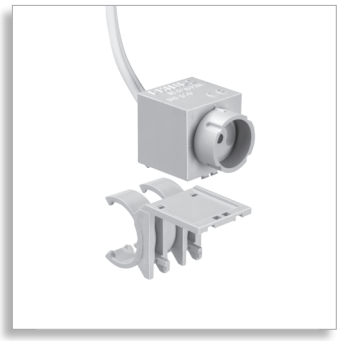

LuxSense™

MicroLuxSense™

ActiLume™

ActiLume™ Color

OccuSwitch™ Wireless

Dynadimmer™

Chronosense™

PHILIPS

Contents

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LuxSense™

Provides daylight regulation via a single miniature sensor

Philips LuxSense is a daylight sensor that can control up to 20 fixtures equipped with Philips Advance Mark 7 *0-10V* or EssentiaLine *0-10V* ballasts. The sensor measures the reflected light coming from the designated surface below, such as a desk or tabletop. It dims the lamp output when the light level exceeds the required level defined by the LuxSense sensor. The light level is easily adjusted via a simple dial.

Luxsense provides the benefit of a comfortable and controllable level of illumination throughout the working day. More importantly it can provide energy savings when installed near windows where natural illumination is usually greatest.

It is also designed to save energy by reducing excess light output that occurs from design factors of lumen depreciation. Lamps are dimmed slightly when new, but the light levels will then be raised over time to compensate for depreciation of lamp output that occurs in normal lamp aging.

State-of-the-art daylight sensor

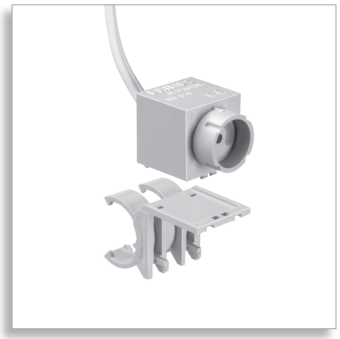
Provides a potential energy savings of up to 32% without sacrificing visual comfort*

Simple to use lighting control system

No specific lighting control training is needed to commission or adjust light levels or operation modes

Flexibility in design

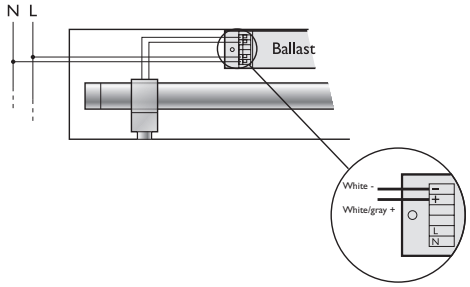
LuxSense can be incorporated directly into a fixture or alternatively clipped to a T5 lamp.**



* Galasiu, A.D. "Energy saving lighting control systems for open-plan offices: a field study," National Research Council Canada, v4 no1, July 2007 pg. 7-29

** External installation of class 2 wiring where allowed by local codes.

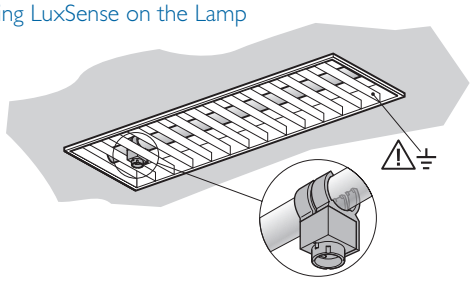
Installation of LuxSense into existing fixtures



Connecting diagram of the sensor to the ballast

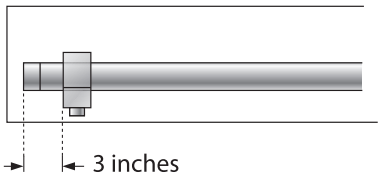
The maximum fixture temperature should always remain below 70°C. The sensitivity opening angle should never be obscured by the optics or any other part of the fixture. Metal optics should be properly grounded.

Mounting LuxSense on the Lamp



LuxSense mounted with a lamp clip (For use with T5 lamps only).

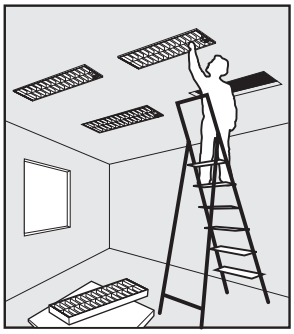
Not for use with T5/HO lamps.



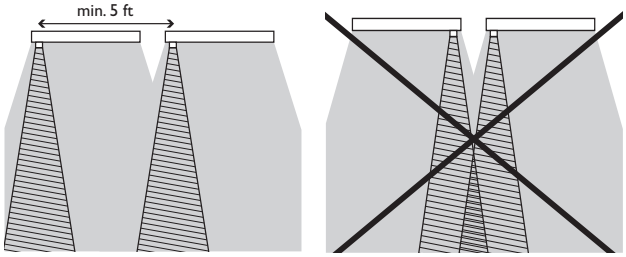
Position LuxSense 3 inches away from the end cap on the (electrical) "cold" side of the lamp. This is the side of the lamp that is connected to the terminals of the ballast that allows for the longest wiring to the lamp.

Installation of fixtures that include LuxSense

Install fixtures



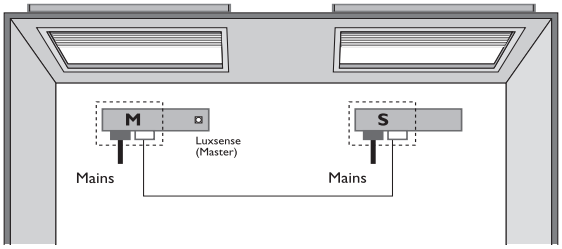
Interconnecting LuxSense Master fixtures (M) to Satellite fixtures (S)



Interconnecting LuxSense Master fixture (M) to Satellite fixture (S).

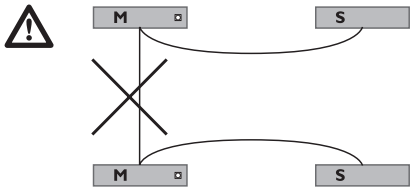
Up to 19 satellite fixtures can be looped through to 1 Master fixture, if all of them are equipped with Philips Advance Mark 7® *0-10V* or EssentiaLine *0-10V* ballasts.

