



GO GREEN 



4 LED Solutions



Retrofit



12v-120v

R

Module



12v-277v

M

Flat Panel



12v-277v

P

STRIP



12v-277v

S

LED EXTERIOR ILLUMINATION

Why Choose FOCUS for LED?

- FOCUS' proprietary **LED** technology is superior to other exterior **LED** lighting products because of our ability to match the warm white color of halogen bulbs and our consistent light output over a wide range of voltages.
- Now with 4 different types of technologies; **Retrofit, LED Modules, Flat Panel LEDS & LED Strip**, FOCUS offers you more **LED** solutions than anyone else.
- No special installation or wiring is required with FOCUS Plug & Play **LEDS**. It is as easy as changing the light bulb.
- FOCUS **LEDS** are manufactured to our specification for a consistent color range of 2700K - 3000K.
- We offer a complete line of **LED** products including fixtures, light sources and transformers.
- FOCUS **LEDS** are designed to be used in outdoor environments in any climate as well as indoors.

Energy Efficient and Environmentally Friendly

- Long Term Cost Savings - **LEDS** on average use 75% less energy than traditional incandescent or halogen bulbs.
- Have More Fixtures and Use Less Power - FOCUS **LED** transformers are smaller so they use less power and are designed to allow for 4 to 5 times more fixtures per run.
- FOCUS **LEDS** offer up to 50,000 hours average life compared to 2,000 hours for a regular halogen bulb. Not having to replace halogen light bulbs frequently will save you both time and money.
- Environmentally Friendly - **LEDS** are mercury free.

**Area • Path • Well
Directional • Step
Underwater • Surface
Brick • Hanging**

You name the application and Focus has the LED technology for you to

GO LED NOW! 



PL-19-LED2-BAR



NEW

AREA LIGHT FLAT PANEL LEDS

Completely Re-Engineered Hub

For Use With 4w LED Panel

The Most Efficient LED Area Lighting On The Market

ONLY FROM FOCUS

4w / 300 Lumens/ Optional 120v to 277v*

Remote Driver Supplied

Brighter Than a 20w Halogen

Available in 3000K Warm White or

5200K Cool White

50,000 Hour Round LED Panel

5 Year Warranty

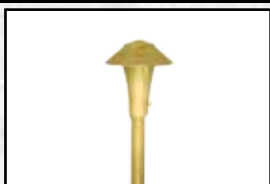


*Must use FA-26 mounting post or junction box for 120v-277v applications

AVAILABLE ON THE FOLLOWING FOCUS AREA LIGHT MODELS



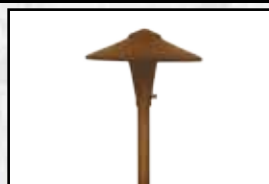
AL-01-LEDP



AL-01SM-LEDP



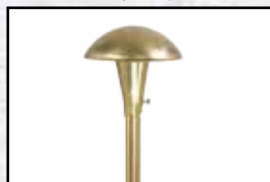
AL-03-LEDP (All Models) *



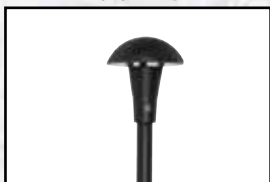
AL-04-LEDP



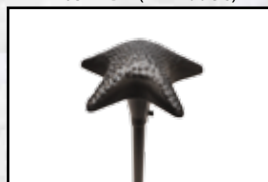
AL-05-LEDP



AL-06-LEDP



AL-06SM-LEDP



AL-07-LEDP



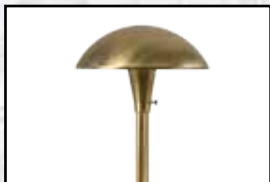
AL-09-LEDP *



AL-10-LEDP *



AL-10LGP-LEDP *



AL-12-LEDP



AL-14-LEDP



AL-15-LEDP



AL-15SM-LEDP



AL-16-LEDP



AL-17-LEDP



AL-17SM-LEDP



AL-17SM2-LEDP



* Hub not required



NEW

PATH LIGHT FLAT PANEL LEDS

Newly Engineered Bracket

For Use With 4w LED Panel

The Most Efficient LED Area Lighting On The Market

ONLY FROM FOCUS

4w / 300 Lumens/ Optional 120v to 277v*

Remote Driver Supplied

Brighter Than a 20w Halogen

Available in 3000K Warm White or

5200K Cool White

50,000 Hour Round LED Panel

5 Year Warranty

*Must use FA-26 mounting post or junction box
for 120v-277v applications

AVAILABLE ON THE FOLLOWING FOCUS PATH LIGHT MODELS



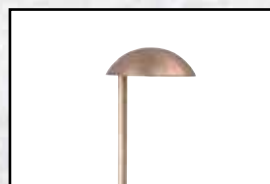
PL-01-LEDP



PL-03-LEDP



PL-04-LEDP



PL-05-LEDP



PL-06-LEDP



PL-09-LEDP



PL-11-LEDP



PL-12-LEDP



PL-20-LEDP



PL-21-LEDP



3 Lens Options:

Clear (Std.) | Sand Blast | White

The entire line of FOCUS Area & Path Lights are LED NOW.

Using our 2.2 watt OMNI-2 LED every FOCUS area light is now an LED area light. OMNI-2 Retrofit technology allows for retrofitting any style single contact & most upright bi-pin fixtures in the field.

The OMNI-2's water resistant proprietary design combined with 50,000 hours average rated life will provide over 22 years of maintenance free performance (based on 6 hours per night). The LEDS energy efficiency allows for multiple area / path lights, creating beautiful lighting effects on any surface. The Omni is equivalent to a 20w JC Halogen Bulb.



PL-20-LED2WBR



AL-15-AH-LED2-BAR



AL-20-LED2-COP



FL-OMNI2-27K



FL-OMNI2BP-27K



PL-19-LED2-BAR



PL-21-NB-LED2-BAT

Ordering the OMNI-2 & Omni-2BP

For New LED Fixtures:

Simply add **-LED2** or **LED2BP** to catalog number.

For example ordering **AL-20-LED2-COP** upgrades your new fixture to a 50,000 hour Omni-2 LED light source.

PL-21-LED2BP upgrades your new fixture to a 50,000 hour Omni-2 Bi-Pin LED light source.

To order light source only for retrofitting in the field:

FL-OMNI2-27K: Single Contact 50,000 hour Omni-2 LED light source.

FL-OMNI2BP-27K: Bi-Pin 50,000 hour Omni-2 LED light source.



PL-18-LED2-BAR



RXA-01-LED2-COP



AL-17-LED2-BAR

Unsurpassed performance, quality and energy efficiency available in MR16 12 volt and most 120 volt fixtures.

