lamp type   | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |      |
|-------------|----------------------------|--------------------------------------|---------------|------|
| JD110V1000W | 20,000                     | 37,800                               | (1/10)        | 14.0 |
|             |                            |                                      | (1/20)        | 18.0 |
|             |                            |                                      | (1/10)        | 10.0 |
|             |                            |                                      | (1/20)        | 12.0 |

Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



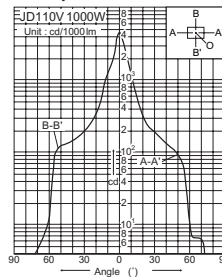
## JDF1003DX JDF1002DX

see **p.36**

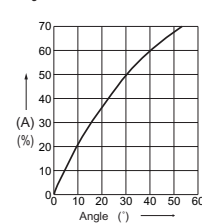
Beam characteristics

| Lamp type   | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam efficiency(%)<br>(1/20) |
|-------------|----------------------------|--------------------------------------|-------------------------|------------------------------|
| JD110V1000W | 20,000                     | 4,320                                | A-A' 34.0               | A-A' 52.0                    |
|             |                            |                                      | B-B' 36.0               | B-B' 54.0                    |

Intensity Distribution Curve



Angular Cumulative lumens curve



## EYE MULTI-FOCUS Floodlight



### H571DX

Anti corrosion resistance

see **p.37**

Beam characteristics

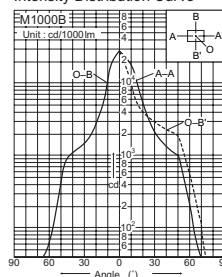
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam efficiency (%) |
|-----------|----------------------------|--------------------------------------|-------------------------|---------------------|
| M1000B    | 109,250*                   | 2,780                                | (V 1/10) 53             | 49.0                |
|           |                            |                                      | (H 1/10) 54             |                     |
|           |                            |                                      | (V 1/20) 86             | 62.5                |
|           |                            |                                      | (H 1/20) 74             |                     |
| MF1000B   | 106,400                    | 640                                  | (V 1/10) 109            | 70.0                |
|           |                            |                                      | (H 1/10) 108            |                     |
|           |                            |                                      | (V 1/20) 123            | 73.0                |
|           |                            |                                      | (H 1/20) 122            |                     |

\* 95% of the initial lumens V : Vertical, H : Horizontal

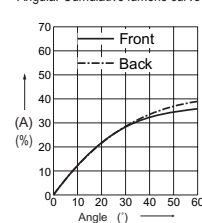
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam efficiency (%) |
|-----------|----------------------------|--------------------------------------|-------------------------|---------------------|
| NH940LX   | 138,000                    | 2,336                                | (V 1/10) 56             | 51.0                |
|           |                            |                                      | (H 1/10) 66             |                     |
|           |                            |                                      | (V 1/20) 93             | 67.5                |
|           |                            |                                      | (H 1/20) 86             |                     |
| NH940FLX  | 131,000                    | 620                                  | (V 1/10) 111            | 62.5                |
|           |                            |                                      | (H 1/10) 106            |                     |
|           |                            |                                      | (V 1/20) 124            | 66.0                |
|           |                            |                                      | (H 1/20) 122            |                     |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



### H570DX

Corrosion resistance

see **p.37**

Beam characteristics

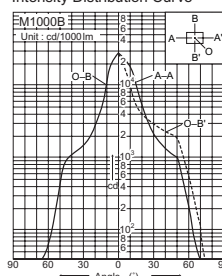
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam efficiency (%) |
|-----------|----------------------------|--------------------------------------|-------------------------|---------------------|
| M1000B    | 109,250*                   | 2,780                                | (V 1/10) 53             | 49.0                |
|           |                            |                                      | (H 1/10) 54             |                     |
|           |                            |                                      | (V 1/20) 86             | 62.5                |
|           |                            |                                      | (H 1/20) 74             |                     |
| MF1000B   | 106,400                    | 640                                  | (V 1/10) 109            | 70.0                |
|           |                            |                                      | (H 1/10) 108            |                     |
|           |                            |                                      | (V 1/20) 123            | 73.0                |
|           |                            |                                      | (H 1/20) 122            |                     |

\* 95% of the initial lumens V : Vertical, H : Horizontal

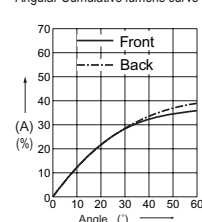
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam efficiency (%) |
|-----------|----------------------------|--------------------------------------|-------------------------|---------------------|
| NH940LX   | 138,000                    | 2,336                                | (V 1/10) 56             | 51.0                |
|           |                            |                                      | (H 1/10) 66             |                     |
|           |                            |                                      | (V 1/20) 93             | 67.5                |
|           |                            |                                      | (H 1/20) 86             |                     |
| NH940FLX  | 131,000                    | 620                                  | (V 1/10) 111            | 62.5                |
|           |                            |                                      | (H 1/10) 106            |                     |
|           |                            |                                      | (V 1/20) 124            | 66.0                |
|           |                            |                                      | (H 1/20) 122            |                     |

V : Vertical, H : Horizontal

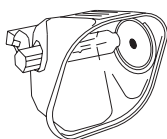
Intensity Distribution Curve



Angular Cumulative lumens curve



## EYE MULTI-SPACE Floodlight 2000W



### HOF211X

Standard type

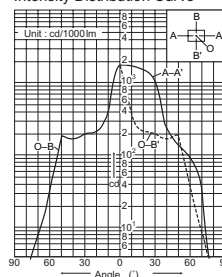
see **p.38**

Beam characteristics

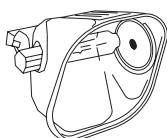
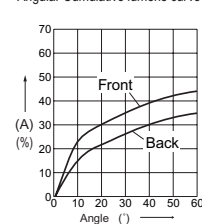
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam angle(')<br>(1/20) | Beam efficiency(%)<br>(1/10) | Beam efficiency(%)<br>(1/20) |
|------------|----------------------------|--------------------------------------|-------------------------|-------------------------|------------------------------|------------------------------|
| MT2000B/BH | 200,000                    | 1,765                                | V87                     | V109                    | 58.8                         | 75.5                         |
|            |                            |                                      | H80                     | H112                    |                              |                              |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



### HOF212X

Anti corrosion resistance

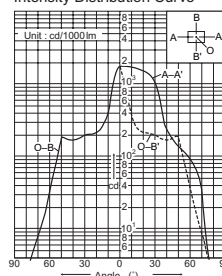
see **p.38**

Beam characteristics

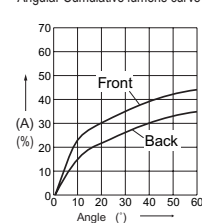
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(')<br>(1/10) | Beam angle(')<br>(1/20) | Beam efficiency(%)<br>(1/10) | Beam efficiency(%)<br>(1/20) |
|------------|----------------------------|--------------------------------------|-------------------------|-------------------------|------------------------------|------------------------------|
| MT2000B/BH | 200,000                    | 1,765                                | V87                     | V109                    | 58.5                         | 75.5                         |
|            |                            |                                      | H80                     | H112                    |                              |                              |

V : Vertical, H : Horizontal

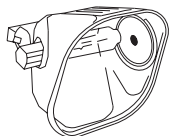
Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



## HOF201X

Standard type

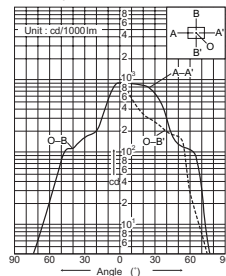
see p.39

Beam characteristics

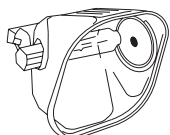
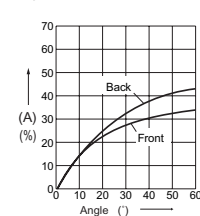
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |        | Beam efficiency(%) |        |
|------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|            |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| MT2000B/BH | 220,000                    | 854                                  | V104          | V113   | 72.0               | 74.5   |
|            |                            |                                      | H130          | H138   |                    |        |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



## HOF202X

Corrosion resistance

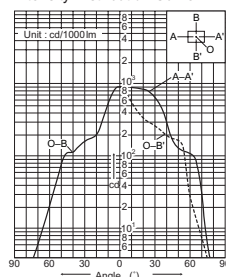
see p.39

Beam characteristics

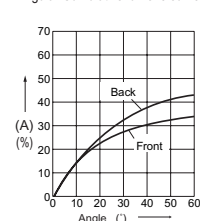
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |        | Beam efficiency(%) |        |
|------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|            |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| MT2000B/BH | 220,000                    | 854                                  | V104          | V113   | 72.0               | 74.5   |
|            |                            |                                      | H130          | H138   |                    |        |

V : Vertical, H : Horizontal

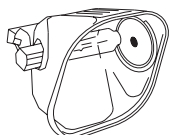
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE MULTI-SPACE Floodlight 1500W



## HOF122X

Standard type

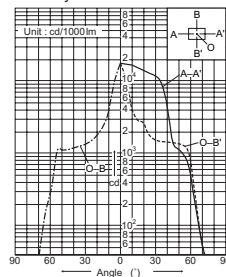
see p.40

Beam characteristics

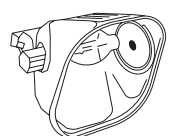
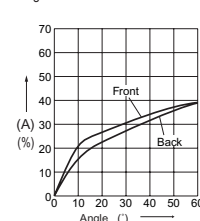
| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |        | Beam efficiency(%) |        |
|--------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|              |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| MT1500A-D/BH | 125,000                    | 1,741                                | V44           | V116   | 49.5               | 77.5   |
|              |                            |                                      | H88           | H112   |                    |        |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



## HOF104X

Corrosion resistance

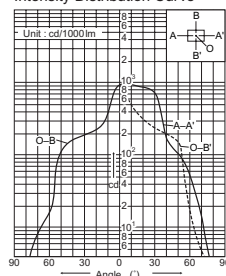
see p.40

Beam characteristics

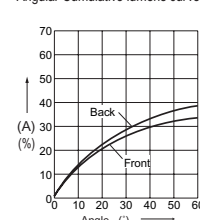
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |        | Beam efficiency(%) |        |
|------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|            |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| M1000B/BUH | 109,250*                   | 889                                  | V106          | V115   | 68.0               | 70.0   |
|            |                            |                                      | H106          | H122   |                    |        |

\* 95% of the initial lumens V : Vertical, H : Horizontal

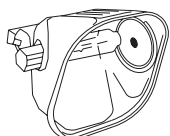
Intensity Distribution Curve



Angular Cumulative lumens curve



# EYE MULTI-SPACE Floodlight 1000W



## HOF121X

Standard type

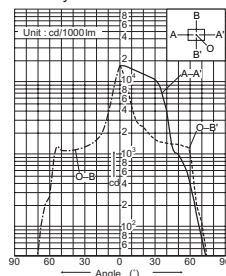
see p.40

Beam characteristics

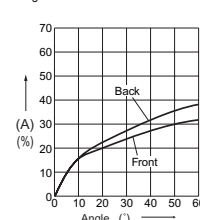
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(') |        | Beam efficiency(%) |        |
|------------|----------------------------|--------------------------------------|---------------|--------|--------------------|--------|
|            |                            |                                      | (1/10)        | (1/20) | (1/10)             | (1/20) |
| MT1000B/BH | 115,000                    | 1,657                                | V48           | V117   | 46.5               | 70.5   |
|            |                            |                                      | H88           | H104   |                    |        |