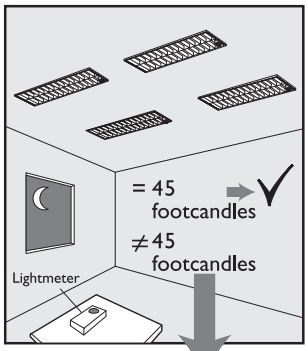
Satellite fixture should have similar daylight conditions to the master.



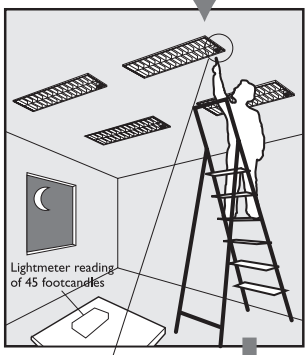
Connect 0-10V "+ to +" and "– to –". (See diagram above)

Never loop through 2 Master fixtures!

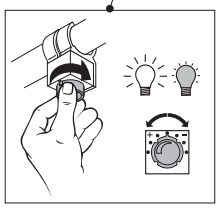




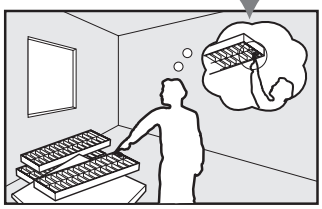
Measure the light level under each LuxSense sensor with no or negligible daylight contribution.



If needed, turn the diaphragm until the required light level is reached (with no or negligible daylight contribution).



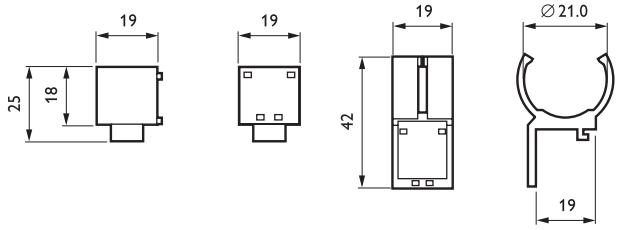
See diagram on the left to manually adjust the light levels.



You can easily copy the new set point to other rooms when similar daylight and reflector conditions exist.

Warning: the required light level should be no more than 30% lower than the average installed light level, without daylight contribution (e.g. 55 footcandles installed, adjustment down to 39 foot candles is possible). Please note that LuxSense is not designed for maintaining a constant light level.

Dimensions in mm



Technical data

Operation conditions

Ambient temperature	5°C to 55°C
Rel. humidity	15% to 90%, no condensation
Max. temperature of clip to lamp contact surface	70°C

Storage conditions

Ambient temperature	-25°C to 70°C
Rel. humidity	5% to 95% at 25°C

Connection
20 AWG, flying leads, length 27 inches.

Color coding of cable:
white/grey +
white –
Connecting the wires in the reverse will result in minimum light output.

Housing

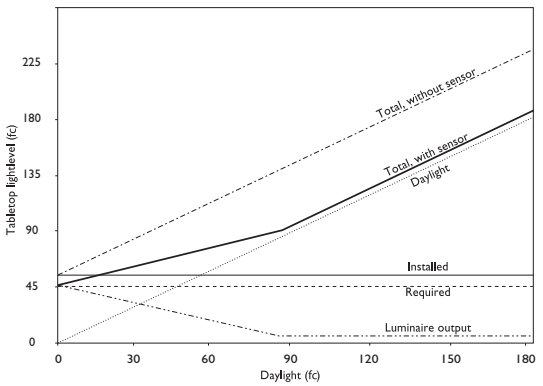
Material	ASA
Color	light grey (similar to RAL 7035)

Weight/dimensions
Approx. 20 grams, 25x21x19mm.

Control signal input
- operating voltage: 1.5 - 10VDC
- operating current sink 100µA-3mA (sufficient for 20 0-10VDC ballasts)
- control voltage variation: < 0.5V over current and temperature range
- max. input voltage (maximum rating): 15 Vdc
- max. current sink (maximum rating): 50 mA

Optical characteristics
It is assumed that the reflection in a room is such that a light level of 45 fc on a table (2.6 ft. in height) will result in 2.3 fc seen by the controller at ceiling height (8 ft.) under a viewing angle of 45°
- The opening angle can be adapted by the diaphram control, realizing an adjustment factor between 1/3 and 3.

Controls characteristics
LuxSense compensates approximately for 50% of the added light (simulated and measured with a fluorescent light source). See graph below. In case of a natural light source, the light compensation is higher than 50%.



LuxSense controls characteristics

MicroLuxSense™

Provides daylight regulation via a single miniature sensor

MicroLuxSense is a DayLight Regulation option (DLR) for luminaires equipped with a Philips Advance Mark 7 *0-10V* or EssentiaLine *0-10V* ballasts. The sensor measures the reflected light coming from the surface below. It dims down the lamp output when the light level exceeds the required light level defined by the light sensor set point.

MicroLuxSense can be installed in the luminaire either mounted between the louvers or recessed in the housing.

Connect to the 0-10VDC control input of the Mark 7 or EssentiaLine ballast

Provides a potential energy savings of up to 32% without sacrificing visual comfort*

Maximize visual comfort

Automated regulation of artificial lighting allows for task illumination to be maintained.

Arrives from the factory in a standard preset configuration

No need for complex commissioning. Field adjustment possible if needed.

Regulate up to 20 luminaires

Utilize one sensor for continuous rows or multiple sensors with single luminaires

Uses common sensor footprint with ActiLume and ActiLume Color

One luminaire design now has the capability to provide various control options

* Galasiu, A.D. "Energy saving lighting control systems for open-plan offices: a field study," National Research Council Canada, v4 no1, July 2007 pg. 7-29

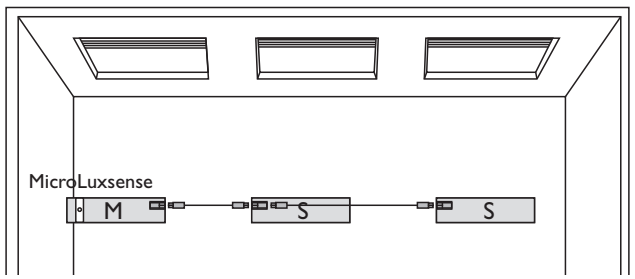
Installation

Mount the luminaire with MicroLuxSense daylight Regulation option.

Interconnecting MicroLuxSense Master fixture (M) to Satellite fixture (S).