The ARROW LED can be used in all FOCUS MR16 fixtures. Optimized to deliver the punch and color of a 20 watt halogen. The 4 watt ARROW & ARROW SAVER are the answer to any directional lighting need, up or down. Our new LED Modules & Flat Panels offer even more directional flood lighting capabilities.



RXD-01-LED-BAR



DL-42-LEDM7-BRS



LFL-01-LEDP8120V-BLT



RXD-02-LED-COP



DL-41-VERT-LEDM-WIR



DL-15-SM-LEDP-CPR

GO GREEN

RETROFIT



All FOCUS MR16, MR11, MR8 PAR20/30/38 & AR111 directional lighting can be retrofitted to energy efficient LED using one of our ARROW LED Light Sources:

For MR16 Fixtures choose either the 4w 50,000 Hour Arrow MR16 Light Source or 4w 40,000 Hour Arrow Saver Light Source.

For MR11 Fixtures choose the 2w 50,000 Hour Arrow MR11 Light Source.

For MR8 Fixtures choose the 1.5w 25,000 Hour Arrow MR8 Light Source.

For PAR Fixtures choose either the 9w PAR20, 15w PAR30 or 21w PAR38 50,000 Hour Arrow Light Sources.

For AR111 Choose the 13w 50,000 Hour Arrow AR111 Light Source.

All retrofit LEDs offer multiple beam spreads

MODULE



The following FOCUS directional lighting fixtures can be ordered with LED Module technology:

The **DL-42-LEDM7** is a 7w 50,000 Hour LED Module light source which replaces a 35w Halogen & is available with interchangeable 40°, 15° or 120° Wide Flood optics packages.

The **DL-41-LEDM** Mini Flood a 3w 50,000 Hour LED Module light source which replaces to a 20w Halogen.



40° & 15° Optics for 7w Module

FLAT PANEL



The following FOCUS directional lighting can be ordered with LED Flat Panel technology:

The **LFL-01-LEDP8** Flood is a 8w 50,000 Hour LED Flat Panel light source which replaces a 50w-75w light fixture or 13w CFL.

The **DL-15-LEDP** and the smaller profile **DL-15SM-LEDP** are 4w 50,000 Hour LED Flat Panel light sources that replace 20w-35w fixtures

All Focus Flat Panel LEDs can be ordered in 3000K Warm White or 5200K Cool White to adapt to any lighting requirement.

Note: All FOCUS LED's are for use with a magnetic power supply only. LED Module, MR16, MR11 AR111 & PAR series LED's must be installed in a sealed fixture. Non-dimmable. DOE LM79 tested / LM80 compliant. Power factor >90%

WELL LIGHTING 12v-277v

Unobtrusive in-grade LED lighting solutions able to reach the tallest tree tops and architecture with unmatched energy savings.

Uplighting with familiar 35° flood (BAB) & 12° spot (ESX) takes the guess work out of LED well lighting.



The **SL-20-MD-L-LEDM7-BRS** is a 7w 50,000 Hour LED Module light source which replaces a 35w Halogen & is available with interchangeable 40°, 15° or 120° (no lens) Wide Flood optics packages.



40° & 15° Optics for 7w Module



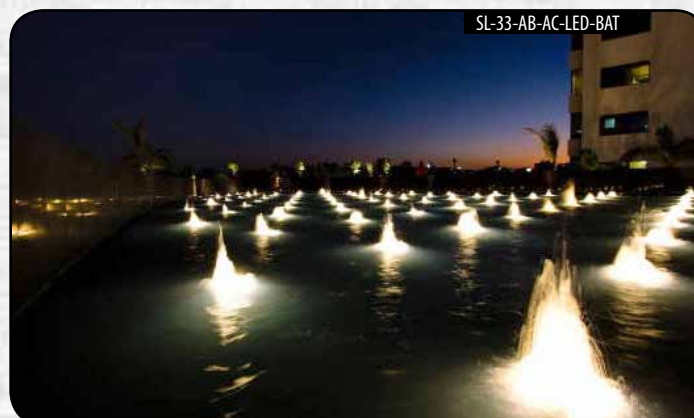
UNDERWATER LIGHTING 12v

Take your waterscapes lighting to the next level.

The SL-33 underwater light, already a best seller and well trusted underwater fixture, is **LED NOW**. The ARROW MR16 combined with the tried and true design of the SL-33 allows for multiple underwater lighting applications.



- Fountains
- Spillways
- Waterfalls
- Streams
- Statuary



Along with the **ARROW** Retrofit system, you can use any **FOCUS** colored or beam control lens to create beautiful & dramatic water effects.

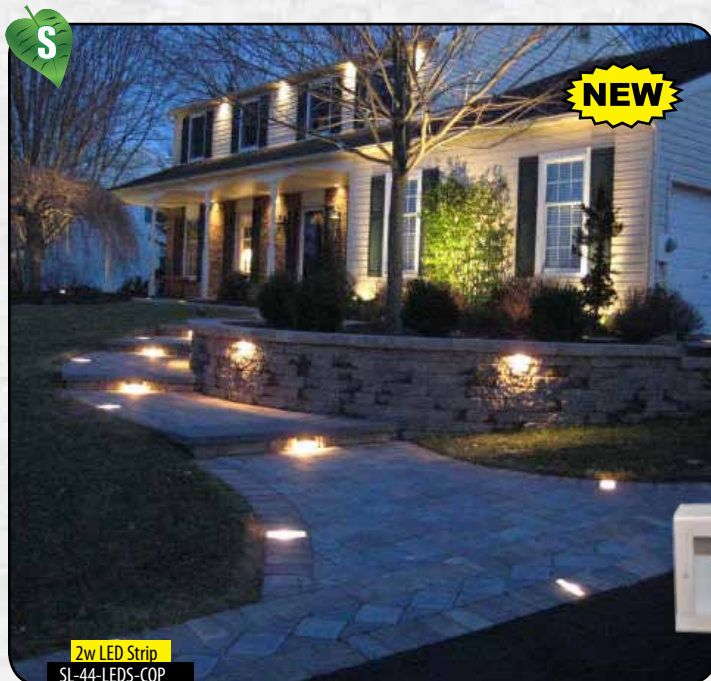
Warm 2700K - 3000K color to accent the beauty of any outdoor living area using 75% less energy.

Your families gathering places and outdoor kitchens deserve to be illuminated with beautiful color that does not interfere with the setting.

Long life and low energy costs allow for multiple lighting applications for safety, security and beautification, all night long.



Why sacrifice the traditional warm white color for artificial LED blue color when you can use FOCUS LED Strip technology?