V : Vertical, H : Horizontal

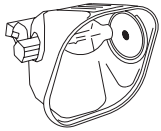
Intensity Distribution Curve



Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)



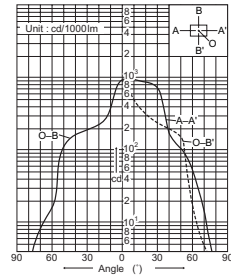
**HOF103X**  
Corrosion resistance  
see p.40

Beam characteristics

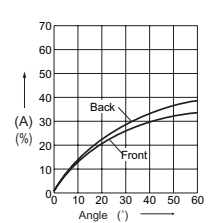
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°)<br>(1/10) | Beam angle(°)<br>(1/20) | Beam efficiency(%)<br>(1/10) | Beam efficiency(%)<br>(1/20) |
|------------|----------------------------|--------------------------------------|-------------------------|-------------------------|------------------------------|------------------------------|
| M1000B/BUH | 109,250*                   | 889                                  | V106<br>H106            | V115<br>H122            | 68.0                         | 70.0                         |

\* 95% of the initial lumens V : Vertical, H : Horizontal

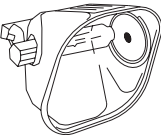
Intensity Distribution Curve



Angular Cumulative lumens curve



## EYE MULTI-SPACE Floodlight 400W

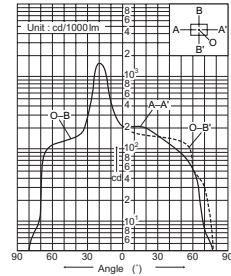


**HOF401X**  
Standard type  
see p.41

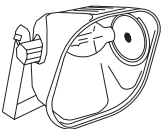
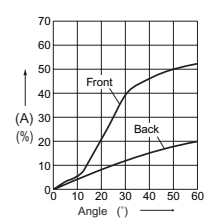
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) |
|-----------|----------------------------|
| M400LS/U  | 35,000                     |

Intensity Distribution Curve



Angular Cumulative lumens curve

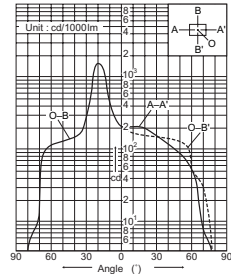


**HOF402X**  
Corrosion resistance  
see p.41

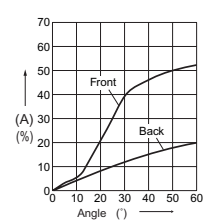
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) |
|-----------|----------------------------|
| M400LS/U  | 35,000                     |

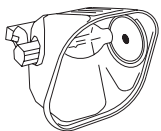
Intensity Distribution Curve



Angular Cumulative lumens curve



## EYE MULTI-SPACE Floodlight 400W



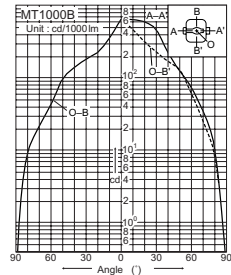
**HPF104PX**  
Corrosion resistance  
see p.42

Beam characteristics

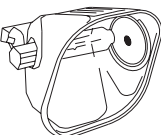
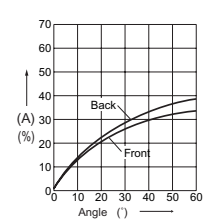
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°)<br>(1/10) | Beam angle(°)<br>(1/20) | Beam efficiency(%)<br>(1/10) | Beam efficiency(%)<br>(1/20) |
|------------|----------------------------|--------------------------------------|-------------------------|-------------------------|------------------------------|------------------------------|
| MT1000B/BH | 115,000                    | 651                                  | V124<br>H114            | V132<br>H142            | 65.5                         | 69.0                         |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve

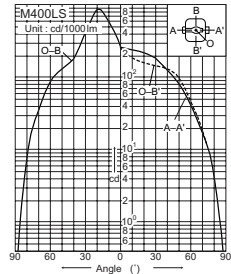


**HPF402PX**  
Corrosion resistance  
see p.42

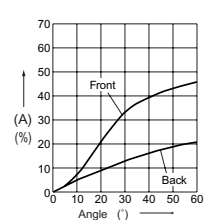
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) |
|-----------|----------------------------|
| M400LS/U  | 35,000                     |

Intensity Distribution Curve

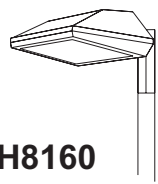


Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)

## EYE TENNISTER 1000W



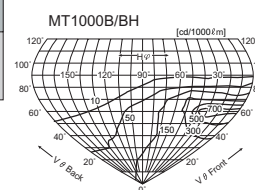
**H8160**

see p.44

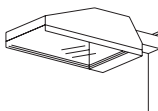
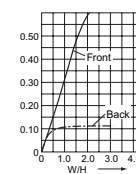
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|------------|----------------------------|----------------------------------------------------|
| MT1000B/BH | 115,000                    | 80.0                                               |

Intensity Distribution Curve



Utilization factor curve



**H8151A(B)**

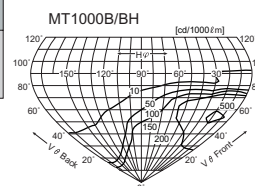
Built-in ballast type

see p.44

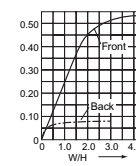
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|------------|----------------------------|----------------------------------------------------|
| MT1000B/BH | 115,000                    | 61.5                                               |

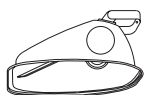
Intensity Distribution Curve



Utilization factor curve



## EYE AREA STAR 400W



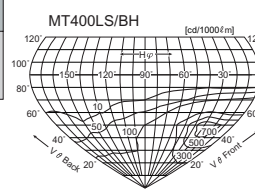
**H8420**

see p.45

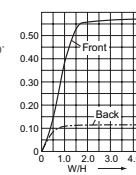
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|------------|----------------------------|--------------------------------------|----------------------------------------------------|
| MT400LS/BH | 39,000                     | 835                                  | 71.5                                               |

Intensity Distribution Curve



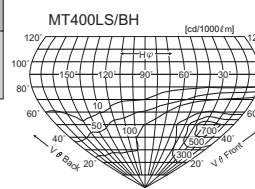
Utilization factor curve



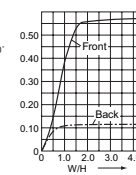
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|------------|----------------------------|--------------------------------------|----------------------------------------------------|
| MT400LS/BH | 39,000                     | 835                                  | 71.5                                               |

Intensity Distribution Curve



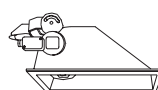
Utilization factor curve



**H8421-0**

see p.45

## EYE AREA STAR 1000W



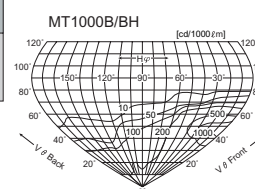
**H8120**

see p.45

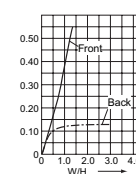
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|------------|----------------------------|--------------------------------------|----------------------------------------------------|
| MT1000B/BH | 115,000                    | 1,000                                | 80.0                                               |

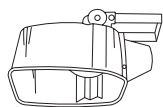
Intensity Distribution Curve



Utilization factor curve



# EYE AREA LIGHT 1000W



## H8104

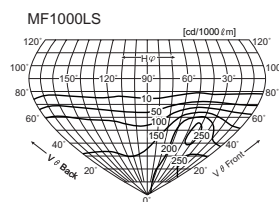
With glass protector, free arm

see p.46

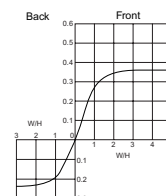
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%)) |
|-----------|----------------------------|---------------------------------------------------|
| MF1000LS  | 87,000                     | 65.0                                              |

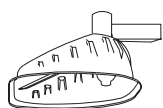
Intensity Distribution Curve



Utilization factor curve



# EYE AREA LIGHT 400W



## H801

Fixed arm type

## H802

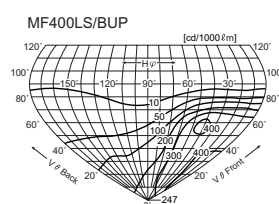
Free arm type

see p.47

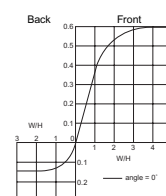
Beam characteristics

| Lamp type   | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%)) |
|-------------|----------------------------|---------------------------------------------------|
| MF400LS/BUP | 39,000                     | 75.0                                              |

Intensity Distribution Curve



Utilization factor curve



## H803

With glass protector, fixed arm

## H804

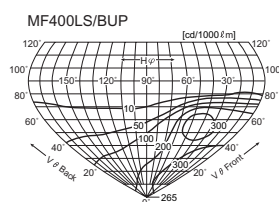
With glass protector, free arm

see p.47

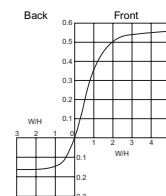
Beam characteristics

| Lamp type   | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%)) |
|-------------|----------------------------|---------------------------------------------------|
| MF400LS/BUP | 39,000                     | 71.5                                              |

Intensity Distribution Curve



Utilization factor curve





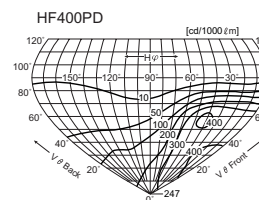
## SAH811

see p.47

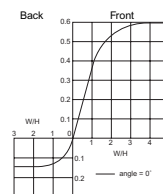
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|-----------|----------------------------|----------------------------------------------------|
| HF400PD   | 24,000                     | 75.0                                               |

Intensity Distribution Curve



Utilization factor curve



## H805

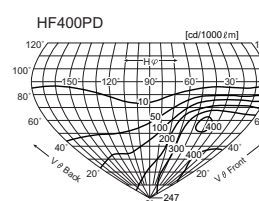
factory

see p.47

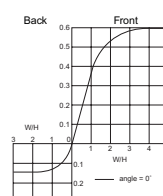
Beam characteristics

| Lamp type | Lamp lumens<br>( $\ell$ m) | Fixture efficiency(%)<br>(Light output ratio (%) ) |
|-----------|----------------------------|----------------------------------------------------|
| HF400PD   | 24,000                     | 75.0                                               |

Intensity Distribution Curve



Utilization factor curve



# Tungsten Halogen Floodlight 1000W • 500W



## JF1001M

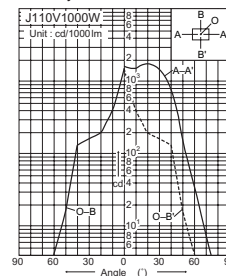
see p.48

Beam characteristics

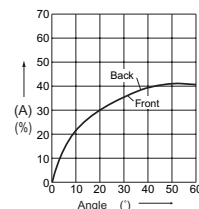
| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°)<br>(1/10) (1/20) | Beam efficiency(%)<br>(1/10) (1/20) |
|------------|----------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| J110V1000W | 21,000                     | 1,703                                | V62 V86<br>H98 H108            | 66.0 76.0                           |