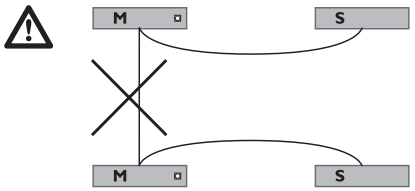
Up to 19 satellite fixtures can be looped through to 1 Master fixture, if all of them are equipped with Philips Advance Mark 7® *0-10V* or EssentiaLine *0-10V* ballasts.

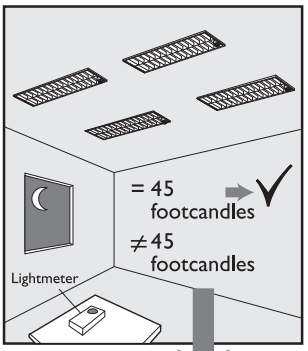
Satellite fixture should have similar daylight conditions to the master.



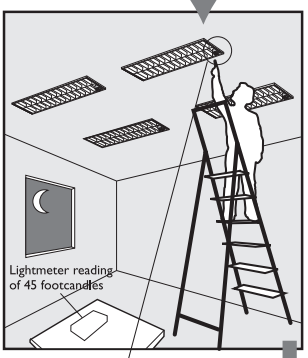
Connect 0-10V "+ to +" and "– to –". (See diagram above)

Never loop through 2 Master fixtures!

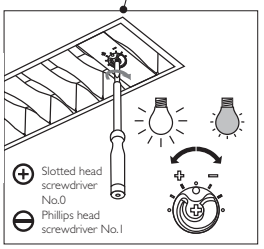




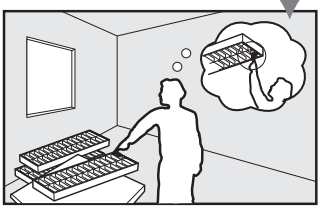
Measure the light level under each MicroLuxSense sensor with no or negligible daylight contribution.



If needed, turn the diaphragm until the required light level is reached (with no or negligible daylight contribution).



The setpoint of the sensor can be changed manually by using a screwdriver to turn the control ring on the front, which influences the diaphragm. The housing is equipped with an indication of the default setting.



You can easily copy the new set point to other rooms when similar daylight and reflector conditions exist.

Warning: the required light level should be no more than 30% lower than the average installed light level, without daylight contribution (e.g. 55 footcandles installed, adjustment down to 39 foot candles is possible). Please note that MicroLuxSense is not designed for maintaining a constant light level.

General Specifications

Technical data

Operation conditions

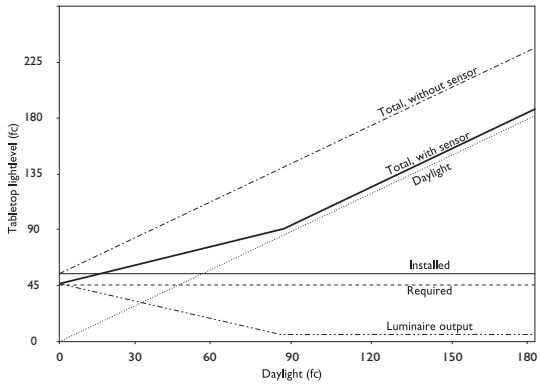
Ambient temperature	5°C to 55°C
Rel. humidity	5% to 90%, no condensation
Max. allowed temperature Anywhere on the sensor housing	55°C

Storage conditions

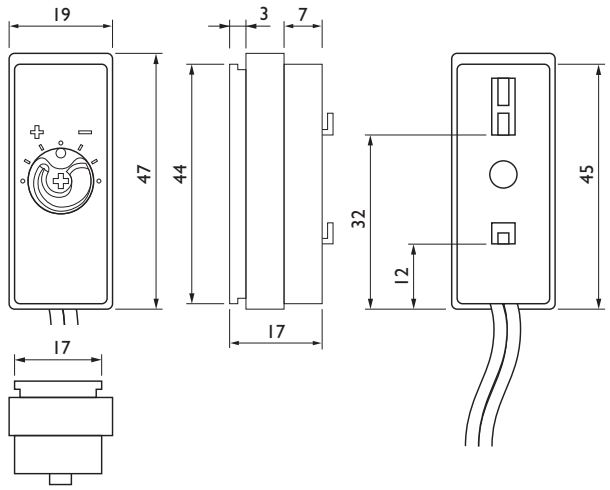
Ambient temperature	-25°C to 70°C
Rel. humidity	5% to 95% at 25°C
Connection	20 AWG, flying leads, length 27 inches.
Color coding of cable	white/grey +, white –. Connecting the wires in the reverse will result in minimum light output.
Housing material	Polycarbonate UL94 V-0
Color bottom part	Ultra Dark Grey (similar to RAL 7024)
Color cover part	Light Grey (similar to RAL 7035)
Weight/dimensions	Approx. 25 grams, 47x19x19 mm
Control signal input	
operating voltage	+1.5 - +10Vdc
operating current sink	100µA-3mA (sufficient for 20 Philips Advance Mark 7 *0-10V* or EssentiaLine *0-10V* ballasts)
control voltage variation	< 0.7V over current and temp. range
max. input voltage	15 Vdc (maximum rating)
max. current sink	50 mA (maximum rating)
Optical characteristics	- It is assumed that the reflection in a room is such that a light level of 45 fc on a table (2.6 ft. in height) will result in 2.3 fc seen by the controller at ceiling height (8 ft.) under a viewing angle of 45°
	- The opening angle can be adapted by the diaphram control, realizing an attenuation factor between 1/3 and 3.

MicroLuxSense control characteristics

The control characteristics are described in the graph. The light sensor roughly compensates for 50% of the ingressing daylight by dimming the artificial light output, until the minimum output is reached.



Dimensions in mm



ActiLume™

An easy to use and install lighting control system

ActiLume is a revolutionary new plug-and-play daylight/occupancy lighting system that virtually eliminates any worries of complicated programming procedures. Commissioning is easily achieved by pushing a button on the sensor that calibrates the light level and switches the controller between open plan and private office modes.

Actilume consists of a ready to use sensor and control unit to be built directly into a luminaire. This system is designed to deliver maximum visual comfort and potential energy savings of up to 65%* to the commercial sector.

