



## High Lux Performance White LED Module

### Key Features

- Integrated ultra compact form factor
- Fanless air cooling technology
- Multiple mounting options
- Fully dimmable
- RoHS compliant
- Powered by LedEngin's highest flux density, ultra reliable 4-chip LED
- Precision optics delivering narrow flood beam pattern

### Benefits

- 70% reduction in power consumption
- Cool to the touch for improved safety
- Easy to install
- Uniform illumination levels throughout beam
- No UV or IR in the beam
- CBCP equivalent to 50W narrow flood halogen MR16
- Industry leading lumen maintenance and color point stability
- Reduced operating costs based on energy and maintenance savings

### Typical Applications

- General Lighting
- Museum Lighting
- Retail & Display Lighting
- Hospitality Lighting
- Accent & Task Lighting
- Architectural Detail Lighting

### Description

**LuxSpot™** delivers the lighting equivalence of a conventional 50W halogen MR16 lamp in a similar form factor with a 70% power savings and >10 times the service life. The combination of LedEngin's industry leading high performance LED technology with optical, electrical, and thermal management solutions enable this innovative source replacement, delivering both the performance of a conventional halogen or incandescent light source and the benefits of solid state lighting. LuxSpot delivers the quality and quantity of light required for a broad range of spot, accent, track and down lighting applications in a standard narrow flood beam pattern. The versatile system design of LuxSpot reduces integration challenges, allowing for rapid incorporation in to a variety of lighting systems. The high quality materials and components used in LuxSpot are engineered to optimize light output and minimize stress, resulting in monumental reliability, color point stability and lumen maintenance.

## Typical Operating Characteristics @ $T_A = 25^\circ\text{C}$ (Free Air)

Table 1:

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Storage Temperature	$T_{\text{stg}}$	-40	25	85	$^\circ\text{C}$
Operating Temperature	$T_{\text{opr}}$	-25	25	55	$^\circ\text{C}$
Input Voltage	$V_{\text{IN}}$	21.6	24	26.4	VDC
PWM input Voltage (Low)	$V_{\text{PWM-L}}$	0		0.2	V
PWM input Voltage (High)	$V_{\text{PWM-H}}$	5		24	V
Power Consumption	$P_{\text{IN}}$			15	W
Sound Pressure Level <sup>[1]</sup>	$L_p$			22	dBA
Average Luminous Maintenance <sup>[2]</sup>	$L_{70}$		>50		kHrs
Weight			0.182		kg

Notes for Table 1:

- SPL measured at 1m per ISO 7779.
- Average Lumen Maintenance > 70% at 50K hours @  $T_A = 40^\circ\text{C}$ .

## Typical Optical Specifications @ $T_A = 25^\circ\text{C}$ (Free Air)

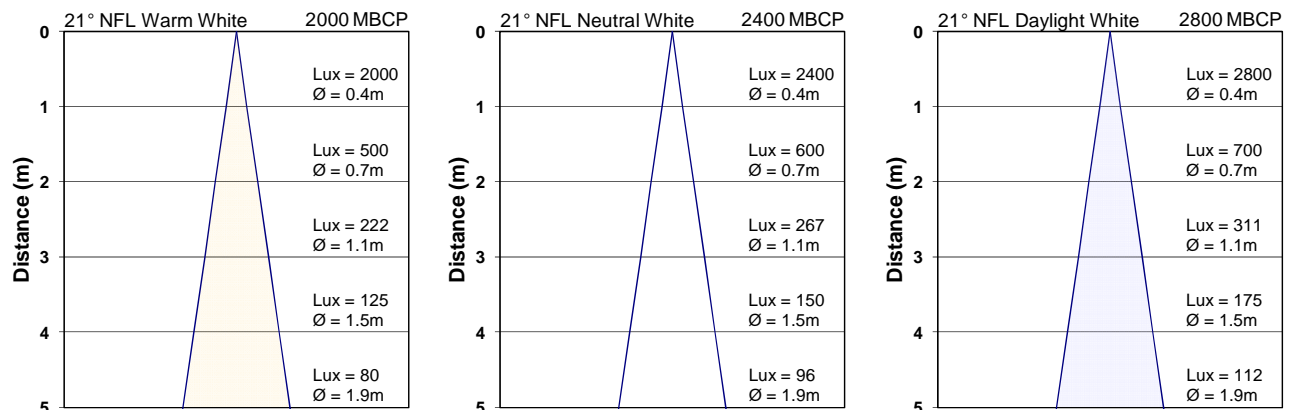
Table 2:

LuxSpot™ Part Number	Color	Color Temp (K)	CRI	Beam Type	Beam Angle (FWHM)	Lux @ 1m <sup>[1]</sup> (lx)	Lumen <sup>[2]</sup> (lm)
LS17-002W14	Warm White	3200	80	Narrow Flood	21°	2000	350
LS17-012W14	Warm White	3200	90	Narrow Flood	21°	1800	325
LS17-002N14	Neutral White	4100	75	Narrow Flood	21°	2400	420
LS17-002D14	Daylight White	5500	75	Narrow Flood	21°	2800	500

Notes for Table 2:

- Lux @ 1m = MBCP (Maximum Beam Candlepower) or CBCP (Center Beam Candlepower).
- Refers to a typical module's lumen performance at thermal equilibrium @  $T_A = 25^\circ\text{C}$ .

## Typical Illuminance Specifications @ $T_A = 25^\circ\text{C}$ (Free Air)



## Typical Radiation Pattern

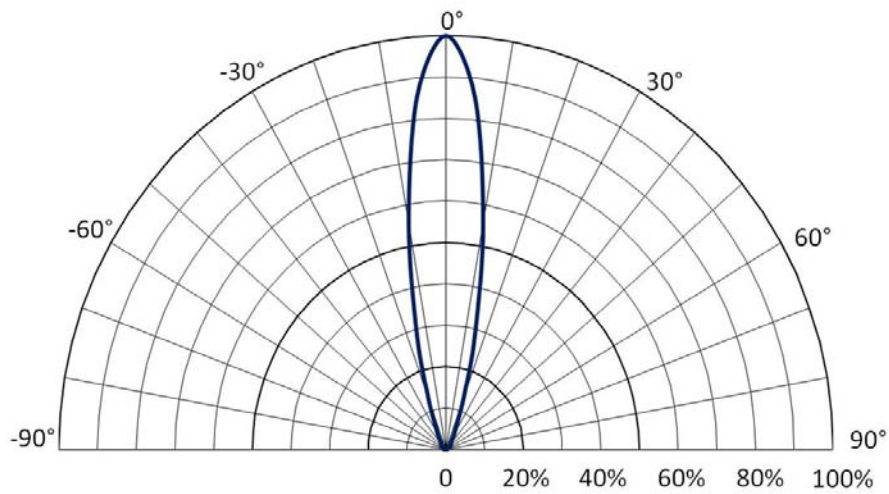


Figure 1: Typical representative radiation pattern.

## Mechanical Dimensions (mm)

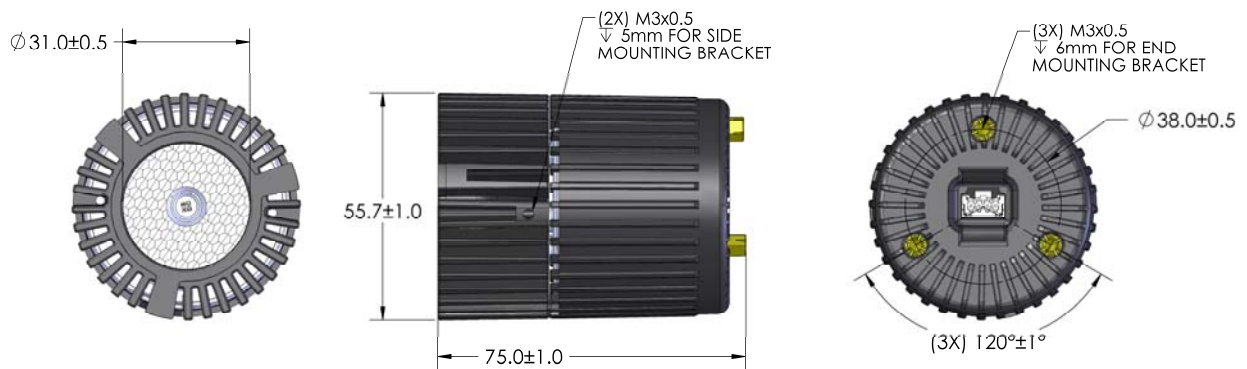


Figure 2: Package outline drawing.