V : Vertical, H : Horizontal

Intensity Distribution Curve



Angular Cumulative lumens curve



## JF0501M

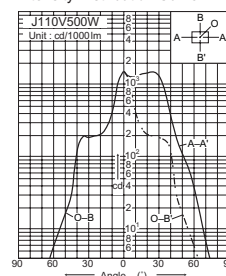
see p.48

Beam characteristics

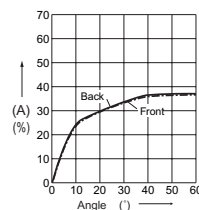
| Lamp type | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°)<br>(1/10) (1/20) | Beam efficiency(%)<br>(1/10) (1/20) |
|-----------|----------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| J110V500W | 10,000                     | 1,461                                | V74 V84<br>H94 H100            | 65.5 71.0                           |

V : Vertical, H : Horizontal

Intensity Distribution Curve

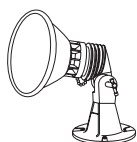


Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)

# EYE Halogen light <500A series> 500W



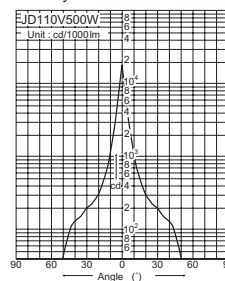
**JAN0**

see p.50

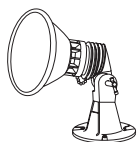
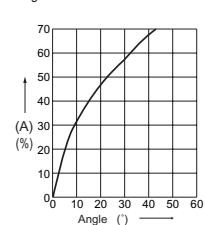
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |      | Beam efficiency(%) |
|------------|----------------------------|--------------------------------------|---------------|------|--------------------|
| JD110V500W | 9,500                      | 17,624                               | (1/10)        | 16.0 | (1/10) 27.5        |
|            |                            |                                      | (1/20)        | 22.0 | (1/20) 33.5        |

Intensity Distribution Curve



Angular Cumulative lumens curve



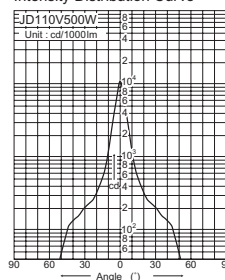
**JAM0**

see p.50

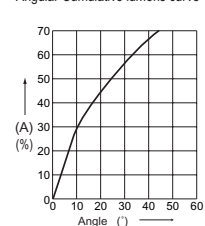
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |      | Beam efficiency(%) |
|------------|----------------------------|--------------------------------------|---------------|------|--------------------|
| JD110V500W | 9,500                      | 10,688                               | (1/10)        | 20.0 | (1/10) 29.0        |
|            |                            |                                      | (1/20)        | 28.0 | (1/20) 37.0        |

Intensity Distribution Curve



Angular Cumulative lumens curve



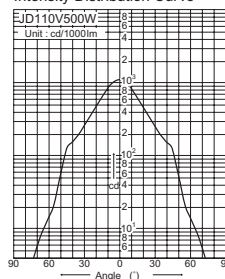
**JAW0**

see p.50

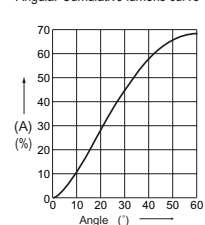
Beam characteristics

| Lamp type  | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |       | Beam efficiency(%) |
|------------|----------------------------|--------------------------------------|---------------|-------|--------------------|
| JD110V500W | 9,500                      | 1,122                                | (1/10)        | 92.0  | (1/10) 62.0        |
|            |                            |                                      | (1/20)        | 100.0 | (1/20) 65.5        |

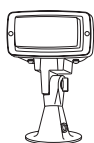
Intensity Distribution Curve



Angular Cumulative lumens curve



## EYE Halogen light <250B • 150C series>



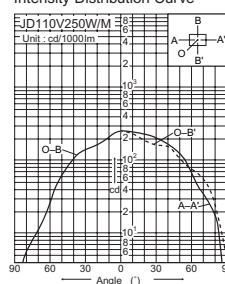
**JB0**

see p.51

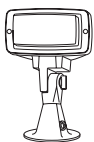
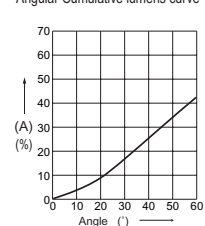
Beam characteristics

| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        |
|--------------|----------------------------|--------------------------------------|---------------|--------|
|              |                            |                                      | (1/10)        | (1/20) |
| JD110V250W/M | 4,500                      | 255                                  | A-A'          | 151.0  |
|              |                            |                                      | O-B           | 60.0   |
|              |                            |                                      | O-B'          | 80.0   |
|              |                            |                                      | A-A'          | 164.0  |
|              |                            |                                      | O-B           | 68.0   |
|              |                            |                                      | O-B'          | 85.0   |

Intensity Distribution Curve



Angular Cumulative lumens curve



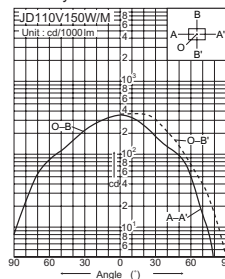
**JC0**

see p.51

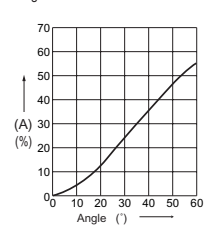
Beam characteristics

| Lamp type    | Lamp lumens<br>( $\ell$ m) | Beam intensity<br>(cd/1000 $\ell$ m) | Beam angle(°) |        |
|--------------|----------------------------|--------------------------------------|---------------|--------|
|              |                            |                                      | (1/10)        | (1/20) |
| JD110V150W/M | 2,400                      | 365                                  | A-A'          | 126.0  |
|              |                            |                                      | O-B           | 75.0   |
|              |                            |                                      | O-B'          | 72.0   |
|              |                            |                                      | A-A'          | 137.0  |
|              |                            |                                      | O-B           | 83.0   |
|              |                            |                                      | O-B'          | 79.0   |

Intensity Distribution Curve

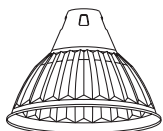


Angular Cumulative lumens curve



(A)=Angular Cumulative lumens (%)

# Highbay Reflector 1000W



## SAW712

see p.94

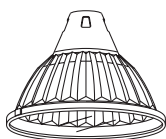
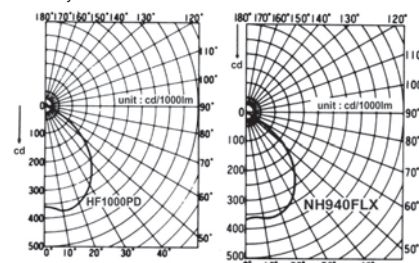
| Lamp type | Lumens (lm) | Fixture efficiency (%) | Max. fitting distance |
|-----------|-------------|------------------------|-----------------------|
| HF1000PD  | 64,000      | 83.0                   | 1.30H                 |
| NH940FLX  | 131,000     | 85.0                   | 1.25H                 |

H : Fitting height

Utilization Factor

| Reflection factor | HF1000PD    |      |      |      |      | NH940FLX |      |      |      |      |
|-------------------|-------------|------|------|------|------|----------|------|------|------|------|
|                   | Floor (%)   | 50   | 30   | 0    | 0    | 10       | 50   | 30   | 0    | 0    |
| Room index        | Ceiling (%) | 50   | 30   | 0    | 0    | 0        | 50   | 30   | 0    | 0    |
|                   | Wall (%)    | 50   | 30   | 50   | 30   | 0        | 50   | 30   | 50   | 30   |
|                   | 0.60        | 0.43 | 0.38 | 0.42 | 0.38 | 0.33     | 0.43 | 0.38 | 0.42 | 0.38 |
|                   | 0.80        | 0.52 | 0.47 | 0.51 | 0.47 | 0.42     | 0.52 | 0.47 | 0.51 | 0.47 |
|                   | 1.00        | 0.59 | 0.54 | 0.57 | 0.54 | 0.49     | 0.58 | 0.54 | 0.57 | 0.53 |
|                   | 1.25        | 0.63 | 0.59 | 0.62 | 0.58 | 0.54     | 0.63 | 0.59 | 0.61 | 0.58 |
|                   | 1.50        | 0.67 | 0.64 | 0.66 | 0.63 | 0.59     | 0.67 | 0.64 | 0.65 | 0.63 |
|                   | 2.00        | 0.72 | 0.69 | 0.70 | 0.68 | 0.64     | 0.71 | 0.69 | 0.70 | 0.67 |
|                   | 2.50        | 0.75 | 0.72 | 0.73 | 0.71 | 0.67     | 0.74 | 0.72 | 0.72 | 0.70 |
|                   | 3.00        | 0.77 | 0.75 | 0.75 | 0.73 | 0.69     | 0.76 | 0.74 | 0.74 | 0.73 |
|                   | 4.00        | 0.79 | 0.77 | 0.77 | 0.76 | 0.72     | 0.78 | 0.77 | 0.77 | 0.75 |
|                   | 5.00        | 0.81 | 0.79 | 0.79 | 0.78 | 0.74     | 0.80 | 0.78 | 0.78 | 0.77 |
|                   | 7.00        | 0.82 | 0.81 | 0.80 | 0.80 | 0.76     | 0.81 | 0.80 | 0.79 | 0.75 |
|                   | 10.00       | 0.84 | 0.83 | 0.82 | 0.81 | 0.78     | 0.83 | 0.82 | 0.81 | 0.77 |

Intensity distribution curve



## SAW712G with glass protector SAW712N with net protector

see p.94

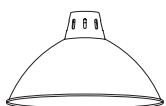
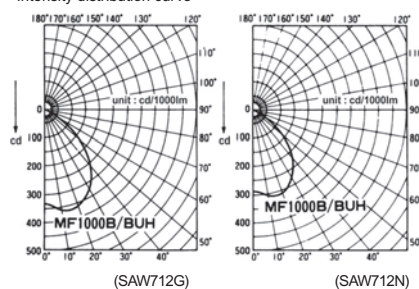
| Lamp type            | Lumens (lm) | Fixture efficiency (%) | Max. fitting distance |
|----------------------|-------------|------------------------|-----------------------|
| (SAW712G)MF1000B/BUH | 115,000     | 77.0                   | 1.35H                 |
| (SAW712N)MF1000B/BUH | 115,000     | 69.5                   | 1.35H                 |