PAVER LED LIGHTS

The following FOCUS hardscape lighting can be ordered with waterproof LED Strip technology:

The **SL-44-LED5**, **SL-4466-LED5** & **SL-4469-LED5**, (4"x 8", 6"x6" & 6"x 9" paver lights) features a 2w 40,000 Hour LED Strip light source which replaces a 10w Halogen.

The LED Strip can also be ordered as an easy **in field retrofit kit** for upgrading currently installed Focus Paver Lights.

Part # FA-SL-44-LEDSKIT

The **SL-42-LED5** & The smaller profile **SL-42SM-LED5** ledge lights are 2w 40,000 Hour LED Strip light sources which replace a 10w Halogen.



NEW

Commercial Grade Cast NO BACK BOX REQUIRED!

12v

SL-50-LEDP/ SL-50-LEDP52

No back box required

7.25" (W) x 2" (H) x 1.125" (D)

- 5w 12v DC integrated flat panel LED
- 3000K Warm White or 5200K Cool White
- 50,000 Hour LED Panel / 5 Year Warranty
- Exterior driver included

ONLY
1.125"
DEEP



SL-50 5w FLAT PANEL LED



SL-08-LEDP/ SL-08-LEDP52

No back box required

8.25" (W) x 3.25" (H) x .875" (D)

- 8w 12v DC integrated flat panel LED
- 3000K Warm White or 5200K Cool White
- 50,000 Hour LED Panel / 5 Year Warranty
- Exterior driver included

ONLY
.875"
DEEP



SL-08 8w FLAT PANEL LED



SL-07-SM-LEDM

No back box required

2.75" Ø x 1.50" (D)

- 3w 12v LED module (no socket)
- Equal to 20w halogen
- 3000K Warm White
- 50,000 Hour LED Panel / 5 Year Warranty
- On board integrated driver

ONLY
1.50"
DEEP

SL-07-SM 3w LED MODULE
with HEAT SINK BUILT INTO BACKPLATE

NEW

Residential Grade Stamped NO BACK BOX REQUIRED!

**12v**

- 4.75" (W) x 3.00" (H) x .75" (D)
- 4w 12v DC integrated flat panel LED
- 350 Lumens / 380 Lumens 52K*
- 3000K Warm White or 5200K Cool White
- Remote Driver Supplied
- 50,000 Hour LED Panel / 5 Year Warranty



SL-02-LEDP-CAM

**ONLY .75" DEEP****NO BACK BOX
REQUIRED**

SL-02-LEDP-CAR



SL-02-VERT-LEDP-BAV



SL-02AL-LEDP-COP



SL-021L-LEDP-CAM

NEW

Residential Grade Stamped NO BACK BOX REQUIRED!

**12v**

- 8.25" (W) x 3.25" (H) x .75" (D)
- 8w 12v DC integrated flat panel LED
- 630 Lumens / 680 Lumens 52K*
- 3000K Warm White or 5200K Cool White
- Remote Driver Supplied
- 50,000 Hour LED Panel / 5 Year Warranty



SL-04-LEDP-RST



SL-04-LEDP-CAR



SL-04-VERT-LEDP-CAM



SL-04AL-LEDP-BRS



SL-041L-LEDP-WBR

ONLY .75" DEEP**NO BACK BOX
REQUIRED**

* For 5200K add -52 to catalog # eg: SL-04-LEDP52-RST

COMING SOON ON THESE COMMERCIAL GRADE CAST FIXTURES



SL-08AL-LEDP-BAR



SL-17-LEDP-BRS



SL-17AL-LEDP-BRS



SL-30-LEDP-BAV



SL-31-LEDP-BRS

LED MODULE SERIES



NEW

LEDS by CREE

3w Module comparable to 20w Halogen

7w Module comparable to 35w Halogen

- 3 watt LED module (150 Lumens)
- 7 watt LED module (450 Lumens) with optional Optics for 40° Flood and 15° Spot or 120° Wide Flood (no optic)
- 2800K - 3000K Halogen like color
- High CRI ~ 85 (color rendering index)
- Operates on 12v AC/DC systems
- Operating range of 9v-18v (optimum 10v-15v)
- On board driver
- Optional drivers for 120v-277v applications
- Superior performance in outdoor environments
- No glass or fragile parts
- 50,000 hours average rated life
- Must be powered by magnetic transformer
- 5 year limited warranty on LED components
- DOE LM79 tested. LM80 compliant

3w Module For use in the following fixtures:

SL-07-SM / PL-17-LEDM, DL-09SM-LEDM

7w Module For use in the following fixtures:

DL-42 / SL-20MD-LEDM



7w LED MODULE 12v



3w LED MODULE 12v



40° & 15° Optics for 7w Module

FLAT PANEL SERIES



NEW

4w | 5w | 8w Flat Panel LEDS

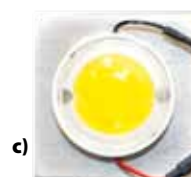
- 4 watt flat panel LED (350 Lumens, 380 at 52K)
- 4 watt round flat panel LED (300 Lumens, 320 at 52K)
- 5 watt flat panel LED (350 Lumens, 380 at 52K)
- 8 watt flat panel LED (630 Lumens, 680 at 52K)
- 8 watt round flat panel LED (630 Lumens-coming soon)
- 3000K Warm White or 5200K Cool White color
- High CRI ~ 85 (color rendering index)
- Operates on 12v AC/DC systems
- Operating range of 9v-18v (optimum 10v-15v)
- External driver
- Optional drivers for 120v-277v applications
- 50,000 hours average rated life
- Water resistant
- Superior performance in outdoor environments
- Must be powered by magnetic transformer
- 5 year limited warranty on LED components



a)



b)



c)



d)



e)

- a) 8w Flat Panel
- b) 8w Round Flat Panel
- c) 4w Round Flat Panel
- d) 4w Flat Panel
- e) 5w Flat Panel

Catalog Number/ Catalog Number 52K	Watts	Volts	Dim.	Description	Color
LED MODULES					
See above for available fixtures	3w	12v-277v		12v LED MODULE	2800K-3000K
FLAT PANEL LEDS					
FL-LEDP-4W35001/ FL-LEDP-4W5235001	4w	12v-277v	4.00" x 2.75"	12v-277v FLAT PANEL	3000K or 5200K
FL-LEDP-4W35002/ FL-LEDP-4W5235002	4w	12v-277v	2.50" x 2.50"	12v-277v ROUND FLAT PANEL	3000K or 5200K
FL-LEDP-5W350011/ FL-LEDP-5W52350011	5w	12v-277v	7.00" x 1.00"	12v-277v FLAT PANEL	3000K or 5200K
FL-LEDP-8W70001/ FL-LEDP-8W5270001	8w	12v-277v	8.00" x 2.75"	12v-277v FLAT PANEL	3000K or 5200K
FL-LEDP-8W70002/ FL-LEDP-8W5270002	8w	12v-277v	TBD	12v-277v ROUND FLAT PANEL	3000K or 5200K

