



High Lux Performance White LED MR16 Lamp

LuxDot™ -- delivering the performance of a conventional halogen light source with the benefits of solid state lighting to maximize "Lux on Target™". LuxDot MR16 replacements combine energy efficiency and long service life to provide payback times less than 9 months!

Key Features

- Performance equivalent to 35W halogen MR16
- Precision optic delivering high quality uniform beam pattern
- Form factor meets IEC 60630:2002 standards for GU5.3/GX5.3 package
- Compatible with many magnetic and electronic transformers*
- Dimmable with recommended dimmers*
- Power factor >0.9
- Powered by LedEngin's latest high flux density LED
- UL, cUL and CE certified
- RoHS compliant

Benefits

- 80% power savings over 35W halogen MR16 and >10 times the service life
- Smooth light gradient eliminates hot spots and rings for better illumination throughout beam
- Plug and play; compatible with standard MR16 based fixtures
- Easy to install and operate
- Compatible with several dimmer / transformer combinations
- Suitable for use in commercial installations
- Industry leading lumen maintenance and color point stability
- Meets safety standards
- No UV or IR in the beam

* for current list visit http://www.ledengin.com/luxdot/LuxDot_Transformer_Compatibility_List.xls

Typical Applications

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

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Typical Operating Characteristics @ T_A = 25°C (Free Air)

Table 1:

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Storage Temperature	T _{stg}	-40	25	85	°C
Operating Temperature	T _{opr}	-25	25	40	°C
Input Voltage (AC)	V _{IN}	11.5	12	13.5	VAC
Input Voltage (DC)		11.5	12	12.5	VDC
Power Consumption (AC)	P _{IN}		5.7	6.1	W
Power Consumption (DC)	P _{IN}		5.7	6.1	W
Average Luminous Maintenance ^[1]	L ₇₀		>50		kHrs
Power Factor	PF		>0.92		
Weight			58		g

Notes for Table 1:

1. Average Lumen Maintenance > 70% at 50K hours @ T_A = 25°C.

Typical Optical Specifications @ T_A = 25°C (Free Air)

Table 2:

Beam	Part Number	Color Temperature (K)	Illuminance at 1 meter (Lux) ^[1]	Illuminance at 3 meters (Lux)	Light Output (Lumens)	Color Rendering Index (CRI)
Spot 12°	LD16-021W27	Warm White 2700K	1200	133	150	85
	LD16-021W29	Warm White 2900K	1280	142	160	85
	LD16-021W31	Warm White 3100K	1440	160	170	85
	LD16-021N41	Neutral White 4100K	1760	196	210	75
	LD16-021D55	Daylight White 5500K	1920	213	240	75
Narrow Flood 23°	LD16-022W27	Warm White 2700K	760	84	150	85
	LD16-022W29	Warm White 2900K	800	89	160	85
	LD16-022W31	Warm White 3100K	900	100	170	85
	LD16-022N41	Neutral White 4100K	1100	122	210	75
	LD16-022D55	Daylight White 5500K	1220	136	240	75
Flood 37°	LD16-023W27	Warm White 2700K	375	42	150	85
	LD16-023W29	Warm White 2900K	400	44	160	85
	LD16-023W31	Warm White 3100K	450	50	170	85
	LD16-023N41	Neutral White 4100K	550	61	210	75
	LD16-023D55	Daylight White 5500K	600	67	240	75

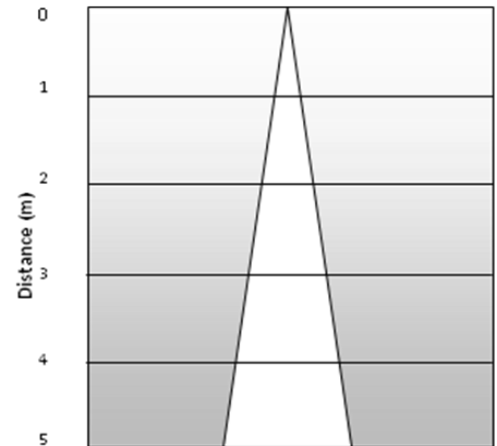
Notes for Table 2:

1. Refers to a typical module's lumen performance after 1 – 2 seconds of operation @ T_A = 25°C.
2. Lux @ 1m = CBCP (Center Beam Candlepower) measured in cd