H : Fitting height

Utilization Factor

| Reflection factor | SAW712G     |      |      |      |      | SAW712N |      |      |      |      |
|-------------------|-------------|------|------|------|------|---------|------|------|------|------|
|                   | Floor (%)   | 10   | 30   | 0    | 0    | 10      | 50   | 30   | 0    | 0    |
| Room index        | Ceiling (%) | 50   | 30   | 0    | 0    | 0       | 50   | 30   | 0    | 0    |
|                   | Wall (%)    | 50   | 30   | 50   | 30   | 0       | 50   | 30   | 50   | 30   |
|                   | 0.60        | 0.41 | 0.37 | 0.41 | 0.37 | 0.32    | 0.36 | 0.32 | 0.36 | 0.32 |
|                   | 0.80        | 0.49 | 0.45 | 0.48 | 0.45 | 0.40    | 0.43 | 0.40 | 0.42 | 0.39 |
|                   | 1.00        | 0.56 | 0.52 | 0.55 | 0.51 | 0.47    | 0.49 | 0.45 | 0.48 | 0.45 |
|                   | 1.25        | 0.60 | 0.56 | 0.58 | 0.55 | 0.51    | 0.52 | 0.49 | 0.51 | 0.48 |
|                   | 1.50        | 0.63 | 0.60 | 0.62 | 0.59 | 0.56    | 0.56 | 0.53 | 0.55 | 0.52 |
|                   | 2.00        | 0.67 | 0.65 | 0.66 | 0.64 | 0.60    | 0.60 | 0.57 | 0.58 | 0.56 |
|                   | 2.50        | 0.70 | 0.68 | 0.68 | 0.67 | 0.63    | 0.62 | 0.60 | 0.61 | 0.59 |
|                   | 3.00        | 0.72 | 0.70 | 0.70 | 0.68 | 0.65    | 0.64 | 0.62 | 0.62 | 0.61 |
|                   | 4.00        | 0.74 | 0.72 | 0.72 | 0.71 | 0.67    | 0.66 | 0.64 | 0.64 | 0.63 |
|                   | 5.00        | 0.75 | 0.74 | 0.73 | 0.72 | 0.69    | 0.67 | 0.66 | 0.65 | 0.64 |
|                   | 7.00        | 0.76 | 0.76 | 0.75 | 0.74 | 0.71    | 0.69 | 0.68 | 0.67 | 0.66 |
|                   | 10.00       | 0.78 | 0.77 | 0.76 | 0.75 | 0.72    | 0.70 | 0.69 | 0.68 | 0.65 |

Intensity distribution curve



## SAN712

see p.94

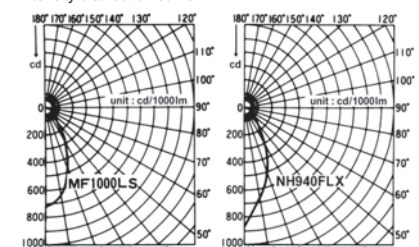
| Lamp type | Lumens (lm) | Fixture efficiency (%) | Max. fitting distance |
|-----------|-------------|------------------------|-----------------------|
| MF1000LS  | 87,000      | 76.1                   | 0.78H                 |
| NH940FLX  | 131,000     | 82.9                   | 0.67H                 |

H : Fitting height

Utilization Factor

| Reflection factor | NH940FLX    |      |      |      |      | MF1000LS |      |      |      |      |
|-------------------|-------------|------|------|------|------|----------|------|------|------|------|
|                   | Floor (%)   | 10   | 30   | 0    | 0    | 10       | 50   | 30   | 0    | 0    |
| Room index        | Ceiling (%) | 50   | 30   | 0    | 0    | 0        | 50   | 30   | 0    | 0    |
|                   | Wall (%)    | 50   | 30   | 50   | 30   | 0        | 50   | 30   | 50   | 30   |
|                   | 0.60        | 0.49 | 0.45 | 0.48 | 0.45 | 0.41     | 0.52 | 0.48 | 0.51 | 0.47 |
|                   | 0.80        | 0.54 | 0.51 | 0.54 | 0.50 | 0.47     | 0.58 | 0.54 | 0.57 | 0.53 |
|                   | 1.00        | 0.59 | 0.56 | 0.58 | 0.55 | 0.52     | 0.63 | 0.59 | 0.62 | 0.58 |
|                   | 1.25        | 0.62 | 0.59 | 0.61 | 0.58 | 0.55     | 0.66 | 0.63 | 0.65 | 0.62 |
|                   | 1.50        | 0.65 | 0.62 | 0.64 | 0.62 | 0.58     | 0.70 | 0.66 | 0.68 | 0.66 |
|                   | 2.00        | 0.69 | 0.66 | 0.67 | 0.65 | 0.62     | 0.74 | 0.71 | 0.72 | 0.70 |
|                   | 2.50        | 0.71 | 0.69 | 0.70 | 0.68 | 0.65     | 0.76 | 0.74 | 0.75 | 0.73 |
|                   | 3.00        | 0.72 | 0.71 | 0.71 | 0.70 | 0.67     | 0.78 | 0.76 | 0.76 | 0.75 |
|                   | 4.00        | 0.74 | 0.73 | 0.73 | 0.72 | 0.69     | 0.80 | 0.78 | 0.79 | 0.77 |
|                   | 5.00        | 0.75 | 0.74 | 0.74 | 0.73 | 0.70     | 0.81 | 0.80 | 0.80 | 0.79 |
|                   | 7.00        | 0.77 | 0.76 | 0.75 | 0.75 | 0.72     | 0.83 | 0.82 | 0.81 | 0.78 |
|                   | 10.00       | 0.78 | 0.77 | 0.76 | 0.76 | 0.73     | 0.84 | 0.84 | 0.83 | 0.79 |

Intensity distribution curve



# Highbay Reflector 400W



## SAW412

see p.95

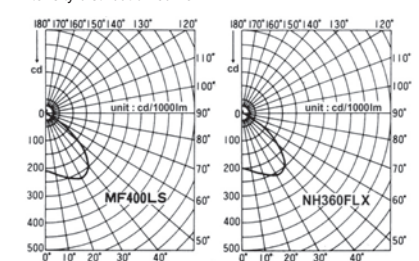
| Lamp type | Lumens (lm) | Fixture efficiency (%) | Max. fitting distance |
|-----------|-------------|------------------------|-----------------------|
| MF400LS   | 38,000      | 73                     | 1.75H                 |
| NH360FLX  | 46,000      | 70                     | 1.75H                 |

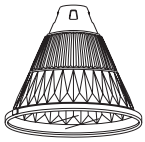
H : Fitting height

Utilization Factor

| Reflection factor | MF400LS     |      |      |      |      | NH360FLX |      |      |      |      |
|-------------------|-------------|------|------|------|------|----------|------|------|------|------|
|                   | Floor (%)   | 10   | 30   | 0    | 0    | 10       | 50   | 30   | 0    | 0    |
| Room index        | Ceiling (%) | 50   | 30   | 0    | 0    | 0        | 50   | 30   | 0    | 0    |
|                   | Wall (%)    | 50   | 30   | 50   | 30   | 0        | 50   | 30   | 50   | 30   |
|                   | 0.60        | 0.34 | 0.29 | 0.33 | 0.29 | 0.24     | 0.33 | 0.28 | 0.32 | 0.28 |
|                   | 0.80        | 0.42 | 0.38 | 0.41 | 0.37 | 0.32     | 0.41 | 0.36 | 0.40 | 0.36 |
|                   | 1.00        | 0.49 | 0.45 | 0.47 | 0.44 | 0.39     | 0.47 | 0.43 | 0.46 | 0.42 |
|                   | 1.25        | 0.53 | 0.49 | 0.52 | 0.48 | 0.44     | 0.51 | 0.47 | 0.50 | 0.47 |
|                   | 1.50        | 0.57 | 0.54 | 0.56 | 0.53 | 0.49     | 0.55 | 0.52 | 0.54 | 0.51 |
|                   | 2.00        | 0.62 | 0.59 | 0.60 | 0.58 | 0.54     | 0.59 | 0.57 | 0.58 | 0.56 |
|                   | 2.50        | 0.64 | 0.62 | 0.63 | 0.61 | 0.57     | 0.62 | 0.60 | 0.61 | 0.59 |
|                   | 3.00        | 0.66 | 0.64 | 0.64 | 0.63 | 0.59     | 0.64 | 0.62 | 0.63 | 0.61 |
|                   | 4.00        | 0.69 | 0.67 | 0.67 | 0.65 | 0.62     | 0.66 | 0.65 | 0.65 | 0.64 |
|                   | 5.00        | 0.70 | 0.69 | 0.68 | 0.67 | 0.64     | 0.68 | 0.66 | 0.66 | 0.65 |
|                   | 7.00        | 0.72 | 0.71 | 0.70 | 0.69 | 0.66     | 0.69 | 0.68 | 0.68 | 0.67 |
|                   | 10.00       | 0.73 | 0.72 | 0.71 | 0.70 | 0.67     | 0.70 | 0.70 | 0.69 | 0.66 |

Intensity distribution curve





**SAW412G**  
with glass protector  
**SAW412N**  
with net protector

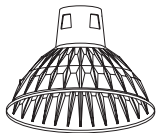
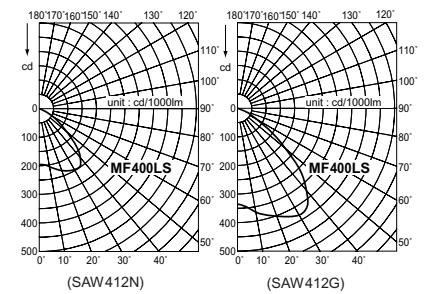
see **p.95**

| Lamp type   | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-------------|----------------|------------------------------|--------------------------|
| MF400LS/BUP | 38,000         | 65.0                         | 1.70H                    |
| MF400LS/BUP | 38,000         | 55.0                         | 1.60H                    |

Utilization Factor

| Reflection factor | (SAW412G) MF400LS/BUP |      |      |      |      |      | (SAW412N) MF400LS/BUP |      |      |      |      |      |
|-------------------|-----------------------|------|------|------|------|------|-----------------------|------|------|------|------|------|
|                   | 10                    |      |      |      |      |      | 10                    |      |      |      |      |      |
| Floor (%)         | 10                    |      |      |      |      |      | 10                    |      |      |      |      |      |
| Ceiling (%)       | 50                    |      |      |      |      |      | 50                    |      |      |      |      |      |
| Wall (%)          | 50                    | 30   | 50   | 30   | 0    | 0    | 50                    | 30   | 50   | 30   | 0    | 0    |
| Room index        | 0.60                  | 0.31 | 0.27 | 0.31 | 0.27 | 0.23 | 0.26                  | 0.22 | 0.26 | 0.23 | 0.19 | 0.19 |
|                   | 0.80                  | 0.38 | 0.34 | 0.38 | 0.34 | 0.30 | 0.33                  | 0.29 | 0.32 | 0.29 | 0.26 | 0.26 |
|                   | 1.00                  | 0.44 | 0.41 | 0.43 | 0.40 | 0.36 | 0.37                  | 0.34 | 0.37 | 0.34 | 0.31 | 0.31 |
|                   | 1.25                  | 0.48 | 0.44 | 0.47 | 0.44 | 0.40 | 0.41                  | 0.38 | 0.40 | 0.37 | 0.34 | 0.34 |
|                   | 1.50                  | 0.51 | 0.48 | 0.50 | 0.48 | 0.44 | 0.44                  | 0.41 | 0.43 | 0.41 | 0.38 | 0.38 |
|                   | 2.00                  | 0.55 | 0.53 | 0.54 | 0.52 | 0.49 | 0.47                  | 0.45 | 0.46 | 0.44 | 0.42 | 0.42 |
|                   | 2.50                  | 0.58 | 0.55 | 0.56 | 0.54 | 0.51 | 0.49                  | 0.48 | 0.48 | 0.47 | 0.44 | 0.44 |
|                   | 3.00                  | 0.59 | 0.57 | 0.58 | 0.56 | 0.53 | 0.51                  | 0.49 | 0.50 | 0.48 | 0.46 | 0.46 |
|                   | 4.00                  | 0.61 | 0.60 | 0.60 | 0.58 | 0.56 | 0.53                  | 0.52 | 0.52 | 0.51 | 0.48 | 0.48 |
|                   | 5.00                  | 0.62 | 0.61 | 0.61 | 0.60 | 0.57 | 0.54                  | 0.53 | 0.53 | 0.52 | 0.50 | 0.50 |
|                   | 7.00                  | 0.64 | 0.63 | 0.62 | 0.61 | 0.59 | 0.55                  | 0.55 | 0.54 | 0.54 | 0.52 | 0.52 |
|                   | 10.00                 | 0.65 | 0.64 | 0.63 | 0.63 | 0.60 | 0.56                  | 0.56 | 0.55 | 0.55 | 0.53 | 0.53 |