S.C. SERIES



OMNI 2.2w SC BAYONET comparable to 20w JC Halogen
OMNI 2.2w BI-PIN comparable to 20w JC Halogen

- 2.2 watt SC single contact bayonet base (ba15s) or 2.2w G4 bi-pin
- Omni-directional beam (360° horizontal, 275° vertical)
- 100 Lumens
- 2700K warm white
- Operates on 12v AC/DC systems
- Operating range of 9v-18v (optimum 10v-15v)
- Superior performance in outdoor environments
- No glass or fragile parts
- Water resistant
- 50,000 hours average rated life
- Must be powered by magnetic transformer
- 5 year limited warranty
- DOE LM79 tested. LM80 compliant



OMNI-2
2.2w/12v



OMNI-2 BP
2.2w/12v

MR SERIES



MR8
1.5w/12v



LEDS by CREE



MR11
2w/12v

ARROW 4w MR16 comparable to 20w MR16 Halogen
ARROW 6w MR16 comparable to 35w MR16 Halogen
ARROW 2w MR11 comparable to 10w MR11 Halogen
ARROW 1.5w MR8 comparable to 10w MR8 Halogen

- 4 watt GU5.3 bi-pin base(12v MR16)
Arrow-200 Lumens/ Saver-180 Lumens
- 6 watt GU5.3 bi-pin base(12v MR16) 430 Lumens
- 4 watt GU10 bi-pin base(120v MR16) 200 Lumens
- 2 watt GU4 bi-pin base(12v MR11) 90 Lumens
- 1.5 watt GU4 bi-pin base(12v MR8) 65 Lumens
- High power LED light source
- 2 popular beam spreads:
MR16 35° Flood (BAB) & 12° Spot (ESX)
MR11 40° Flood & 15° Spot
- 2800K - 3000K Halogen like color
- High CRI ~ 85 (color rendering index)
- Operates on 12v AC/DC systems
- Operating range of 8v-18v (optimum 10v-15v)
- 50,000 hours average rated life / 40,000 hours (Arrow Saver)
- Cool beam, low heat produced
- Must be powered by magnetic transformer
- Must be installed in a sealed fixture
- 10 year limited warranty on LED components (Arrow MR16)
- 5 year limited warranty (MR11 & MR16 Arrow Saver)
- DOE LM79 tested. LM80 compliant • RoHS compliant



MR16
4w/12v **Saver**



MR16
4w/12v



MR16
4w/120v



MR16
6w/12v

NEW

Catalog Number	Watts	Volts	Description	Color
OMNI-2 LEDs				
FL-LED-OMNI2-27K	2.2w	12v	SC Base 12v LED	2700K
FL-LED-OMNI2-BP-27K	2.2w	12v	Bi-Pin Base 12v LED	2700K
ARROW MR16 SERIES LEDs				
FL-LED-MR16-BAB**	4w	12v	35° GU5.3 Bi-Pin 12v LED	2800K-3000K
FL-LED-MR16-ESX**	4w	12v	12° GU5.3 Bi-Pin 12v LED	2800K-3000K
FL-LED-120V-MR16-BAB**	4w	120v	35° GU10 Bi-Pin 120v LED	2800K-3000K
FL-LED-120V-MR16-ESX**	4w	120v	12° GU10 Bi-Pin 120v LED	2800K-3000K
FL-LED-MR16W40*	6w	12v	40° GU10 Bi-Pin 120v LED	2800K-3000K
ARROW MR16 SAVER LEDs				
FL-LED-MR16A540	4w	12v	40° GU5.3 Bi-Pin 12v LED	2800K-3100K
FL-LED-MR16A515	4w	12v	15° GU5.3 Bi-Pin 12v LED	2800K-3100K
ARROW MR8 & MR11 LEDs				
FL-LED-MR11-40**	2w	12v	40° GU4 Bi-Pin 12v LED	2800K-3000K
FL-LED-MR11-15**	2w	12v	15° GU4 Bi-Pin 12v LED	2800K-3000K
FL-LED-MR8NL*	1.5w	12v	120° GU4 Bi-Pin 12v LED	2800K-3100K

AR111 SERIES



ARROW 13w AR111 comparable to 75w Halogen

- 13 watt G53 Quick Connect base (12v AR111)
- High power LED light source
- 510 Lumens
- 2 popular beam spreads:
 - 40° Flood
 - 15° Spot
- 2800K - 3000K Halogen like color
- High CRI ~ 85 (color rendering index)
- Operates on 12v AC/DC systems
- Operating range of 8v - 18v (optimum 10v-15v)
- 50,000 hours average rated life
- Cool beam, low heat produced
- Must be powered by magnetic transformer
- Must be installed in a sealed fixture
- 5 year limited warranty on LED components
- DOE LM79 tested. LM80 compliant



**AR111
13w/12v**

PAR SERIES



ARROW 9w PAR20 comparable to 50w Halogen
ARROW 15w PAR30 comparable to 75w Halogen
ARROW 21w PAR38 comparable to 90w Halogen

- 9 watt E27 medium base (PAR20) 300 Lumens
- 15 watt E27 medium base (PAR30) 600 Lumens
- 21 watt E27 medium base (PAR38) 900 Lumens
- High power LED light source
- 2 popular beam spreads:
 - 40° Flood
 - 15° Spot
- 2800K - 3000K Halogen like color
- High CRI ~ 85 (color rendering index)
- Operates on 120v AC/DC systems
- Operating range of 110v-200v (optimum 110v-130v)
- 50,000 hours average rated life
- Cool beam, low heat produced
- Must be installed in a sealed fixture
- 5 year limited warranty on LED components
- DOE LM79 tested. LM80 compliant



**PAR30
15w/120v**

**PAR20
9w/120v**

**PAR38
21w/120v**

Catalog Number	Watts	Volts	Description	Color
ARROW AR111 SERIES LEDS				
FL-LED-AR111-40	13w	12v	40° Quick Connect AR111 12v LED	2800K-3000K
FL-LED-AR111-15	13w	12v	15° Quick Connect AR111 12v LED	2800K-3000K
ARROW PAR SERIES LEDS				
FL-LED-P2040-27K	9w	120v	40° E27 Med. Base Par20 120v LED	2800K-3000K
FL-LED-P2015-27K	9w	120v	15° E27 Med. Base Par20 120v LED	2800K-3000K
FL-LED-P3040-27K	15w	120v	40° E27 Med. Base Par30 120v LED	2800K-3000K
FL-LED-P3015-27K	15w	120v	15° E27 Med. Base Par30 120v LED	2800K-3000K
FL-LED-P3840-27K	21w	120v	40° E27 Med. Base Par38 120v LED	2800K-3000K
FL-LED-P3815-27K	21w	120v	15° E27 Med. Base Par38 120v LED	2800K-3000K