The relative light output of the luminaire is defined by its placement within the space (window or corridor side of the office). The controller switches the lamps in a fixture automatically on and off based on occupancy and regulates the light output according to the amount of daylight entering the space. The system is operated with Philips Advance ROVR™ electronic ballasts.

State-of-the-art daylight/occupancy sensor
Provides a potential energy savings of up to 65% without sacrificing visual comfort*

Simple to use lighting control system
No specific lighting control training is needed to commission or adjust light levels or operation modes

Two pre-programmed application modes
Private or open plan modes can be selected via a simple push of the service button

* Galasiu, A.D. "Energy saving lighting control systems for open-plan offices: a field study," National Research Council Canada, v4 no1, July 2007 pg. 7-29

ActiLume
Controller LLC 1654
Sensor LRI 1653

General Specifications

Plug & Play control models

- Mode 1, Private Office: Lights switch off after 15 minutes, saving energy in a private office situation.
- Mode 2, Open Office: Lights dim after 15 minutes, but are not switched off until unoccupied for 2 additional hours. This avoids dark areas in an open plan office.

Technical data for installation, mains operation

Rated mains voltage	120-277 V
Voltage tolerance:	+/- 10% 108-305 V
Mains frequency	50/60 Hz
Input power (system)	<2W
Maximum number of ballasts	9
Maximum number of extension sensors	2

Technical data for design and mounting in fixtures

Operating conditions

Ambient temperature	0 °C to 55 °C Sensor and controller
Relative humidity	20% to 85%, no condensation

Storage Conditions

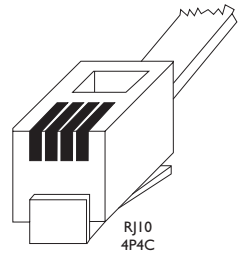
Ambient temperature	-25 °C to +85 °C
Relative humidity	10% to 95%

Controller / Sensor Specifications

Sensor LRI 1653

Connection

RJ-10 4-Pole
Fixed to LRI1653 3 ft. cable



Housing (casing)

Material

Polycarbonate UL94 V-0

Mounting
The sensor housing has two mechanisms that may be used for mounting:

1. Latching tabs on the back of the sensor
2. Four small ridges, two on each long side of the sensor

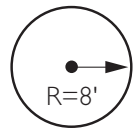
Safety, basic insulation

> 1500 V

When placed at a height of 9 ft. the following values are valid:

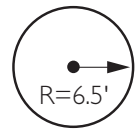
Infrared receiver

Signal Range



Light sensor

Monitoring range of 2.5 to 35 foot-candles at sensor
Monitoring area

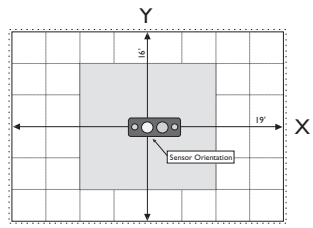


Movement detector

Passive Infra Red (PIR)

Detection area at 9 ft. height:

- 13x13 ft. (sensitive for small movements)
- 20x16 ft. (sensitive for larg movements)



Maximum height PIR: 11 ft.
X-angle PIR: 100°
Y-angle PIR: 82°

Lighting Controls

Set the reference light level adjustment:

Pressing the service button (>3 seconds) until the lamp gives a light flash (wink) will start the automatic calibration procedure for light level adjustment. Step aside or remove stepladder, if used.

The light output of the luminaires connected to window row is set to 80%. The light output of the luminaires connected to a corridor row is set to 100%.

After 30 seconds the ActiLume controller is saving the actual light level as new reference light level (indicated by a second flash). This 30 seconds time delay is required to have sufficient time to step aside or remove a stepladder.

Select the user mode (application):

The user mode can be toggled between mode 1 and 2 by means of a short push on the service button (<3 seconds). [Fig. A]

After the service button has been released the lamp will flash to indicate the selected user mode: 1 flash = User mode 1 (Private office application) 2 flashes = User mode 2 (Open plan office application). The flash count begins after the lamp has been dimmed. Count only the short lamp pulses and not the final lamp level.

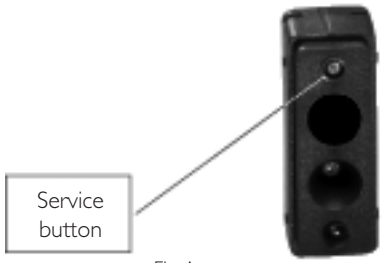


Fig. A

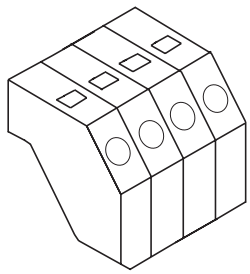
Controller unit LLC 1654

Window and corridor output	In user mode 1 and user mode 2 the system is programmed as one channel with two zones. When enough daylight enters the room, the amount of artificial light will be automatically reduced on the window row and the amount of light on the corridor row will be offset with 30% more light.
Safety, basic insulation	> 1500 V
Material	Polycarbonate UL94 V-0
Mounting	The controller housing contains snap-in pins for quick fixation. The diameter of the fixation holes should be maximum 4.5 mm. The snap-in pins are designed for a metal thickness of maximum 0.8 mm. The maximum distance between the fixation holes is 78 mm.

ActiLume / Sensor

Connector type

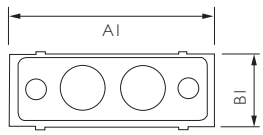
Connection wiring is greatly simplified through use of POKE-IN connectors.