Intensity distribution curve



**SAM412**

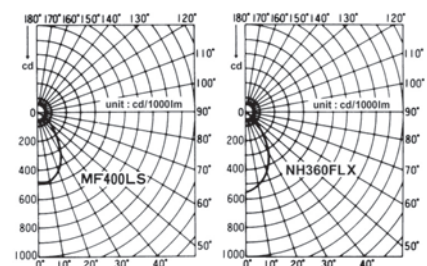
see **p.95**

| Lamp type   | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-------------|----------------|------------------------------|--------------------------|
| MF400LS/BUP | 38,000         | 76.0                         | 1.06H                    |
| NH360FLX    | 46,000         | 75.0                         | 0.90H                    |

Utilization Factor

| Reflection factor | MF400LS |      |      |      |      |      | NH360FLX |      |      |      |      |      |
|-------------------|---------|------|------|------|------|------|----------|------|------|------|------|------|
|                   | 10      |      |      |      |      |      | 10       |      |      |      |      |      |
| Floor (%)         | 10      |      |      |      |      |      | 10       |      |      |      |      |      |
| Ceiling (%)       | 50      |      |      |      |      |      | 50       |      |      |      |      |      |
| Wall (%)          | 50      | 30   | 50   | 30   | 0    | 0    | 50       | 30   | 50   | 30   | 0    | 0    |
| Room index        | 0.60    | 0.46 | 0.42 | 0.45 | 0.41 | 0.38 | 0.45     | 0.42 | 0.45 | 0.41 | 0.38 | 0.38 |
|                   | 0.80    | 0.52 | 0.49 | 0.51 | 0.48 | 0.44 | 0.52     | 0.48 | 0.51 | 0.48 | 0.44 | 0.44 |
|                   | 1.00    | 0.57 | 0.54 | 0.56 | 0.53 | 0.50 | 0.57     | 0.54 | 0.56 | 0.53 | 0.49 | 0.49 |
|                   | 1.25    | 0.61 | 0.58 | 0.59 | 0.57 | 0.53 | 0.60     | 0.57 | 0.59 | 0.56 | 0.52 | 0.52 |
|                   | 1.50    | 0.64 | 0.61 | 0.62 | 0.60 | 0.56 | 0.63     | 0.60 | 0.62 | 0.59 | 0.56 | 0.56 |
|                   | 2.00    | 0.67 | 0.65 | 0.66 | 0.64 | 0.60 | 0.66     | 0.64 | 0.65 | 0.63 | 0.59 | 0.59 |
|                   | 2.50    | 0.69 | 0.68 | 0.68 | 0.66 | 0.63 | 0.69     | 0.67 | 0.67 | 0.65 | 0.62 | 0.62 |
|                   | 3.00    | 0.71 | 0.69 | 0.69 | 0.68 | 0.64 | 0.70     | 0.68 | 0.68 | 0.67 | 0.63 | 0.63 |
|                   | 4.00    | 0.73 | 0.71 | 0.71 | 0.70 | 0.66 | 0.72     | 0.70 | 0.70 | 0.69 | 0.65 | 0.65 |
|                   | 5.00    | 0.74 | 0.73 | 0.72 | 0.71 | 0.68 | 0.73     | 0.72 | 0.71 | 0.70 | 0.67 | 0.67 |
|                   | 7.00    | 0.75 | 0.74 | 0.73 | 0.72 | 0.69 | 0.74     | 0.73 | 0.72 | 0.71 | 0.68 | 0.68 |
|                   | 10.00   | 0.76 | 0.76 | 0.74 | 0.74 | 0.70 | 0.75     | 0.75 | 0.73 | 0.73 | 0.69 | 0.69 |

Intensity distribution curve



**SAN412**

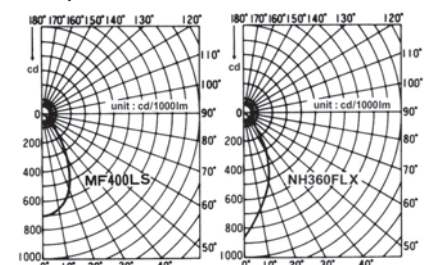
see **p.95**

| Lamp type | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-----------|----------------|------------------------------|--------------------------|
| MF400LS   | 38,000         | 83.0                         | 0.90H                    |
| NH360FLX  | 46,000         | 78.0                         | 0.65H                    |

Utilization Factor

| Reflection factor | NH360FLX |      |      |      |      |      | MF400LS |      |      |      |      |      |
|-------------------|----------|------|------|------|------|------|---------|------|------|------|------|------|
|                   | 10       |      |      |      |      |      | 10      |      |      |      |      |      |
| Floor (%)         | 10       |      |      |      |      |      | 10      |      |      |      |      |      |
| Ceiling (%)       | 50       |      |      |      |      |      | 50      |      |      |      |      |      |
| Wall (%)          | 50       | 30   | 50   | 30   | 0    | 0    | 50      | 30   | 50   | 30   | 0    | 0    |
| Room index        | 0.60     | 0.54 | 0.50 | 0.53 | 0.50 | 0.46 | 0.51    | 0.48 | 0.50 | 0.47 | 0.43 | 0.43 |
|                   | 0.80     | 0.60 | 0.57 | 0.59 | 0.59 | 0.52 | 0.57    | 0.53 | 0.56 | 0.53 | 0.49 | 0.49 |
|                   | 1.00     | 0.65 | 0.62 | 0.64 | 0.61 | 0.57 | 0.61    | 0.58 | 0.60 | 0.57 | 0.54 | 0.54 |
|                   | 1.25     | 0.68 | 0.65 | 0.67 | 0.64 | 0.60 | 0.64    | 0.61 | 0.63 | 0.60 | 0.57 | 0.57 |
|                   | 1.50     | 0.71 | 0.69 | 0.70 | 0.68 | 0.64 | 0.67    | 0.64 | 0.65 | 0.63 | 0.60 | 0.60 |
|                   | 2.00     | 0.75 | 0.73 | 0.73 | 0.71 | 0.67 | 0.70    | 0.68 | 0.68 | 0.67 | 0.63 | 0.63 |
|                   | 2.50     | 0.77 | 0.75 | 0.85 | 0.73 | 0.69 | 0.72    | 0.70 | 0.70 | 0.69 | 0.65 | 0.65 |
|                   | 3.00     | 0.78 | 0.76 | 0.76 | 0.75 | 0.71 | 0.73    | 0.72 | 0.71 | 0.70 | 0.66 | 0.66 |
|                   | 4.00     | 0.80 | 0.79 | 0.78 | 0.77 | 0.73 | 0.75    | 0.74 | 0.73 | 0.72 | 0.68 | 0.68 |
|                   | 5.00     | 0.81 | 0.80 | 0.79 | 0.78 | 0.74 | 0.76    | 0.75 | 0.74 | 0.73 | 0.69 | 0.69 |
|                   | 7.00     | 0.82 | 0.81 | 0.80 | 0.79 | 0.75 | 0.77    | 0.76 | 0.75 | 0.74 | 0.71 | 0.71 |
|                   | 10.00    | 0.83 | 0.82 | 0.81 | 0.80 | 0.76 | 0.78    | 0.77 | 0.76 | 0.75 | 0.72 | 0.72 |

Intensity distribution curve



## Highbay Reflector 100W



**SAW103**

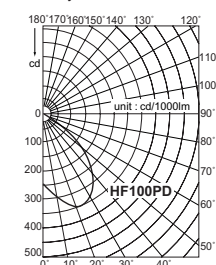
see **p.96**

| Lamp type | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-----------|----------------|------------------------------|--------------------------|
| HF100PD   | 4,200          | 83.0                         | 1.70H                    |

Utilization Factor

| Reflection factor | HF100PD |      |      |      |      |      |
|-------------------|---------|------|------|------|------|------|
|                   | 10      |      |      |      |      |      |
| Floor (%)         | 10      |      |      |      |      |      |
| Ceiling (%)       | 50      |      |      |      |      |      |
| Wall (%)          | 50      | 30   | 50   | 30   | 0    | 0    |
| Room index        | 0.60    | 0.41 | 0.36 | 0.41 | 0.36 | 0.31 |
|                   | 0.80    | 0.51 | 0.46 | 0.50 | 0.45 | 0.40 |
|                   | 1.00    | 0.58 | 0.53 | 0.57 | 0.53 | 0.48 |
|                   | 1.25    | 0.62 | 0.58 | 0.61 | 0.58 | 0.53 |
|                   | 1.50    | 0.67 | 0.63 | 0.66 | 0.63 | 0.58 |
|                   | 2.00    | 0.72 | 0.69 | 0.71 | 0.68 | 0.64 |
|                   | 2.50    | 0.75 | 0.72 | 0.73 | 0.71 | 0.67 |
|                   | 3.00    | 0.77 | 0.75 | 0.75 | 0.74 | 0.70 |
|                   | 4.00    | 0.80 | 0.78 | 0.78 | 0.76 | 0.73 |
|                   | 5.00    | 0.81 | 0.80 | 0.79 | 0.78 | 0.75 |
|                   | 7.00    | 0.83 | 0.82 | 0.81 | 0.80 | 0.77 |
|                   | 10.00   | 0.84 | 0.83 | 0.83 | 0.82 | 0.79 |

Intensity distribution curve





## SAN101

see p.96

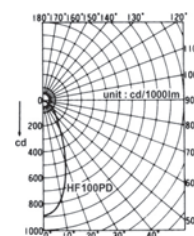
| Lamp type | Lumens (lm) | Fixture efficiency (%) | Max. fitting distance |
|-----------|-------------|------------------------|-----------------------|
| HF100PD   | 4,200       | 77.0                   | 0.70H                 |