STEP & BRICK LIGHT LED RETROFIT KITS



8w LED Flat Panel Retrofit Kit

Simply Insert The Kit Directly Into Any Existing Back Box • For 50w Replacement

Available with 12v, 120v, 240v or 277v Drivers & 3000K Warm White or 52000K Cool White Color:

FA-LED-P812B (12v) FA-LED-P85212B (12v/52K) • FA-LED-P8120B (120v) FA-LED-P852120B (120v/52K)
FA-LED-P8240B (240v) FA-LED-P852240B (240v/52K) • FA-LED-P8277B (277v) FA-LED-P852277B (277v/52K)

Easily Retrofits into ANY Manufacturer's Brick Lights • 8w / 50,000 hours / 630 Lumens/680 Lumens 52K

Minimum Inside Dimensions of Back Box: 6.25" (w) x 2" (h) x 2.5" (d)

Custom Brackets Available to Fit Larger Back Boxes

Must Be Installed in a Sealed Fixture



4w LED Flat Panel Retrofit Kit

Simply Insert The Kit Directly Into Any Existing Back Box • For 25w Replacement

Available with 12v, 120v, 240v or 277v Drivers & 3000K Warm White or 52000K Cool White Color:

FA-LED-P412S (12v) FA-LED-P45212S (12v/52K) • FA-LED-P4120S (120v) FA-LED-P452120S (120v/52K)
FA-LED-P4240S (240v) FA-LED-P452240S (240v/52K) • FA-LED-P4277S (277v) FA-LED-P452277S (277v/52K)

Easily Retrofits into ANY Manufacturer's Step Lights • 4w / 50,000 hours / 350 Lumens/ 350 Lumens 52K

(Minimum Inside Dimensions of Back Box: 4" (w) x 2" (h) x 2.5" (d))

Custom Brackets Available to Fit Larger Back Boxes

Must Be Installed in a Sealed Fixture



INDOOR SURFACE FIXTURE RETROFIT KITS



There are millions of energy wasting surface fixtures in hallways, corridors, stairwells and entrances that need to be replaced. **FOCUS** has the **LED SOLUTION**.

Available with 12v, 120v, 240v or 277v Drivers & 3000K Warm White or 52000K Cool White Color:



8 watt

FL-LEDP-8W700-01 3000K, 630 Lumens
FL-LEDP-8W52700-01 5200K, 680 Lumens
 w/ Aluminum Heat Sink
Replaces 50w-75w

12v Driver: HW-12-8700AC12-LED
 120v Driver: HW-12-8700-LED
 277v Driver: HW-12-8700277-LED



8 watt

FL-LEDP-8W700-02 3000K, 630 Lumens
FL-LEDP-8W52700-02 5200K, 680 Lumens
 w/ Aluminum Heat Sink
Replaces 50w-75w

12v Driver: HW-12-8700AC12-LED
 120v Driver: HW-12-8700-LED
 277v Driver: HW-12-8700277-LED



277v 120v 12v

DRIVERS



4 watt

FL-LEDP-4W350-01 3000K, 350 Lumens
FL-LEDP-4W52350-01 5200K, 380 Lumens
 w/ Aluminum Heat Sink
Replaces 20w-35w

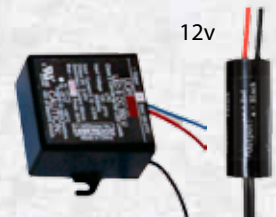
12v Driver: HW-12-435012LED
 120v Driver: HW-12-6350120LED
 240v Driver: HW-12-6350240LED
 277v Driver: HW-12-6350277LED



4 watt

FL-LEDP-4W350-02 3000K, 300 Lumens
FL-LEDP-4W52350-02 5200K, 320 Lumens
 w/ Aluminum Heat Sink
Replaces 20w-35w

12v Driver: HW-12-435012LED
 120v Driver: HW-12-6350120LED
 240v Driver: HW-12-6350240LED
 277v Driver: HW-12-6350277LED



12v 120v/240v/277v

DRIVERS

LED DRIVER REFERENCE CHART	
LED TYPE	DRIVER
Retrofit	On board
Module	On board
Panel	Off board
Strip	On board

Easily convert any incandescent or fluorescent surface fixture to energy saving LED with FOCUS Surface LED Retrofit Kits