Notes for Figure 2:

1. Connector part number: Molex 35362-0450.

## Cable Harness Option

Table 3:

LuxSpot™ Cable Harness Part No.	Cable Harness Length (m)	Molex Connector Part No. <sup>[1]</sup>	Termination
LC4-03121	1	35507-0400	stripped

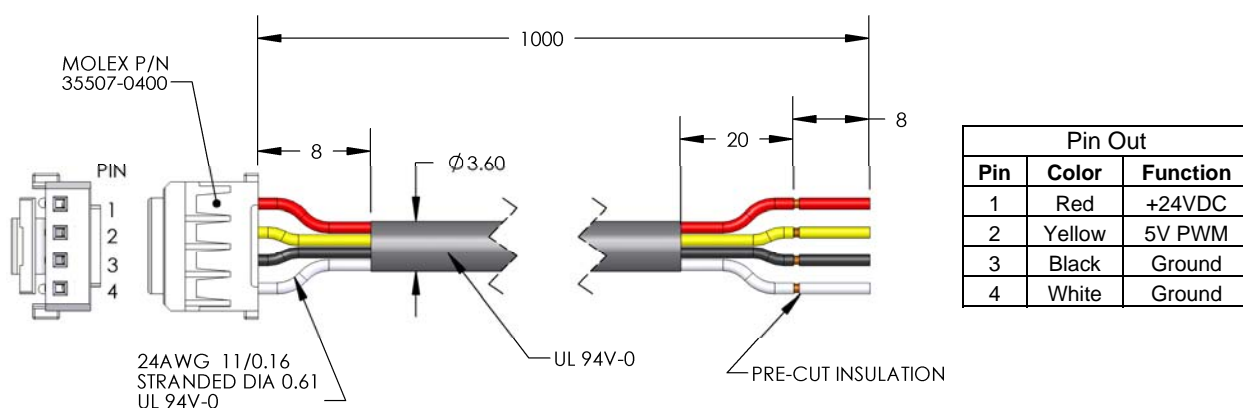


Figure 3: Cable Harness drawing.

### Notes for Figure 3:

- Cable Harness connector:
  - Molex Housing: Part Number 35507-0400 or equivalent.
  - Molex Terminal Pins: Part Number 50212-8000 (reel), 50212-8100 (bag) or equivalent.
- If not using PWM dimming, connect Pin 2 (Yellow) and Pin 4 (White) together to prevent potential flickering.
- Please contact LedEngin or authorized Distributor for more information.

## Footnotes for LuxSpot™

- **Warning!** LuxSpot™ does not have any user serviceable parts inside. To avoid unforeseen injuries such as electrical shock or skin burns, do not disassemble the module when it is connected to supply voltages in excess of LuxSpot's nominal supply voltage.
- LuxSpot™ is not intended for use in emergency light fixtures or exit lights.
- LuxSpot™ is not intended for wet or damp locations. Do not expose to spray water or submerge. Use only in dry locations.
- LuxSpot™ is not designed for use in fully enclosed fixtures. Operate only in fixtures that provide free flow of air around the heat sink.

## Company Information

LedEngin is a global market leader in advanced high-power LED emitters and light-source modules. LedEngin provides total solutions from 3W to 15W in single packages with ultra-small footprints in all colors from Cool White, Warm White, Neutral White, Red, Green, Blue, Amber, RGB, RGBA, Dental Blue and UV. LedEngin supports customers to generate solid-state lighting designs that conserve natural resources. LedEngin is focused on differentiated Ultra High-Brightness LED solutions for diverse global markets using its patent-pending package designs and manufacturing processes. LedEngin offers catalog as well as full custom solutions to enable flexible system designs for its customers. LedEngin is dedicated to long-term win-win partnering with its customers and suppliers. LedEngin is located in Santa Clara, CA in the heart of Silicon Valley.

LedEngin reserves the right to make changes to improve performance without notice.

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