H : Fitting height

Utilization Factor

| Reflection factor | HF100PD   |      |      |      |      |      |
|-------------------|-----------|------|------|------|------|------|
|                   | Floor (%) | 10   |      | 30   |      | 0    |
| Ceiling (%)       |           | 50   |      | 30   |      | 0    |
| Wall (%)          | 50        | 30   | 50   | 30   | 0    |      |
| Room index        | 0.60      | 0.52 | 0.48 | 0.51 | 0.48 | 0.45 |
|                   | 0.80      | 0.58 | 0.54 | 0.57 | 0.54 | 0.51 |
|                   | 1.00      | 0.62 | 0.59 | 0.61 | 0.59 | 0.55 |
|                   | 1.25      | 0.65 | 0.62 | 0.64 | 0.62 | 0.58 |
|                   | 1.50      | 0.68 | 0.65 | 0.67 | 0.65 | 0.62 |
|                   | 2.00      | 0.71 | 0.69 | 0.70 | 0.68 | 0.65 |
|                   | 2.50      | 0.73 | 0.71 | 0.72 | 0.70 | 0.64 |
|                   | 3.00      | 0.74 | 0.73 | 0.73 | 0.72 | 0.69 |
|                   | 4.00      | 0.76 | 0.75 | 0.74 | 0.73 | 0.71 |
|                   | 5.00      | 0.77 | 0.76 | 0.75 | 0.75 | 0.72 |
|                   | 7.00      | 0.78 | 0.77 | 0.77 | 0.76 | 0.73 |
|                   | 10.00     | 0.79 | 0.78 | 0.77 | 0.77 | 0.74 |

Intensity distribution curve



## Highbay Reflector with Emergency Light



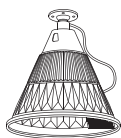
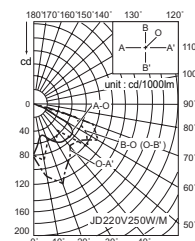
## KNW711P3

see p.104

| Lamp type    | Lumens (lm) | Fixture efficiency (%) |
|--------------|-------------|------------------------|
| JD220V250W/M | 4,200       | 77.0                   |

Date shows for halogen lamp operation.

Intensity distribution curve



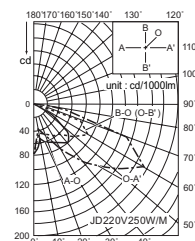
## KNW411D3

see p.104

| Lamp type    | Lumens (lm) | Fixture efficiency (%) |
|--------------|-------------|------------------------|
| JD220V250W/M | 3,750       | 38.5                   |

Date shows for halogen lamp operation.

Intensity distribution curve



## Highbay Reflector with Charcoal Filter



## EVS401

see p.107

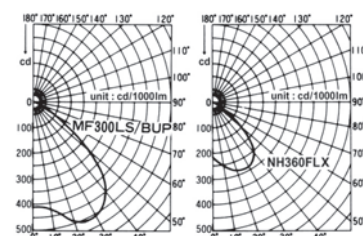
| Lamp type   | Lumens (lm) | Fixture efficiency (%) | Max. fitting distance |
|-------------|-------------|------------------------|-----------------------|
| MF300LS/BUP | 25,500      | 68.5                   | 1.70H                 |
| NH360FLX    | 46,000      | 61.0                   | 1.65H                 |

H : Fitting height

Utilization Factor

| Reflection factor | MF300LS/BUP |      |      |      |      |      | NH360FLX |      |      |      |      |  |
|-------------------|-------------|------|------|------|------|------|----------|------|------|------|------|--|
|                   | 10          |      |      |      |      |      | 10       |      |      |      |      |  |
| Floor (%)         | 50          | 30   | 0    |      |      |      | 50       | 30   | 0    |      |      |  |
| Ceiling (%)       |             | 50   | 30   | 0    |      |      |          | 50   | 30   | 0    |      |  |
| Wall (%)          | 50          | 30   | 50   | 30   | 0    |      | 50       | 30   | 50   | 30   | 0    |  |
| Room index        | 0.60        | 0.35 | 0.31 | 0.34 | 0.30 | 0.26 | 0.32     | 0.28 | 0.31 | 0.28 | 0.24 |  |
|                   | 0.80        | 0.43 | 0.39 | 0.42 | 0.38 | 0.34 | 0.39     | 0.35 | 0.38 | 0.35 | 0.31 |  |
|                   | 1.00        | 0.49 | 0.45 | 0.48 | 0.45 | 0.41 | 0.45     | 0.41 | 0.44 | 0.41 | 0.37 |  |
|                   | 1.25        | 0.52 | 0.49 | 0.51 | 0.48 | 0.45 | 0.48     | 0.45 | 0.47 | 0.45 | 0.41 |  |
|                   | 1.50        | 0.56 | 0.53 | 0.55 | 0.52 | 0.49 | 0.52     | 0.49 | 0.51 | 0.48 | 0.45 |  |
|                   | 2.00        | 0.60 | 0.58 | 0.59 | 0.57 | 0.54 | 0.55     | 0.53 | 0.54 | 0.52 | 0.49 |  |
|                   | 2.50        | 0.62 | 0.60 | 0.61 | 0.59 | 0.56 | 0.58     | 0.56 | 0.56 | 0.55 | 0.52 |  |
|                   | 3.00        | 0.64 | 0.62 | 0.63 | 0.61 | 0.58 | 0.59     | 0.57 | 0.58 | 0.56 | 0.54 |  |
|                   | 4.00        | 0.66 | 0.64 | 0.65 | 0.63 | 0.61 | 0.61     | 0.60 | 0.60 | 0.59 | 0.56 |  |
|                   | 5.00        | 0.67 | 0.66 | 0.66 | 0.65 | 0.62 | 0.62     | 0.61 | 0.61 | 0.60 | 0.57 |  |
|                   | 7.00        | 0.68 | 0.68 | 0.67 | 0.66 | 0.64 | 0.63     | 0.63 | 0.62 | 0.61 | 0.59 |  |
|                   | 10.00       | 0.70 | 0.69 | 0.68 | 0.68 | 0.65 | 0.64     | 0.64 | 0.63 | 0.63 | 0.60 |  |

Intensity distribution curve



# Mixed light 400W + 400W, 250W + 400W



## EVM820

HID lamp 400W + 400W

see p.110

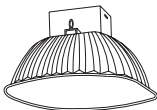
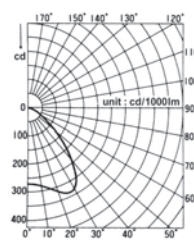
| Lamp type              | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|------------------------|----------------|------------------------------|--------------------------|
| NH360FLX + MF400LE/BUH | 85,500         | 71.5                         | 1.50H                    |

H : Fitting height

Utilization Factor

| Lamp type         | HF400PD+ NH360FLX |      |      |      |      |      | MF400LE+NH360FLX |      |      |      |      |   |
|-------------------|-------------------|------|------|------|------|------|------------------|------|------|------|------|---|
|                   | 10                |      |      |      |      |      | 10               |      |      |      |      |   |
| Reflection factor | Floor (%)         |      |      |      |      |      | Floor (%)        |      |      |      |      |   |
|                   | Ceiling (%)       |      |      |      |      |      | Ceiling (%)      |      |      |      |      |   |
|                   | Wall (%)          | 50   | 30   | 50   | 30   | 0    | 50               | 30   | 50   | 30   | 0    | 0 |
| Room index        | 0.60              | 0.36 | 0.32 | 0.35 | 0.32 | 0.28 | 0.38             | 0.34 | 0.37 | 0.34 | 0.30 |   |
|                   | 0.80              | 0.43 | 0.40 | 0.43 | 0.39 | 0.35 | 0.46             | 0.42 | 0.45 | 0.41 | 0.37 |   |
|                   | 1.00              | 0.49 | 0.46 | 0.48 | 0.45 | 0.41 | 0.51             | 0.48 | 0.50 | 0.47 | 0.44 |   |
|                   | 1.25              | 0.53 | 0.49 | 0.52 | 0.49 | 0.45 | 0.55             | 0.52 | 0.54 | 0.51 | 0.47 |   |
|                   | 1.50              | 0.56 | 0.53 | 0.55 | 0.53 | 0.49 | 0.59             | 0.56 | 0.58 | 0.55 | 0.52 |   |
|                   | 2.00              | 0.60 | 0.58 | 0.59 | 0.57 | 0.54 | 0.63             | 0.60 | 0.61 | 0.59 | 0.56 |   |
|                   | 2.50              | 0.63 | 0.61 | 0.61 | 0.60 | 0.57 | 0.65             | 0.63 | 0.64 | 0.62 | 0.59 |   |
|                   | 3.00              | 0.64 | 0.62 | 0.63 | 0.61 | 0.58 | 0.67             | 0.65 | 0.65 | 0.64 | 0.61 |   |
|                   | 4.00              | 0.66 | 0.65 | 0.65 | 0.64 | 0.61 | 0.69             | 0.67 | 0.67 | 0.66 | 0.63 |   |
|                   | 5.00              | 0.68 | 0.66 | 0.66 | 0.65 | 0.63 | 0.70             | 0.69 | 0.69 | 0.68 | 0.65 |   |
|                   | 7.00              | 0.69 | 0.68 | 0.68 | 0.67 | 0.64 | 0.71             | 0.71 | 0.70 | 0.69 | 0.67 |   |
|                   | 10.00             | 0.70 | 0.69 | 0.69 | 0.68 | 0.66 | 0.73             | 0.72 | 0.71 | 0.70 | 0.68 |   |

Intensity distribution curve  
NH360FLX + MF400LE/BUH



## EVM620

HID lamp 250W + 400W

see p.110

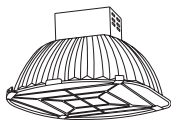
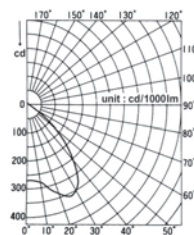
| Lamp type              | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|------------------------|----------------|------------------------------|--------------------------|
| NH220FLX + MF400LE/BUH | 64,500         | 73.0                         | 1.55H                    |