54w CFL



4w LED

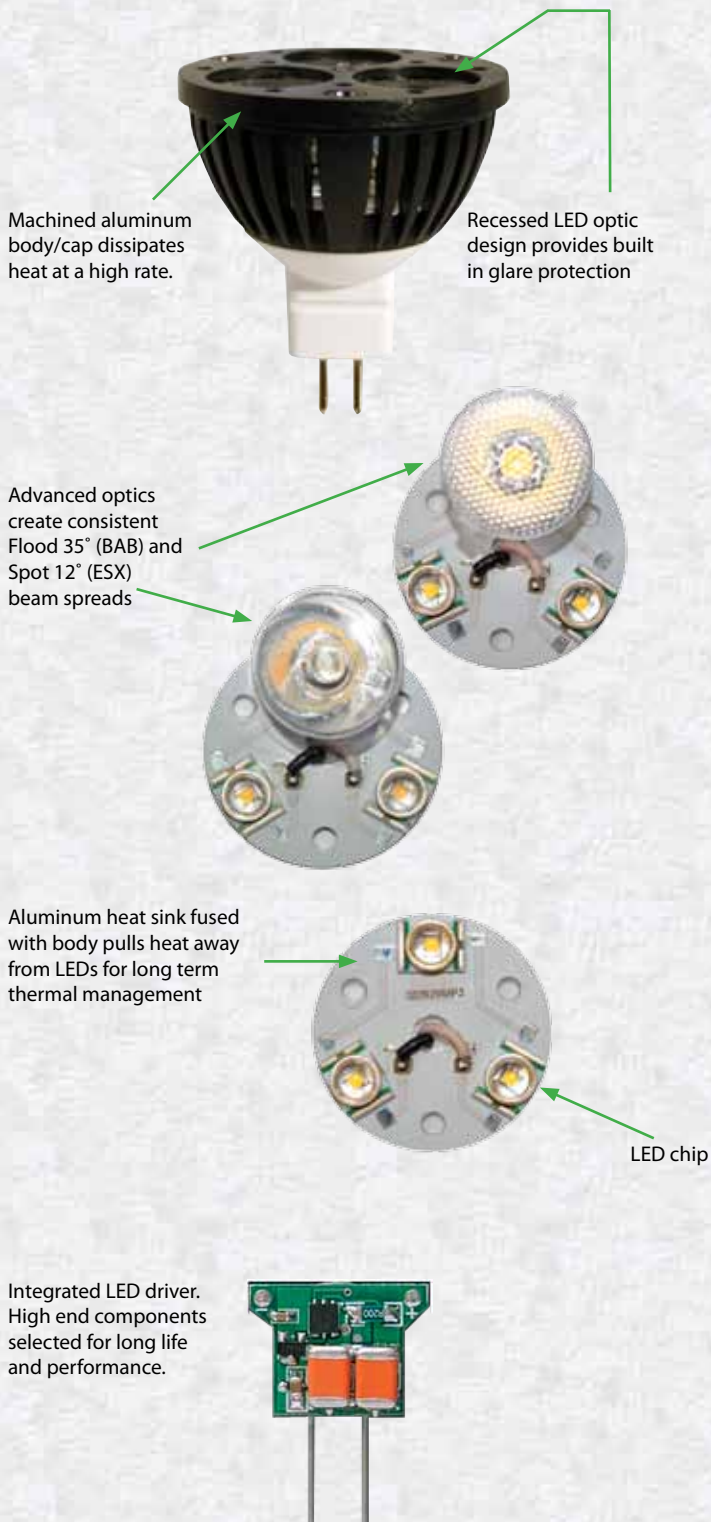


8w LED

If Used Outdoors; Must Be Installed in a Sealed Fixture

MR16 LED ANATOMY

- **Active Heat Dissipation**
- **Superior Optics**
- **Quality Driver Components**



LED CHIP SELECTION

NOT ALL LED CHIPS ARE CREATED EQUAL

FOCUS partners with market leaders in **LED** technology like CREE® to offer only the highest quality chips with the longest life.

LED chips are sorted into bins after manufacturing based on light output and chip quality. Chips with superior light output and quality are put in the high bins while chips with imperfect light and reduced quality are put into the lower bins.

FOCUS selects **LED** chips from only the A1 and B1 top-level bins to meet our quality standards and to ensure consistent warm white light color of 2800K to 3000K and the longest lasting, best quality light levels.

WARM WHITE LED BINS

	3100K	3000K	2900K	2800K	2700K
HIGH QUALITY	A2	A1 Focus	B1 Focus	B2	
	C2	C1	D1	D2	
	E2	E1	F1	F2	
LOW QUALITY	G2	G1	H1	H2	

Is there a difference? Compare a FOCUS LED to any other **LED** on the market and you will find that FOCUS **LEDS** will outperform them all. Our **LEDS** have superior light output using less watts per diode and beautiful warm white consistent color, not the cold, blue hued colors you find with other **LEDS**

NEMA 3R LED POWER SUPPLIES

Above Grade IP55 LED stainless steel transformers.
Upgradable with many options including, Photocells, Timers & Astronomical Timers.

RXT-12-60-MV	Multi Volt 12.5/13.5/14.5, 60 watt
RXT-12-120-MV	Multi Volt 12.5/13.5/14.5, 120 watt
RXT-12-180-MV	Multi Volt 12.5/13.5/14.5, 180 watt
RXT-12-300-MV	Multi Volt 12.5/13.5/14.5, 300 watt
RXT-12-600-MV	Multi Volt 12.5/13.5/14.5, 600 watt

Note: All RXT & DB models are magnetic transformers.



RXT-12-120MV Transformer, 120 watt output
35 Total Fixtures on 4 runs of 250 Feet
Total wattage: 113 watts

Zone #1

Run #1: 250 feet 14/2 wire
5 Omni-2 Area Lights
4 Arrow Directional Lights

Zone #2

Run #2: 250 feet 14/2 wire
4 Arrow Directional Lights
4 Arrow Well Lights



Zone #3

Run #3: 250 feet 14/2 wire
4 Arrow Well Lights
5 Omni-2 Path & Area Lights

Zone #4

Run #4: 250 feet 14/2 wire
2 Arrow Directional Lights
2 Arrow Well Lights
5 Omni-2 Path & Area Lights



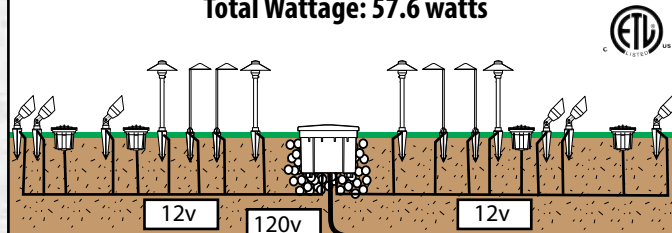
NEMA 12 LED POWER SUPPLIES

Direct Burial IP67 Composite LED transformers.
NEMA 12 enclosures with 1/2" and 3/4" hubs for 120v Line Voltage input.

DB-12-25	12.5v, 25 watt
DB-12-60	12.5v, 60 watt
DB-12-60-MV	Multi Volt 12.5/13.5/14.5, 60 watt
DB-12-120	12.5v, 120 watt
DB-12-120-MV	Multi Volt 12.5/13.5/14.5, 120 watt
DB-12-180	12.5v, 180 watt
DB-12-180-MV	Multi Volt 12.5/13.5/14.5, 180 watt

DB-12-60 Direct Burial Transformer, 60 Watt Output

18 Total Fixtures: 9 on 500 foot run, 9 on 250 foot run
Total Wattage: 57.6 watts



Run #1: 250 feet 14/2 wire

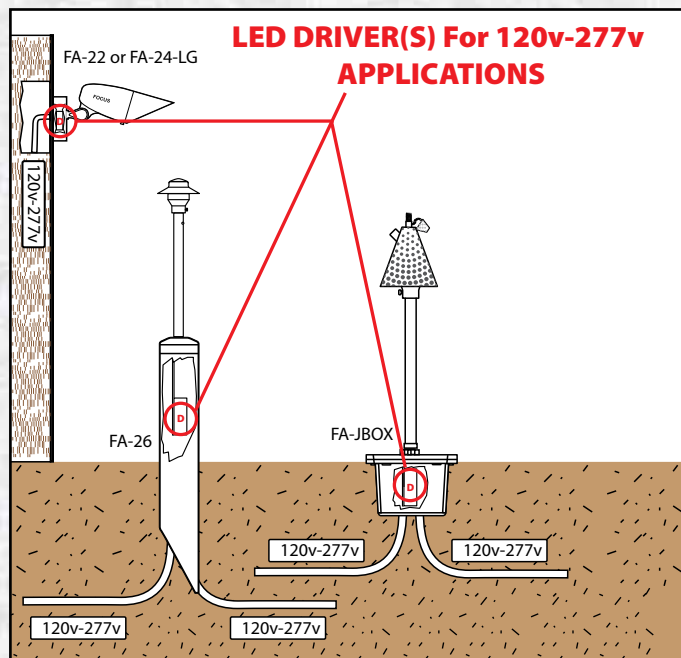
3 Arrow Directional Lights
2 Arrow Well Lights
4 Omni-2 Path & Area Lights

Run #2: 500 feet 12/2 wire

3 Arrow Directional Lights
2 Arrow Well Lights
4 Omni-2 Path & Area Lights

Hard Wire LED Driver

Use to supply proper voltage to 1 or 2 LED fixtures where a low voltage transformer is not accessible.