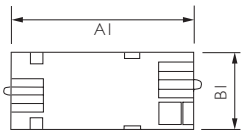
Wire cross-section

22 AWG - 18 AWG solid or stranded with tinned ends
Strip length 3/8"

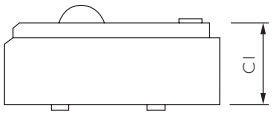
Dimensions in inches



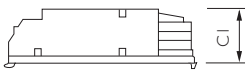
Sensor LRI1653



Controller LLC1654



Sensor LRI1653



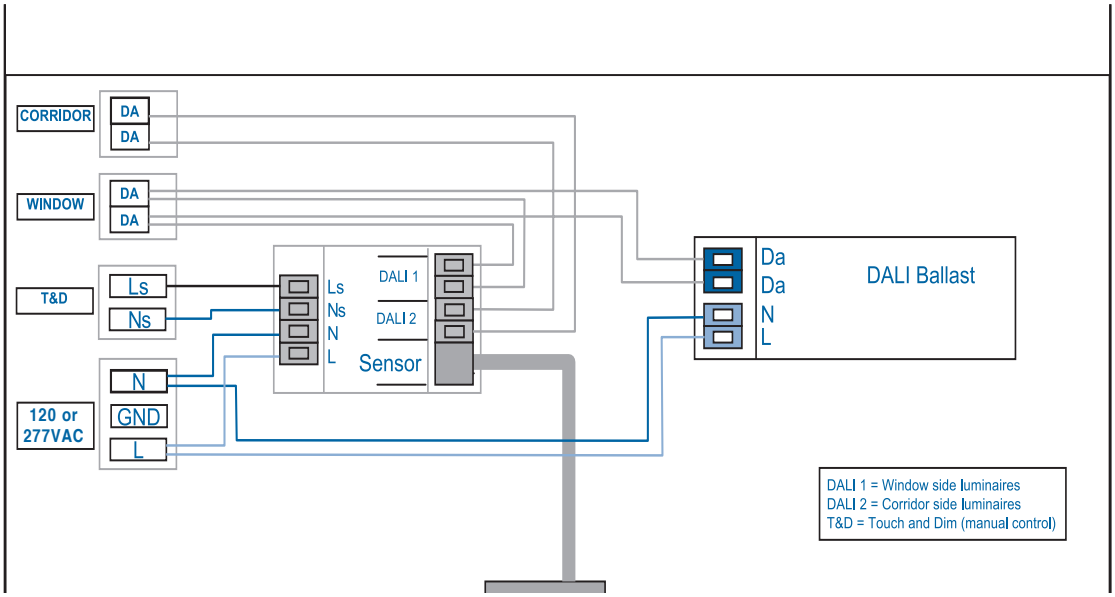
Controller LLC1654

	A1	B1	C1
Sensor LRI 1653	1 3/4	5/8	5/8
Controller LLC 1654	3 1/8	1 3/16	7/8

Dimensions in inches

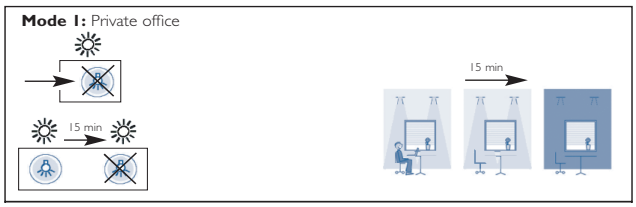
ActiLume
Controller LLC 1654
Sensor LRI 1653

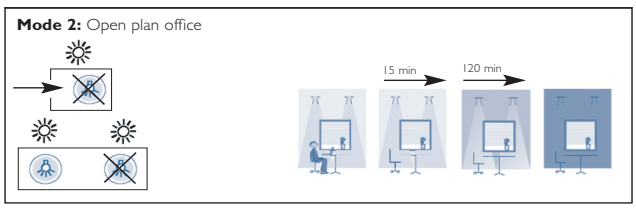
ActiLume / Sensor



ActiLume Modes

Besides the private office and open plan office modes, in the future it will be possible to recall additional (yet to be determined) application modes. This will make the ActiLume system very flexible for all different kinds of applications. An advanced remote control will be added in the future to allow users to select and store other specific modes to meet the space needs.





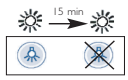
Presence - Area is occupied.

Absence - Light stays on. (internal timer is activated to clock absence time)

Absence - Light dims down to a background level (internal timer is activated to clock absence time) or surrounding light at 100%.

Absence - Light switched off.

When enough daylight is detected, the lights will NOT be switched on automatically when someone enters the room.



When enough daylight is detected (measured over 15 minutes), the lights will automatically be switched off.

ActiLume™ Color

A true plug and play color management system for the retail, hospitality, and architectural markets

Philips ActiLume Color is a stand-alone, lighting control designed for dynamic and static color effects in small, medium and large sized applications. This plug and play color system makes commissioning easy; simply wire the system and you can start color changing with the infrared remote control. With no specific training needed, the operator can quickly recall ten pre-programmed dynamic color changing sequences and ten pre-programmed static scenes. This system has been designed for all indoor applications within retail, hospitality, and other public spaces, to attract people to specific areas and to enhance areas with color for scene setting. In addition, for maximum flexibility it is compatible with many light sources including LEDs and fluorescent lamps.

A maximum of 10 color luminaires can be controlled per ActiLume Color controller via the DALI broadcast output ports. You can also synchronize up to 60 ActiLume Color controllers (or 600 RGB fixtures) simultaneously. This system can also be operated in larger and existing DALI or DMX backbone based networks.

The ActiLume Color system is available with the ActiLume Color Programming Kit. Included in the kit is an easy to use software called ActiLume Color Studio, that allows you to create your own static colors or dynamic color sequences off-site and then upload them to the color controller during on-site commissioning.

Easy to use color management system

Plug and Play controller requires no specific lighting controls training

State-of-the-art controller

Provides the functionality of all input lighting control signals from various input devices (remote control, DALI interface, etc).

Design flexibility

Can be used in one fixture or up to 10 interconnected fixtures as well as the ability to be networked with up to 60 other controllers

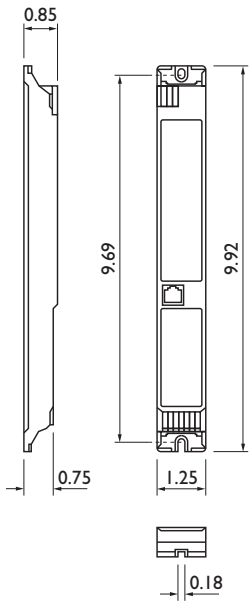
ActiLume Color System

- It can be used for both dynamic sequences from very fast to very slow (24 hr cycle), and static colors that are selected to support many applications including seasonal fashion, merchandise change, a specific atmosphere in a bar or restaurant or to enhance an architectural design.
- It offers 10 pre-programmed sequences corresponding with seasons (Christmas, autumn) and daily ambiance (nature, sunset).

Plug and Play control

- Simple systems with one ActiLume Color controller can be operated by DALI push button controls or remote control. The Philips Advance ROVR ballasts are directly connected to the Red, Green, and Blue outputs without any commissioning.