H : Fitting height

Utilization Factor

| Lamp type         | HF400PD+ NH220FLX |      |      |      |      |      | MF400LE+ NH220FLX |      |      |      |      |   |
|-------------------|-------------------|------|------|------|------|------|-------------------|------|------|------|------|---|
|                   | 10                |      |      |      |      |      | 10                |      |      |      |      |   |
| Reflection factor | Floor (%)         |      |      |      |      |      | Floor (%)         |      |      |      |      |   |
|                   | Ceiling (%)       |      |      |      |      |      | Ceiling (%)       |      |      |      |      |   |
|                   | Wall (%)          | 50   | 30   | 50   | 30   | 0    | 50                | 30   | 50   | 30   | 0    | 0 |
| Room index        | 0.60              | 0.36 | 0.32 | 0.36 | 0.32 | 0.28 | 0.39              | 0.35 | 0.38 | 0.34 | 0.30 |   |
|                   | 0.80              | 0.44 | 0.40 | 0.43 | 0.40 | 0.36 | 0.47              | 0.43 | 0.46 | 0.42 | 0.38 |   |
|                   | 1.00              | 0.50 | 0.46 | 0.49 | 0.46 | 0.42 | 0.53              | 0.49 | 0.52 | 0.49 | 0.45 |   |
|                   | 1.25              | 0.54 | 0.50 | 0.52 | 0.50 | 0.46 | 0.56              | 0.53 | 0.55 | 0.52 | 0.49 |   |
|                   | 1.50              | 0.57 | 0.54 | 0.56 | 0.54 | 0.50 | 0.60              | 0.57 | 0.59 | 0.56 | 0.53 |   |
|                   | 2.00              | 0.61 | 0.59 | 0.60 | 0.58 | 0.55 | 0.64              | 0.62 | 0.63 | 0.61 | 0.57 |   |
|                   | 2.50              | 0.64 | 0.62 | 0.62 | 0.61 | 0.57 | 0.67              | 0.64 | 0.65 | 0.64 | 0.60 |   |
|                   | 3.00              | 0.65 | 0.63 | 0.64 | 0.62 | 0.59 | 0.68              | 0.66 | 0.67 | 0.65 | 0.62 |   |
|                   | 4.00              | 0.67 | 0.66 | 0.66 | 0.65 | 0.62 | 0.70              | 0.69 | 0.69 | 0.68 | 0.65 |   |
|                   | 5.00              | 0.69 | 0.67 | 0.67 | 0.66 | 0.64 | 0.72              | 0.70 | 0.70 | 0.69 | 0.66 |   |
|                   | 7.00              | 0.70 | 0.69 | 0.69 | 0.68 | 0.65 | 0.73              | 0.72 | 0.72 | 0.71 | 0.68 |   |
|                   | 10.00             | 0.71 | 0.71 | 0.70 | 0.69 | 0.67 | 0.74              | 0.74 | 0.73 | 0.72 | 0.70 |   |

Intensity distribution curve  
NH220FLX + MF400LE/BUH



## EVM811

HID lamp 400W + 400W

## EVM611

HID lamp 250W + 400W

see p.110

| Lamp type | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-----------|----------------|------------------------------|--------------------------|
| A         | 85,500         | 76.0                         | 1.65H                    |
| B         | 64,500         | 74.0                         | 1.70H                    |

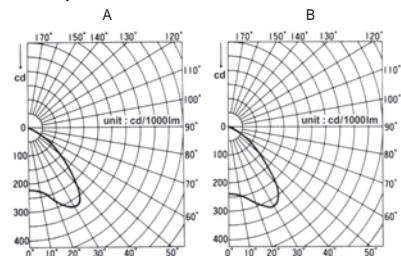
A : NH360FLX + MF400LE/BUH  
B : NH220FLX + MF400LE/BUH

H : Fitting height

Utilization Factor

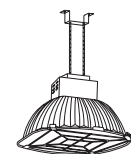
| Lamp type         | EVM811<br>NH360FLX+ MF400LE |      |      |      |      |      | EVM611<br>NH220FLX+ MF400LE |      |      |      |      |   |
|-------------------|-----------------------------|------|------|------|------|------|-----------------------------|------|------|------|------|---|
|                   | 10                          |      |      |      |      |      | 10                          |      |      |      |      |   |
| Reflection factor | Floor (%)                   |      |      |      |      |      | Floor (%)                   |      |      |      |      |   |
|                   | Ceiling (%)                 |      |      |      |      |      | Ceiling (%)                 |      |      |      |      |   |
|                   | Wall (%)                    | 50   | 30   | 50   | 30   | 0    | 50                          | 30   | 50   | 30   | 0    | 0 |
| Room index        | 0.60                        | 0.37 | 0.33 | 0.36 | 0.32 | 0.28 | 0.36                        | 0.31 | 0.35 | 0.31 | 0.27 |   |
|                   | 0.80                        | 0.46 | 0.41 | 0.45 | 0.41 | 0.36 | 0.44                        | 0.40 | 0.43 | 0.40 | 0.35 |   |
|                   | 1.00                        | 0.52 | 0.48 | 0.51 | 0.47 | 0.43 | 0.51                        | 0.47 | 0.50 | 0.46 | 0.42 |   |
|                   | 1.25                        | 0.56 | 0.53 | 0.55 | 0.52 | 0.48 | 0.55                        | 0.51 | 0.54 | 0.51 | 0.46 |   |
|                   | 1.50                        | 0.61 | 0.57 | 0.59 | 0.56 | 0.52 | 0.59                        | 0.56 | 0.58 | 0.55 | 0.51 |   |
|                   | 2.00                        | 0.65 | 0.62 | 0.64 | 0.61 | 0.57 | 0.63                        | 0.61 | 0.62 | 0.60 | 0.56 |   |
|                   | 2.50                        | 0.68 | 0.65 | 0.66 | 0.64 | 0.61 | 0.65                        | 0.64 | 0.65 | 0.63 | 0.59 |   |
|                   | 3.00                        | 0.70 | 0.68 | 0.68 | 0.66 | 0.63 | 0.68                        | 0.66 | 0.66 | 0.65 | 0.61 |   |
|                   | 4.00                        | 0.72 | 0.70 | 0.70 | 0.69 | 0.66 | 0.70                        | 0.69 | 0.69 | 0.67 | 0.64 |   |
|                   | 5.00                        | 0.73 | 0.72 | 0.72 | 0.71 | 0.67 | 0.72                        | 0.70 | 0.70 | 0.69 | 0.66 |   |
|                   | 7.00                        | 0.75 | 0.74 | 0.73 | 0.73 | 0.70 | 0.73                        | 0.72 | 0.71 | 0.71 | 0.68 |   |
|                   | 10.00                       | 0.76 | 0.76 | 0.74 | 0.74 | 0.71 | 0.74                        | 0.74 | 0.73 | 0.72 | 0.69 |   |

Intensity distribution curve



EVM811

EVM611



## EVM812

HID lamp 400W + 400W

## EVM612

HID lamp 250W + 400W

see p.110

| Lamp type | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-----------|----------------|------------------------------|--------------------------|
| A         | 85,500         | 76.0                         | 1.65H                    |
| B         | 64,500         | 74.0                         | 1.70H                    |

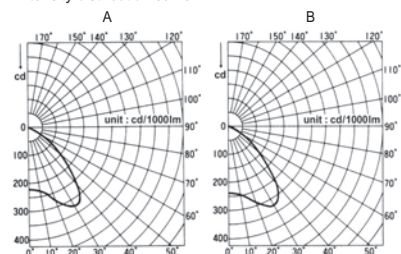
A : NH360FLX + MF400LE/BUH  
B : NH220FLX + MF400LE/BUH

H : Fitting height

Utilization Factor

| Lamp type         | EVM812<br>NH360FLX+ MF400LE |      |      |      |      |      | EVM612<br>NH220FLX+ MF400LE |      |      |      |      |   |
|-------------------|-----------------------------|------|------|------|------|------|-----------------------------|------|------|------|------|---|
|                   | 10                          |      |      |      |      |      | 10                          |      |      |      |      |   |
| Reflection factor | Floor (%)                   |      |      |      |      |      | Floor (%)                   |      |      |      |      |   |
|                   | Ceiling (%)                 |      |      |      |      |      | Ceiling (%)                 |      |      |      |      |   |
|                   | Wall (%)                    | 50   | 30   | 50   | 30   | 0    | 50                          | 30   | 50   | 30   | 0    | 0 |
| Room index        | 0.60                        | 0.37 | 0.33 | 0.36 | 0.32 | 0.28 | 0.36                        | 0.31 | 0.35 | 0.31 | 0.27 |   |
|                   | 0.80                        | 0.46 | 0.41 | 0.45 | 0.41 | 0.36 | 0.44                        | 0.40 | 0.43 | 0.40 | 0.35 |   |
|                   | 1.00                        | 0.52 | 0.48 | 0.51 | 0.47 | 0.43 | 0.51                        | 0.47 | 0.50 | 0.46 | 0.42 |   |
|                   | 1.25                        | 0.56 | 0.53 | 0.55 | 0.52 | 0.48 | 0.55                        | 0.51 | 0.54 | 0.51 | 0.46 |   |
|                   | 1.50                        | 0.61 | 0.57 | 0.59 | 0.56 | 0.52 | 0.59                        | 0.56 | 0.58 | 0.55 | 0.51 |   |
|                   | 2.00                        | 0.65 | 0.62 | 0.64 | 0.61 | 0.57 | 0.63                        | 0.61 | 0.62 | 0.60 | 0.56 |   |
|                   | 2.50                        | 0.68 | 0.65 | 0.66 | 0.64 | 0.61 | 0.65                        | 0.64 | 0.65 | 0.63 | 0.59 |   |
|                   | 3.00                        | 0.70 | 0.68 | 0.68 | 0.66 | 0.63 | 0.68                        | 0.66 | 0.66 | 0.65 | 0.61 |   |
|                   | 4.00                        | 0.72 | 0.70 | 0.70 | 0.69 | 0.66 | 0.70                        | 0.69 | 0.69 | 0.67 | 0.64 |   |
|                   | 5.00                        | 0.73 | 0.72 | 0.72 | 0.71 | 0.67 | 0.72                        | 0.70 | 0.70 | 0.69 | 0.66 |   |
|                   | 7.00                        | 0.75 | 0.74 | 0.73 | 0.73 | 0.70 | 0.73                        | 0.72 | 0.71 | 0.71 | 0.68 |   |
|                   | 10.00                       | 0.76 | 0.76 | 0.74 | 0.74 | 0.71 | 0.74                        | 0.74 | 0.73 | 0.72 | 0.69 |   |

Intensity distribution curve



EVM812

EVM612



**EVM821**  
HID lamp 400W + 400W  
**EVM621**  
HID lamp 250W + 400W

see **p.111**

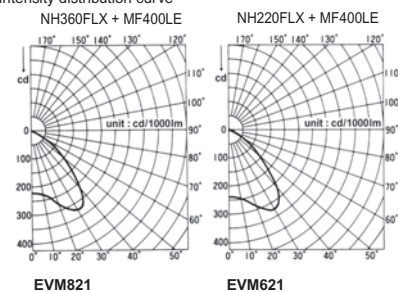
| Lamp type | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-----------|----------------|------------------------------|--------------------------|
| A         | 85,500         | 76.0                         | 1.65H                    |
| B         | 64,500         | 74.0                         | 1.70H                    |