HARD WIRE LED DRIVERS


- Input 120v -277v
- Installs in FA-24-LG Canopies
- Installs in FA-26 Mounting Pedestals
- Installs in FA-JBOX

HW-12-8700LED	120v, 8w LED Driver
HW-12-8700277LED	277v, 8w LED Driver
HW-12-6350240LED	240v, 6w LED Driver
HW-12-6350277LED	277v, 6w LED Driver
HW-12-6350120LED	120v, 6w LED Driver

LED ENERGY SAVINGS

Lifetime Cost: LED vs Standard Light Bulb

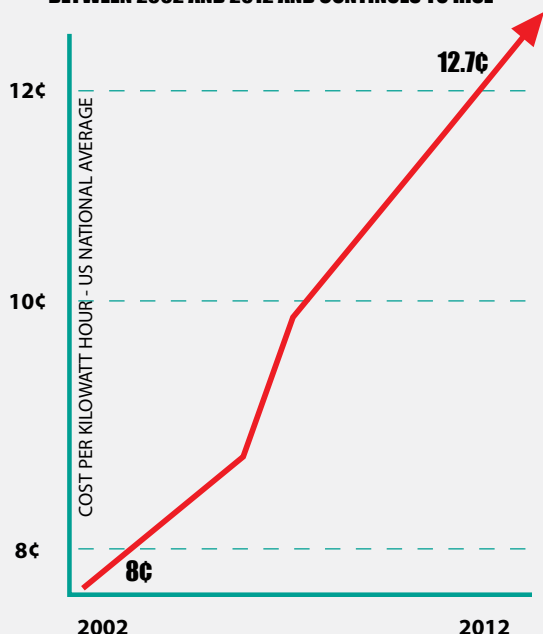
**Save 80% on energy and 50% on total lifetime cost with Focus LED systems.
Plus additional savings on installation time, maintenance & setup charges**

SYSTEM COMPONENTS	STANDARD LANDSCAPE LIGHTING SYSTEM	FOCUS LED SYSTEM 
FIXTURES	\$1,000.00	\$2,000.00
TRANSFORMERS & CABLE	\$1,375.00	\$750.00
REPLACEMENT BULBS & SERVICE CHARGES	\$2,000.00	\$0.00
ELECTRICITY	\$2,880.00	\$576.00
TOTAL	\$7,255.00	\$3,326.00
		54% Total Savings!

System costs based on average landscape of 2,000 square foot home illuminated with 600 watts of incandescent/halogen lighting. Electricity costs based on 40,000 hours at \$0.12 per kilowatt hour (national average). **The sooner you convert to LED, the sooner you will realize increased savings.**

COST OF ELECTRICITY

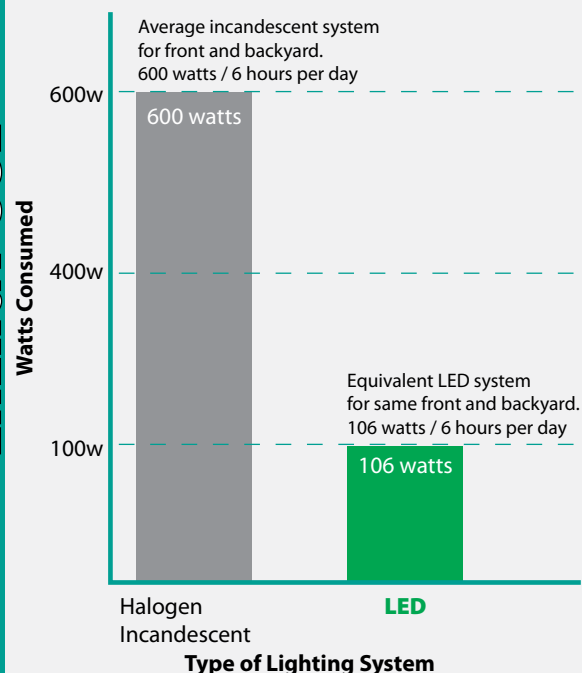
THE AVERAGE COST OF ELECTRICITY ROSE 33% BETWEEN 2002 AND 2012 AND CONTINUES TO RISE



PERFORMANCE COMPARISONS

FOCUS LED SYSTEM CONSUMES ABOUT 80% LESS ELECTRICITY THAN INCANDESCENT HALOGEN SYSTEM WITH SIMILAR LIGHT OUTPUT

ENERGY USE



22+ YEARS OF HIGH LUMEN OUTPUT

Based on 6 hours per night usage

Focus ARROW MR16 LED is rated for 50,000 hours L7
(L7 is the time, in hours, for LEDs to reach 70% of the initial lumen output)

All LED's depreciate in lumen output over time. Focus ARROW LED's minimize this degradation by using only the highest grade LED chips and superior thermal management.

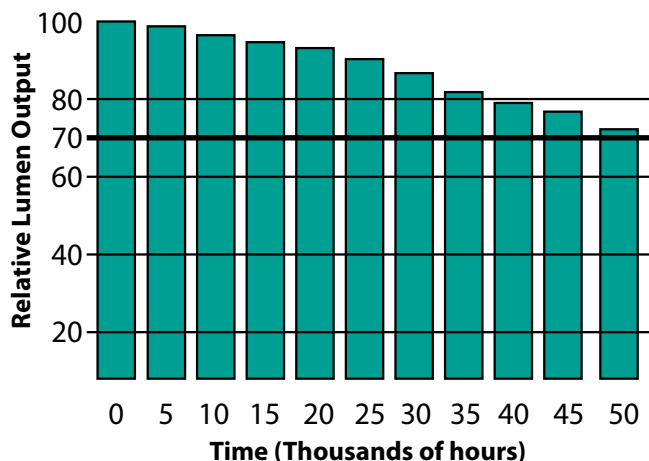
Based on 6 hours per night usage

4.5% degradation after 2.3 years (5,000 hours of usage)

6.0% degradation after 4.6 years (10,000 hours of usage)

9.0% degradation after 11.5 years (25,000 hours of usage)

Less than 30% degradation after 22.8 years (50,000 hours of usage)



Degradation calculations based on 6 hours per night usage under normal operating conditions

LED INSTALLATION MATRIX

LED Lighting Installation Made Easy

FOCUS **LEDs** are rated on the total wattage consumed (**LEDs** plus Driver) so there is no need for complicated mathematics to figure the transformer size requirement.