Dimensions in inches



Technical data

Compliances and approvals

Safety Standards	NEMA 410 UL935
Quality standard	ISO 9001
Environmental standard	ISO 14001
Approval marks	ENEC: 72/23/EEC (low voltage) 89/336/EEC (electromagnetic compatibility) CSA UL-recognized (UL1310 for class II power supplies) CE marking

Technical data for installation

Mains operation	Rated mains voltage 120-277 V
With tolerances for operation	+/- 10%
Mains frequency	50/60 Hz
Output power (system)	
R output	Maximum 10 DALI loads (20 mA)
G output	Maximum 10 DALI loads (20 mA)
B output	Maximum 10 DALI loads (20 mA)
Ext output	Maximum 40 DALI loads (80 mA)
DMX	64 mA
Sensor	5 mA

Technical data for design and mounting in fixtures

Operating conditions	Ambient temperature +5 … 50 °C
Controller and sensor	
Rel. humidity operating	20% … 85%, no condensation
Tcase	75 °C
Storage Conditions	-25 … +70 °C
Rel. humidity storage	10% … 95%
Lifetime	10% failure rate at 50k hrs with Tcase of 75 °C
DMX operation	
Operating temperature	+5 … 55°C
Protocol standards	ANSI 1.11-2004 (USITT DMX512-A) ANSI 1.20-2006 (RDM)
Connector	8-position modular connector (RJ45)
Transient/Burst Immunity and Surge	IEC 61000-4-4/5, level 2 on IO: 0.5kV UL840: over voltage category II (<50 V): 0.5 kV
Network requirements	According to EIA-485-A specification

ActiLume Color Controller unit LLC1670

In standard operation and based on the pre-programmed colors, ActiLume Color calculates the different dim levels for the Red, Green and Blue lamps, and the fading (dim levels) in between two color points. On the extended output, additional ActiLume colors can be operated within the same sequences or scenes.

In DMX operation, the real time DMX commands are directly translated into DALI commands on the output side.

ActiLume Color Inputs/Outputs

4x DALI current limited outputs	DALI-R: 10 DALI loads max DALI-G: 10 DALI loads max DALI-B: 10 DALI loads max DALI-EXT: 40 DALI loads max (mentioned as group RGBE_DA)

1x ActiLume Multi-Sensor input, labeled SENSOR

1x RS-485 connection, based on DMX (RDM)
The controller only supports the RDM address setting. The RDM requires bidirectional RS-485 (half duplex) and a factory programmed device unique ID.

Transmission load terminators	32 devices, with
Transmission level range common	0 ≤V≤+6 with respect to
Transmission frequency	250 kBit/s ± 2%
Reception level range common	+12/-7 with respect to
Reception frequency	250 kBit/s ± 2,5%
Turn around time of DMX transceiver	176 µs after transmission of the last stop bits. When a DMX-RDM controller expects a response, the device must place its transmitter in high impedance state within 88 µs after transmission of the last stop-bit (of the last transmitted byte). Time between slots (data-bytes) may not exceed 76 µs

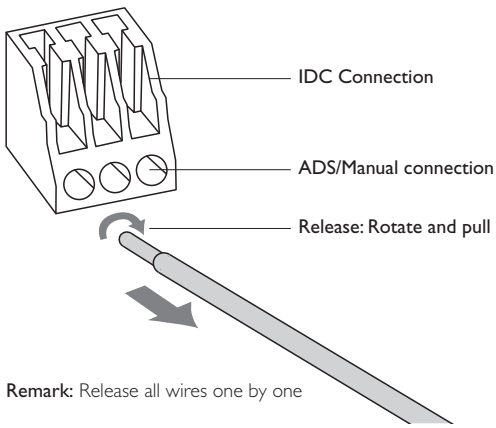
1x DALI passive input, (DALI GP)

Transmit:	
Short circuit current	Max 250 mA
High-level range	11.5 … 20.5 V
Low-level range	–4.5 … 4.5 V
Rise/fall time	10 …50 µs
Transmission frequency	1200 Hz +/- 5%
Receive:	
High-level range	9.5 … 300 V
Low-level range	–6.5 … 6.5 V
Rise/fall time	10 …50 ms (mains), 0 …100 µs (DALI)
Reception frequency	50/60 Hz (mains), 1200 Hz +/- 10% (DALI)

1x Universal mains input

Glow wire test	850 °C / 5 s
Safety, basic insulation	< 2000 V
Material	Polycarbonate + ABS Bay blend KU-2 1514 UL94 V-0
Housing color	Dark gray
Mounting	The minimum distance between the fixation holes is 9.29 inches.

Connections for DALI and mains



Remark: Release all wires one by one

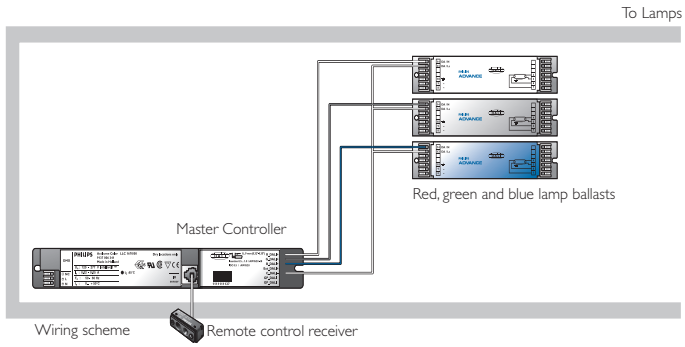
IDC Connection	20 AWG solid/18 AWG stranded
ADS or manual push	20 AWG - 18 AWG solid wire
Strip length	0.32 inches – 0.35 inches

User interfaces

Remote control	IRT1670 needs to be pointed to the sensor (IRR1654, or IRR8125) for starting dynamic sequences or static scenes.
Philips DALI	Broadcast commands will start pre-programmed sequences/static colors

Advanced color selection remote control IRT1670

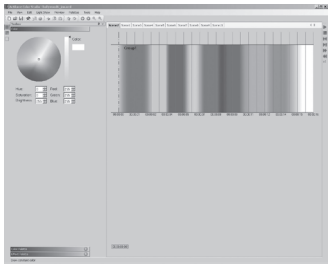
This remote control can be used for selecting pre-programmed color sequences and static colors. These programmed dynamic sequences can be played faster (in half of the time), or slower (factor 3 or 6 slower). Static colors can be selected in hue and dim level and stored into the controller. Batteries are included.