A : NH360FLX + MF400LE/BUP  
B : NH220FLX + MF400LE/BUP  
H : Fitting height

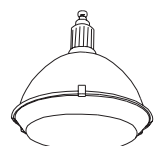
Utilization Factor

| Reflection<br>factor | Lamp type NH360FLX + MF400LE |      |      |      |      |      | NH220FLX + MF400LE |      |      |      |      |  |
|----------------------|------------------------------|------|------|------|------|------|--------------------|------|------|------|------|--|
|                      | Floor (%)                    |      |      |      |      |      | 10                 |      |      |      |      |  |
| Room index           | Ceiling (%)                  |      |      |      |      |      | 50                 |      |      |      |      |  |
|                      | Wall (%)                     |      |      |      |      |      | 30                 |      |      |      |      |  |
|                      | 0.60                         | 0.37 | 0.33 | 0.36 | 0.32 | 0.28 | 0.36               | 0.31 | 0.35 | 0.31 | 0.27 |  |
|                      | 0.80                         | 0.46 | 0.41 | 0.45 | 0.41 | 0.36 | 0.44               | 0.40 | 0.43 | 0.40 | 0.35 |  |
|                      | 1.00                         | 0.52 | 0.48 | 0.51 | 0.47 | 0.43 | 0.51               | 0.47 | 0.50 | 0.46 | 0.42 |  |
|                      | 1.25                         | 0.56 | 0.53 | 0.55 | 0.52 | 0.48 | 0.55               | 0.51 | 0.54 | 0.51 | 0.46 |  |
|                      | 1.50                         | 0.61 | 0.57 | 0.59 | 0.56 | 0.52 | 0.59               | 0.56 | 0.58 | 0.55 | 0.51 |  |
|                      | 2.00                         | 0.65 | 0.62 | 0.64 | 0.61 | 0.57 | 0.63               | 0.61 | 0.62 | 0.60 | 0.56 |  |
|                      | 2.50                         | 0.68 | 0.65 | 0.66 | 0.64 | 0.61 | 0.65               | 0.64 | 0.65 | 0.63 | 0.59 |  |
|                      | 3.00                         | 0.70 | 0.68 | 0.68 | 0.66 | 0.63 | 0.68               | 0.66 | 0.66 | 0.65 | 0.61 |  |
|                      | 4.00                         | 0.72 | 0.70 | 0.70 | 0.69 | 0.66 | 0.70               | 0.69 | 0.69 | 0.67 | 0.64 |  |
|                      | 5.00                         | 0.73 | 0.72 | 0.72 | 0.71 | 0.67 | 0.72               | 0.70 | 0.70 | 0.69 | 0.66 |  |
|                      | 7.00                         | 0.75 | 0.74 | 0.73 | 0.73 | 0.70 | 0.73               | 0.72 | 0.71 | 0.71 | 0.68 |  |
|                      | 10.00                        | 0.76 | 0.76 | 0.74 | 0.74 | 0.71 | 0.74               | 0.74 | 0.73 | 0.72 | 0.69 |  |

Intensity distribution curve



## EYE Low Bright 400W•250W



**EVL420**

see **p.113**

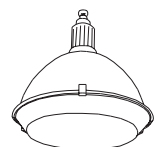
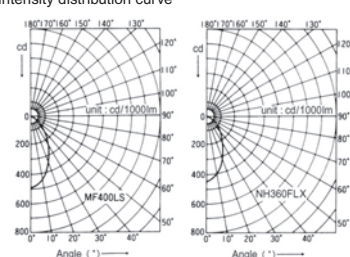
| Lamp type | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-----------|----------------|------------------------------|--------------------------|
| MF400LS   | 38,000         | 64.5                         | 0.85H                    |
| NH360FLX  | 46,000         | 60.0                         | 0.85H                    |

H : Fitting height

Utilization Factor

| Reflection<br>factor | Lamp type MF400LS |      |      |      |      |      | NH360FLX |      |      |      |      |  |
|----------------------|-------------------|------|------|------|------|------|----------|------|------|------|------|--|
|                      | Floor (%)         |      |      |      |      |      | 10       |      |      |      |      |  |
| Room index           | Ceiling (%)       |      |      |      |      |      | 50       |      |      |      |      |  |
|                      | Wall (%)          |      |      |      |      |      | 30       |      |      |      |      |  |
|                      | 0.60              | 0.37 | 0.34 | 0.37 | 0.33 | 0.30 | 0.35     | 0.31 | 0.34 | 0.31 | 0.28 |  |
|                      | 0.80              | 0.42 | 0.39 | 0.42 | 0.39 | 0.35 | 0.39     | 0.36 | 0.39 | 0.36 | 0.33 |  |
|                      | 1.00              | 0.47 | 0.43 | 0.46 | 0.43 | 0.40 | 0.43     | 0.40 | 0.43 | 0.40 | 0.37 |  |
|                      | 1.25              | 0.50 | 0.47 | 0.49 | 0.46 | 0.43 | 0.46     | 0.43 | 0.45 | 0.43 | 0.39 |  |
|                      | 1.50              | 0.52 | 0.50 | 0.51 | 0.49 | 0.46 | 0.49     | 0.46 | 0.48 | 0.46 | 0.42 |  |
|                      | 2.00              | 0.56 | 0.53 | 0.54 | 0.52 | 0.49 | 0.52     | 0.50 | 0.51 | 0.49 | 0.46 |  |
|                      | 2.50              | 0.58 | 0.56 | 0.56 | 0.55 | 0.52 | 0.54     | 0.52 | 0.53 | 0.51 | 0.48 |  |
|                      | 3.00              | 0.59 | 0.57 | 0.58 | 0.56 | 0.53 | 0.55     | 0.53 | 0.54 | 0.52 | 0.50 |  |
|                      | 4.00              | 0.61 | 0.60 | 0.60 | 0.59 | 0.56 | 0.57     | 0.55 | 0.56 | 0.54 | 0.52 |  |
|                      | 5.00              | 0.62 | 0.61 | 0.61 | 0.60 | 0.57 | 0.58     | 0.57 | 0.57 | 0.56 | 0.53 |  |
|                      | 7.00              | 0.64 | 0.63 | 0.62 | 0.62 | 0.59 | 0.59     | 0.58 | 0.58 | 0.57 | 0.55 |  |
|                      | 10.00             | 0.65 | 0.64 | 0.63 | 0.63 | 0.60 | 0.60     | 0.60 | 0.59 | 0.58 | 0.56 |  |

Intensity distribution curve



**EVL220**

see **p.113**

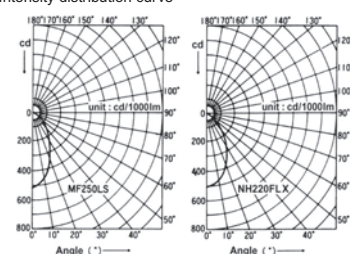
| Lamp type   | Lumens<br>(lm) | Fixture<br>efficiency<br>(%) | Max. fitting<br>distance |
|-------------|----------------|------------------------------|--------------------------|
| MF250LS/BUP | 20,000         | 63.0                         | 0.81H                    |
| NH220FLX    | 25,000         | 65.0                         | 0.85H                    |

H : Fitting height

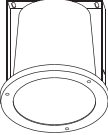
Utilization Factor

| Reflection<br>factor | Lamp type MF250LS |      |      |      |      |      | NH220FLX |      |      |      |      |  |
|----------------------|-------------------|------|------|------|------|------|----------|------|------|------|------|--|
|                      | Floor (%)         |      |      |      |      |      | 10       |      |      |      |      |  |
| Room index           | Ceiling (%)       |      |      |      |      |      | 50       |      |      |      |      |  |
|                      | Wall (%)          |      |      |      |      |      | 30       |      |      |      |      |  |
|                      | 0.60              | 0.37 | 0.34 | 0.37 | 0.34 | 0.31 | 0.39     | 0.35 | 0.38 | 0.35 | 0.32 |  |
|                      | 0.80              | 0.42 | 0.39 | 0.42 | 0.39 | 0.35 | 0.44     | 0.41 | 0.43 | 0.40 | 0.37 |  |
|                      | 1.00              | 0.46 | 0.43 | 0.45 | 0.43 | 0.40 | 0.48     | 0.45 | 0.47 | 0.44 | 0.41 |  |
|                      | 1.25              | 0.49 | 0.46 | 0.48 | 0.46 | 0.42 | 0.51     | 0.48 | 0.50 | 0.47 | 0.44 |  |
|                      | 1.50              | 0.52 | 0.49 | 0.51 | 0.49 | 0.45 | 0.53     | 0.51 | 0.52 | 0.50 | 0.47 |  |
|                      | 2.00              | 0.55 | 0.53 | 0.54 | 0.52 | 0.49 | 0.57     | 0.54 | 0.56 | 0.54 | 0.50 |  |
|                      | 2.50              | 0.57 | 0.55 | 0.56 | 0.54 | 0.51 | 0.59     | 0.57 | 0.57 | 0.56 | 0.53 |  |
|                      | 3.00              | 0.58 | 0.57 | 0.57 | 0.56 | 0.53 | 0.60     | 0.58 | 0.59 | 0.57 | 0.54 |  |
|                      | 4.00              | 0.60 | 0.59 | 0.59 | 0.58 | 0.55 | 0.62     | 0.61 | 0.61 | 0.59 | 0.57 |  |
|                      | 5.00              | 0.61 | 0.60 | 0.60 | 0.59 | 0.56 | 0.63     | 0.62 | 0.62 | 0.61 | 0.58 |  |
|                      | 7.00              | 0.62 | 0.62 | 0.61 | 0.60 | 0.58 | 0.64     | 0.64 | 0.63 | 0.62 | 0.60 |  |
|                      | 10.00             | 0.63 | 0.63 | 0.62 | 0.62 | 0.59 | 0.65     | 0.65 | 0.64 | 0.64 | 0.61 |  |

Intensity distribution curve



# MOISTURE-PROOF Luminaire



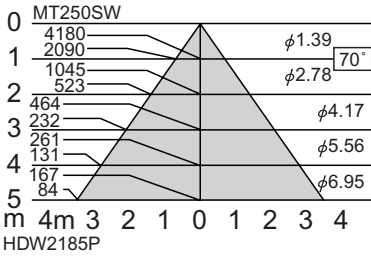
HDW2185P

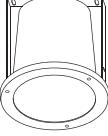
see

p.166

Lamp characteristics

| Lamp type | Lumens<br>( ℓ m) |
|-----------|------------------|
| MT250SW   | 19,000           |





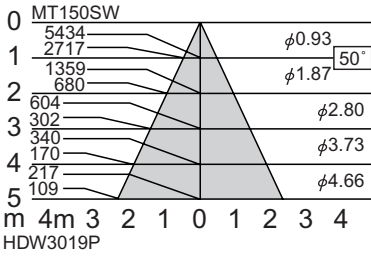
HDW3019P

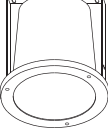
see

p.166

Lamp characteristics

| Lamp type | Lumens<br>( ℓ m) |
|-----------|------------------|
| MT150SW   | 11,000           |





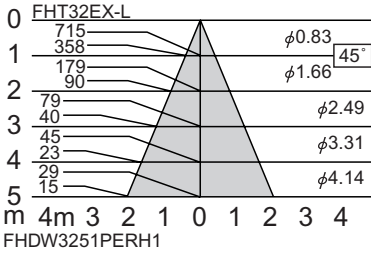
FHDW3251  
PERH1

see

p.166

Lamp characteristics

| Lamp type | Lumens<br>( ℓ m) |
|-----------|------------------|
| FHT32EX-L | 2,400            |





## **IWASAKI ELECTRIC CO., LTD.**

Head Office and International Business Division:  
12-4, Shiba 3-chome, Minato-ku, Tokyo 105-0014, Japan  
Tel: (03) 3454-1841 Fax: (03) 3454-1974  
e-mail: [iwasaki-ibd@eye.co.jp](mailto:iwasaki-ibd@eye.co.jp)  
Home page web-site... <http://www.eye.co.jp>

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