Number of LED fixtures	x	Wattage	=	Transformer Size
8 ARROW LED fixtures	x	4w	=	32 watts
12 OMNI-2 LED fixtures	x	2.2w	=	26.4 watts
Total				= 58.4 watt load
Requires a 60 watt transformer				

Got Distance? Up to 1000 Feet on a Single Run

Optimum operation of FOCUS **LEDs** is between 10 and 15 volts; Therefore, voltage dropping to around 10 volts on a low voltage system is no problem. The graphs below illustrate the number of ARROW MR16 **LEDs** and OMNI-2 SC **LEDs** that can be added to runs up to 1000 feet. Minimum voltage at the last lamp of each run below will be at or above 10 volts for best performance.

Feet Of Cable Run							
60w MV Transformer		100	250	500	750	1000	
12/2 CABLE	12.5 TAP	Arrow	14	14	14	7	5
		Omni-2	26	26	26	16	10
	13.5 TAP	Arrow	14	14	14	10	8
		Omni-2	26	26	26	18	12
	14.5 TAP	Arrow	14	14	14	11	9
		Omni-2	26	26	26	19	14
Number of ARROW or OMNI-2 LEDs							

Feet Of Cable Run							
60w MV Transformer		100	250	500	750	1000	
14/2 CABLE	12.5 TAP	Arrow	14	8	6	4	3
		Omni-2	20	12	9	7	5
	13.5 TAP	Arrow	14	10	8	6	5
		Omni-2	22	15	12	9	7
	14.5 TAP	Arrow	14	14	10*	7	6
		Omni-2	26	20	15	12	8
Number of ARROW or OMNI-2 LEDs							

Note: 3 ARROW LEDs consume about same wattage as 5 OMNI-2 LEDs. To mix ARROW and OMNI-2 on the same run simply calculate the change based on the 3 to 5 ratio.

* Example: Using 14.5v tap with 14/2 cable on 500 foot run will allow for 10 ARROW LEDs. Removing 3 ARROW LEDs will allow you to add 5 OMNI-2 LEDs giving you a total of 7 ARROW and 5 OMNI-2 LEDs on a single 500 foot run.

LED ENERGY SAVINGS

Simplicity of Installation

New Installation:

• No Voltage Meters Required

Focus **LEDs** are engineered for optimum performance between 10 volts and 15 volts. This eliminates the need to check each fixture to verify if voltage is too low or too high.

• Select Transformer Based on Distance

Under 250 ft use Single Volt. Over 250ft use Multi Volt Transformer.

• Select a Voltage Tap

With the freedom to tap from 12 to 15 volts you can't go wrong.

No time consuming calculations required.

• Total System Reliability

As long as voltage is at 10 volts or above at the last fixture in the run all lights will operate at consistent light levels.

Existing Installation:

• Can I Use LEDs On An Existing System?

Absolutely! Just make sure to tap from 12-15 volts. For higher voltage transformer taps, please consult factory.

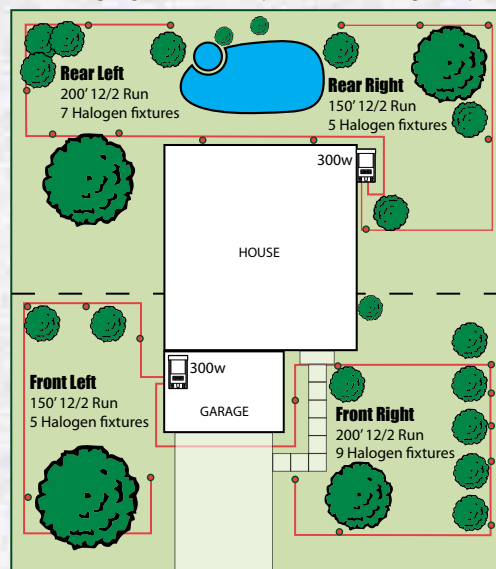


Typical Halogen Power Distribution

26 Halogen Fixtures (20w)

600 watts of power (2 x 300w MV Transformers)

12/2 gauge wire to compensate for voltage drop



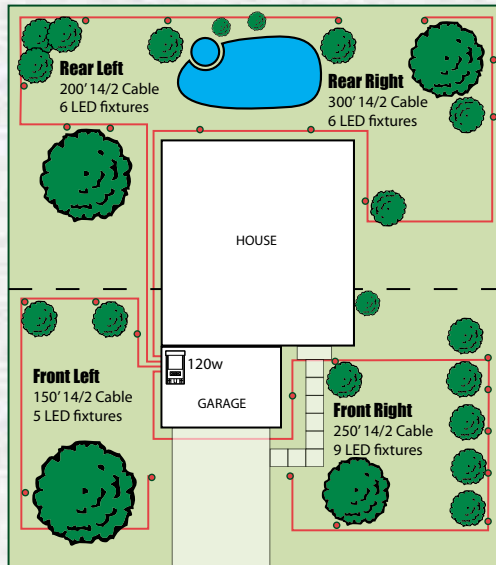
FOCUS LED Power Distribution

26 LED Fixtures

120 watts of power (single 120w MV Transformer)

Thinner and less expensive 14/2 gauge wire

Ability to add up to 20 more LED fixtures



OUTDOOR APPLICATIONS

Can you spot the palm trees illuminated by **ARROW** LEDs in this photograph?



Two palm trees are illuminated by FOCUS **ARROW** LEDs.
The other palm trees by 20w MR16 Halogen.



4w FOCUS **ARROW** (ESX) LED vs. 20w MR16 Halogen (ESX)

INDOOR APPLICATIONS

Businesses all over the country are switching to FOCUS LEDs for indoor applications too. They cost less to operate, are maintenance free, generate less heat and help the environment. All while being virtually indistinguishable from traditional halogen lighting systems.



The left side features two 4w FOCUS **ARROW** MR16 (BAB) LEDs. The right side is using three 20w halogen MR16 (BAB). Virtually identical color output but with energy usage of 8 watts instead of 60 watts!



One 4w FOCUS **ARROW** MR16 LED (right) replaced traditional 20w Halogen (left) for table lighting



400+ **ARROW** LEDs per store

★ FOCUS INDUSTRIES®, INC.

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