Typical Illuminance Specifications @ T_A = 25°C (Free Air)

Distance (m)		1	2	3	4	5
Beam	Color Temperature	Lux				
Spot 12°	Warm White 2700K	1200	300	133	75	48
	Warm White 2900K	1280	320	142	80	51
	Warm White 3100K	1440	360	160	90	58
	Neutral White 4100K	1760	440	196	110	70
	Daylight White 5500K	1920	480	213	120	77
Narrow flood 23°	Warm White 2700K	760	190	84	48	30
	Warm White 2900K	800	200	89	50	32
	Warm White 3100K	900	225	100	56	36
	Neutral White 4100K	1100	275	122	69	44
	Daylight White 5500K	1220	305	136	76	49
Flood 37°	Warm White 2700K	375	94	42	23	15
	Warm White 2900K	400	100	44	25	16
	Warm White 3100K	450	113	50	28	18
	Neutral White 4100K	550	138	61	34	22
	Daylight White 5500K	600	150	67	38	24
Illuminated area diameter (m)	Spot	0.2	0.4	0.6	0.9	1.1
	Narrow flood	0.4	0.8	1.3	1.7	2.1
	Flood	0.8	1.5	2.3	3.0	3.8

Beam Reference



Typical Radiation Pattern

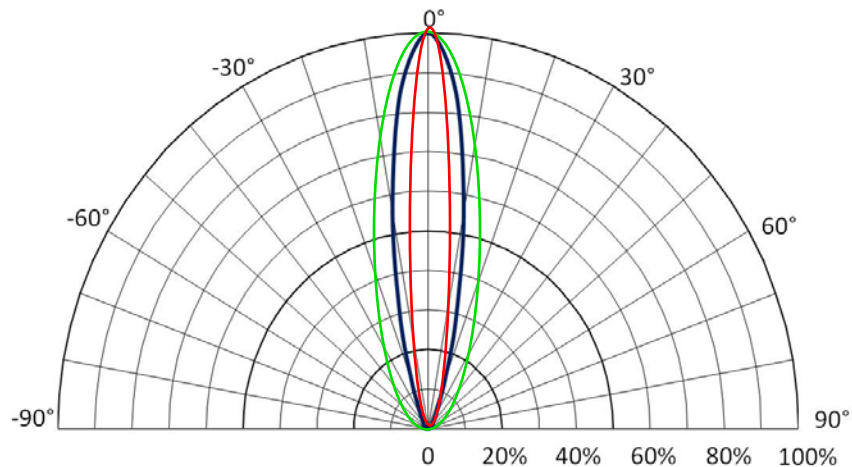


Figure 1: Typical representative radiation pattern.

- Red – Spot flood beam pattern
- Blue – Narrow flood beam pattern
- Green – Flood beam pattern

Mechanical Dimensions (mm)

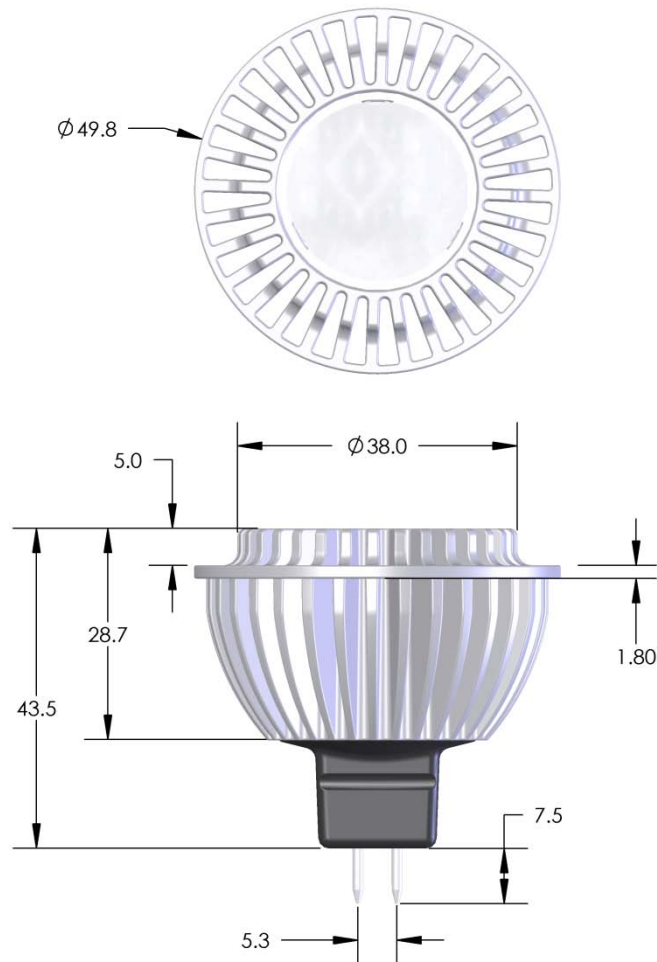
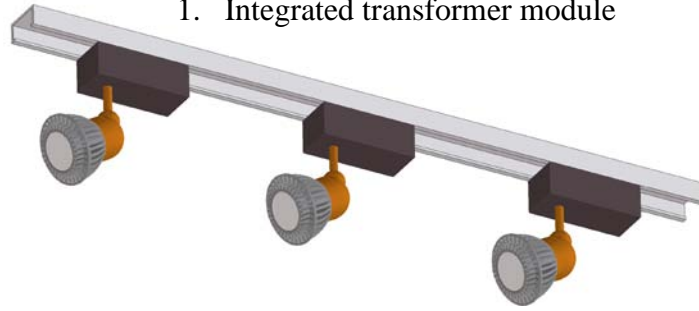