ActiLume Color Programming Kit LCK1671

Consists of:

A. ActiLume Color Studio.
   An intuitive software for programming sequences into the ActiLume Color controller allowing for direct preview, light plan overview, and grouping.
B. RS232 gateway the RS232-DALI gateway translates all communication between the personal computer and the DALI network. The connection between PC and the DALI network is only necessary when the sequences are uploaded into the ActiLume Color Controller. The gateway requires a 24V power supply, not provided.
C. Interconnecting cable for the PC/Gateway.



Ordering and Packing data

Type	Description	Packaging (PCS)
LLCI670	Controller	24
IRR1654	IR Sensor with cap	24
IRR8125	IR Sensor invisable	1
IRT1670	Remote Control	18
LCK1671	Programming Kit	1

IRR 1654 with cap
IRR 8125 invisible

Connection	RJ-10 4-Pole 100 cm cable
Housing (casing)	
Material	Polycarbonate UL94 V-0
Glow wire test	950 °C / 5 s
Safety, basic insulation	< 2000 V
Infrared receiver	RC5 signal
	Minimum range 20 m^2
Cap material IRR1654	Polycarbonate, RAL7035

IRR 8125

IRR 1654

OccuSwitch™ Wireless

A simple, easy, and effortless way to create a more sustainable work environment

The Philips OccuSwitch Wireless Occupancy Sensor is an advanced wireless system that automatically turns lights off when a workspace is unoccupied, saving energy and helping to create a more sustainable work environment. The system consists of a wireless battery-powered ceiling mounted sensor that communicates to a wall switch. Multiple sensors and switches can be used for additional coverage.

Using a combination of passive infrared (PIR) technology and advanced logic for detecting major and minor motion, the sensor recognizes when the room is occupied (or unoccupied), helping to eliminate false triggers. The system adapts to accommodate varying user patterns with built-in intelligence to automatically adjust the shut off time delay.

The Philips OccuSwitch Wireless Control System is a unique indoor plug and play system perfect for retrofits and new installations in commercial applications including private offices, conference rooms, restrooms, breakrooms, copyrooms, storage areas, and lobby areas. Uncompromising on style, the functional design allows for easy setup and adjustments to system settings via front accessible buttons.

Easy-to-install retrofit
Wireless controls means no sensor wiring providing quick set-up times, minimizing disruptions

Advanced occupancy sensing
Helps eliminate false triggers which optimizes energy savings

Sleek Low Profile Design
Stylish low-profile design easily blends into existing and current office designs

10-year battery life design*
Provides worry free maintenance, just install and leave for long lasting performance

Manual-On/Auto-Off Capability
Compliant with applicable California Title 24 energy efficiency code requirements

* Product has a 2-year limited warranty. See page 8-18 for more details.

OccuSwitch Wireless
Occupancy Sensor LRM 1742
Switch LRM 1720

Wireless Occupancy Sensor Specifications

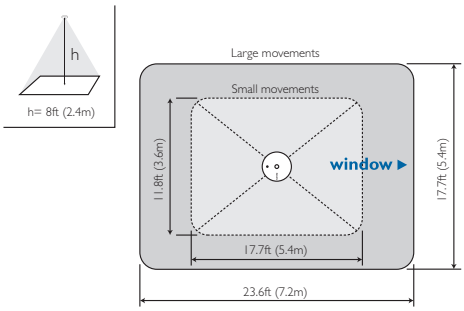
Detection Technology
Passive Infrared (PIR)

Mounting Height
Can be installed for up to 12ft ceiling height

Detection Area
Will vary based on ceiling height.
For a typical ceiling height of 8 ft (2.4m):

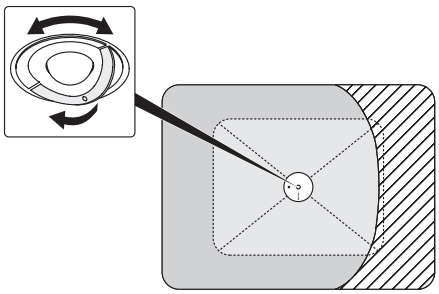
Major motion coverage	17.7 x 23.6ft (5.40m x 7.20m)
Minor motion coverage	11.8 x 17.7ft (3.60m x 5.40m)

Larger areas will require multiple sensors.



The orientation of the window arrow on the mounting plate aligns the direction of the rectangular detection area.

Rotating Shield



During installation the retractable sensor shield can be rotated to partially mask the sensor's field of view and prevent unwanted movement detection.

Wireless Network Protocol
ZigBee Pro 2.4GHz
Universal license free band

Wireless Compatibility
Can be connected with multiple OccuSwitch Wireless Wall Switches. Up to 10 sensors and switches can be networked together.

Wireless Range
Switch to Sensor: 50ft (17m)

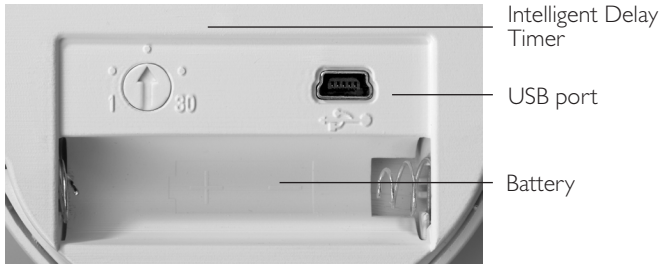
Switch to Switch (same plane): 18ft (6m)

Switch to Switch (line of sight): 50ft (17m)

Battery
Standard AA size 3.6V DC Lithium-thionyl chloride (Included)
10-year battery life design. Actual battery lifetime will vary based on application and occupancy activity.

Intelligent Delay Timer
The switch-off delay can be manually set between 1 and 30 minutes using the dial on the sensor. Once system is operational, the initial setting is automatically adjusted to the user's occupancy pattern

USB Port
Incorporates ability for future field firmware upgrades



Dimensions

Diameter	3.3 inches (84mm)
Height (with ceiling plate)	0.98 inches (25mm)

Operating Conditions

Temperature	41°F – 104°F (5°C – 40°C) For Indoor use only.
Humidity	20% – 85%, non-condensing
Environmental Compliance	RoHS
Regulatory Compliance	UL, CSA, FCC, California Title 24 Energy Efficient Standards

OccuSwitch Wireless
Occupancy Sensor LRM 1742
Switch LRM 1720

Wireless Wall Switch Specifications

Operating Voltage	Universal Input 120V AC or 277V AC, 60 Hz
Load Rating	
Electronic Fluorescent Ballast:	120V / 1300VA 277V / 1300VA
Electromagnetic Fluorescent Ballast:	120V / 1300VA 277V / 1300VA
Incandescent lamps	120V / 800W
Motor load	120V / 0.25HP
Wireless Network Protocol	ZigBee Pro 2.4GHz Universal license free band

Wireless Compatibility

Can be connected to multiple OccuSwitch Wireless Sensors and Switches. Up to 10 sensors and switches can be networked together.

Stand alone or 3-way switching

Each Wireless Switch can be configured to operate as a standalone switch or a 3-way switch.

By default the switch will act as a stand-alone switch: the switch only controls the load that is connected to it.

When configured as a 3-way switch, all loads are controlled from any switch.

USB Port

Incorporates ability for future field firmware upgrades

Color	White Almond
Dimensions	
length x width x depth	4.13 x 2.56 x 1.79 inches (105 x 65 x 45mm)

Designed to fit in a standard single-gang wall box.
Can also be installed in a multi-gang configuration.

Operating Conditions	
Temperature	41°F – 104°F (5°C – 40°C) For Indoor use only.
Humidity	20% – 85%, non-condensing
Environmental Compliance	RoHS
Regulatory Compliance	UL, CSA, FCC, California Title 24 Energy Efficient Standards

Product Warranty

2-year limited warranty. Go to our website for up-to-date warranty information on this product: www.philips.com/advancewarranty.

Type	Description	Quantity
LRM 1742/00	OccuSwitch Wireless occupancy sensor	1
LRA 1720/00	OccuSwitch Wireless wall switch (White color)	1
LRA 1720/01	OccuSwitch Wireless wall switch (Almond color)	1

For complete ordering information, contact your local sales representative.

Dynadimmer™

A simple, easy to install outdoor controller for electronic lighting systems

The Dynadimmer is a stand-alone dimming control with a 0-10 volt dimming output that can be used in combination with a compatible dimmable electronic driver. Easy to install into a luminaire or pole without any need for external control components or additional signal wiring, it is fully flexible and can be reprogrammed at any time to fit new lighting demands if changes are needed.

The Dynadimmer can be configured to dim to any level that the end-user wishes at set periods, with a maximum of five set periods. Both the levels and the time period are configured with an easy-to-use software tool, which also calculates and displays the energy savings that may be obtained from a particular dimming schedule.

The designed configuration is then loaded into a standard personal computer that will be used later to program the Dynadimmer via a USB cable. This configuration can be modified at any time by down-loading a new dimming schedule to adapt the lighting to a new situation or simply fine-tune the savings.

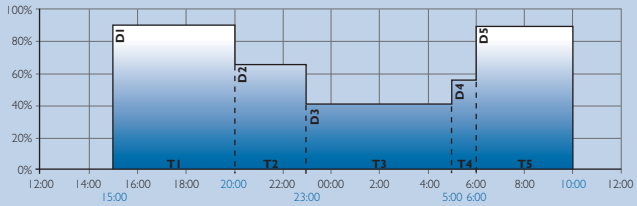
The five time periods and five dim levels guarantee an optimal schedule whether the application is an industrial area, parking lot, residential area or road. The Dynadimmer can help to meet certain road/ area-lighting requirements and standards, which entail the introduction of illumination levels that take account of road use and/or traffic flows.

Energy savings and reduced light nuisance through dimming

Small size that can fit within almost any luminaire

Easy-to-use software that can provide a forecast of energy savings

Energy savings may be are maximized with the Dynadimmer. The fact that any level can be configured at any time makes very low levels late at night possible, high levels at peak times (though not necessarily 100%) and medium levels during the transitional periods. For example, a dimming schedule like the one shown in the picture projects an overall yearly energy saving of 40%.



Avaialble in Q2, 2010 – Contact your local sales rep or agent for more details.

Chronosense™

A simple, easy to install outdoor controller for magnetic lighting systems

The Chronosense is a stand-alone dimming control with a 1-step dim control output that can be used in combination with one multi-wattage electro-magnetic ballast or additional dim ballast. Easy to install into a luminaire or pole without any need for external control components or additional signal wiring, it is fully flexible and can be reprogrammed at any time to fit new lighting demands if changes are needed.

The time period for which the Chronosense applies the 1-step dimming can easily be changed by means of dipswitches in the unit and can be modified at any time in the future. To calculate the hours for which it should operate, Chronosense counts the time that the lights were turned on and determines a mid-point, which is used as an intelligent reference point.

The Chronosense comes ready to operate with a factory pre-set value of a 6-hour dimming period. The six-position dipswitch sets both mode of operation (test/normal) and the appropriate dimming period. Switches 1-3 set the dim hours before the midpoint of the night, switches 4-5 the dim hours after and the sixth sets the mode of operation.

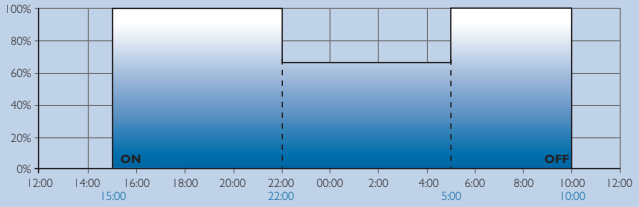
The Chronosense is suitable for new installations as well as retrofit solutions for electro-magnetic controlled luminaires. The flexible dipswitch settings guarantee an optimal schedule whether the application is an industrial area, parking lot or residential area. The Chronosense can help to meet certain Outdoor lighting requirements and standards, which entail the introduction of illumination levels that take account of use and/or traffic flows.

Energy savings and reduced light nuisance through dimming

Easy to install and flexible to reprogram

Suitable for new installations as well as retrofit

The energy savings with Chronosense are determined by the ballast combination used. A typical configuration with a multi-wattage 100/150W ballast projects an overall yearly energy saving of 20%. The ballast determines the dim level, but using the combination with the multi-wattage 100/150W it is usually about 65% of full power (as shown in the picture).



Avaialble in Q2, 2010 – Contact your local sales rep or agent.

Notes