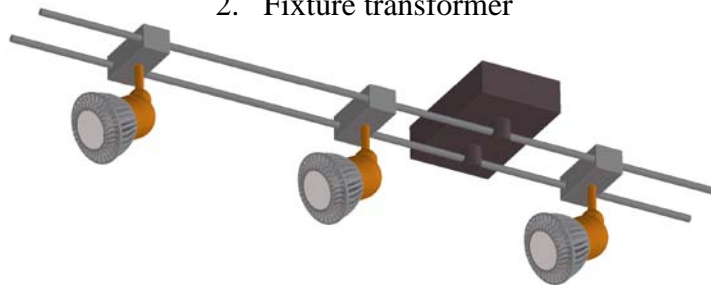
Figure 2: Package outline drawing.

Mounting Options

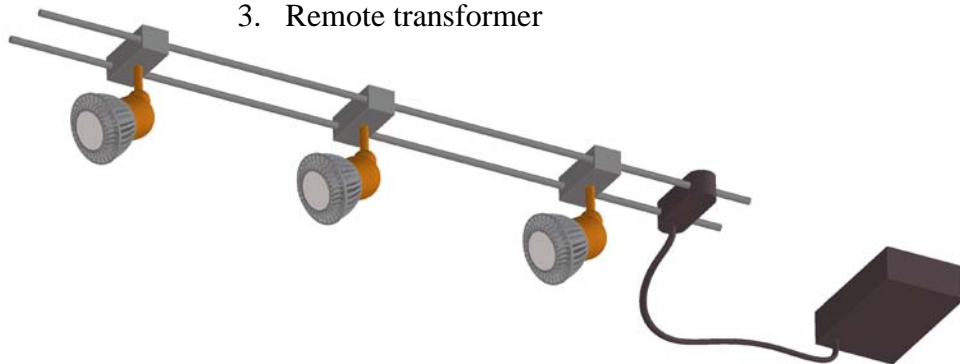
1. Integrated transformer module



2. Fixture transformer



3. Remote transformer



Footnotes for LuxDot™

- **Warning!** LuxDot™ does not have any user serviceable parts inside. To avoid unforeseen injuries such as electrical shock or skin burns, do not disassemble the module.
- LuxDot™ is not intended for use in emergency light fixtures or exit lights.
- LuxDot™ is not intended for wet or damp locations. Do not expose to spray water or submerge. Use only in dry locations.
- LuxDot™ 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, Inc. is a solid state lighting manufacturer of advanced high-power LED emitters and light-source modules. LedEngin provides differentiated high brightness, high flux density LED solutions to maximize usable light or “Lux on Target™” for lighting and other diverse global markets. Using patent-pending package and optics designs. LedEngin products are among the performance leaders in compact, high intensity applications. 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.

Please contact LuxDot@ledengin.com or (408) 492-0620 for more information or visit us at www.LuxDot.net or www.ledengin.com.