



5W LED MR16

# 5W LED MR16

Approved By Customer	Designer	Checker	Approval

Date : 2006/7/11

Version : 1.3

Device No. : 3-RD-01-H0002  
EDISON OPTO CORPORATION

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<http://www.edison-opto.com.tw>



# 5W LED MR16



EdiPower series can provide different power-operation and different colors. They serve as optical engine appropriately and applied to lighting and projector in the form of MR16 or others.

## Features

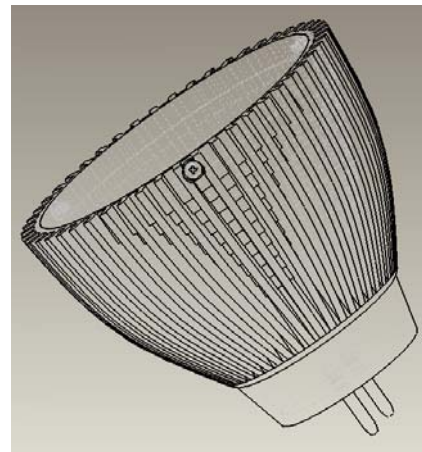
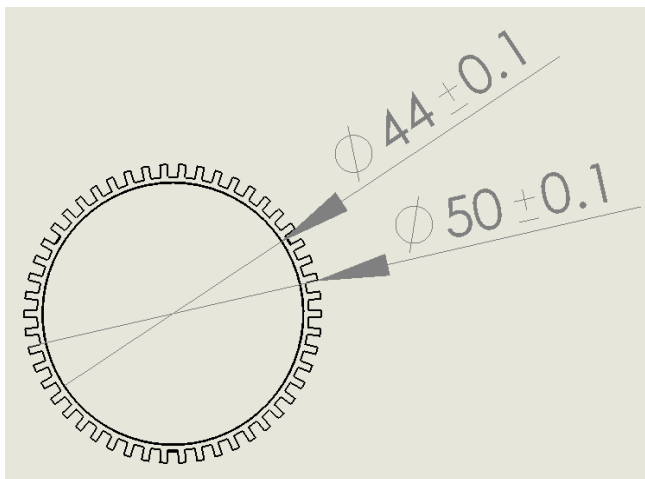
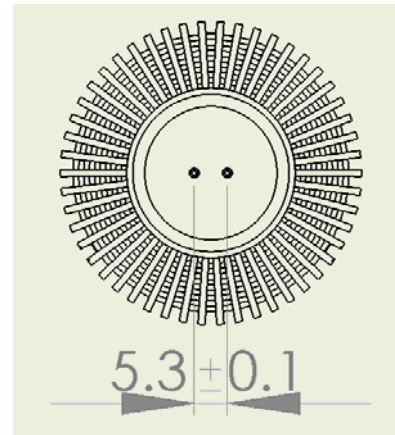
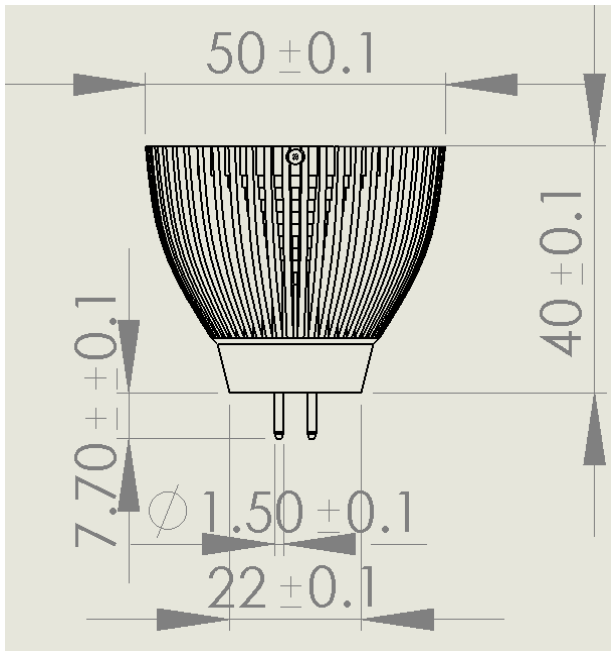
- Compatible with traditional halogen MR16
- High power factor 95%
- Excellent thermal performance
- NO UV

## Typical Applications

- Entertainment lighting
- Architectural lighting
- Landscape lighting
- Bollards/Security/Garden lighting
- Interior Commercial lighting



**Package Outlines:**



Unit:mm

**Material:**

**Heat sink: Al**

**Bottom base: PBT, flammability V2 level**

**Surface of heat sink: Cr coating**

**Pin type: GU 5.3**

## Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
Operating voltage (AC/DC)	V	15	V
LED Junction Temperature	T <sub>j</sub>	125	°C
LED Case Temperature	T <sub>c</sub>	75	°C
Operating Temperature	T <sub>opr</sub>	-30 ~ +40	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +60	°C
Input Voltage root-mean-square	V <sub>rms</sub>	9~13	V
Heat sink temperature	Th	75	°C

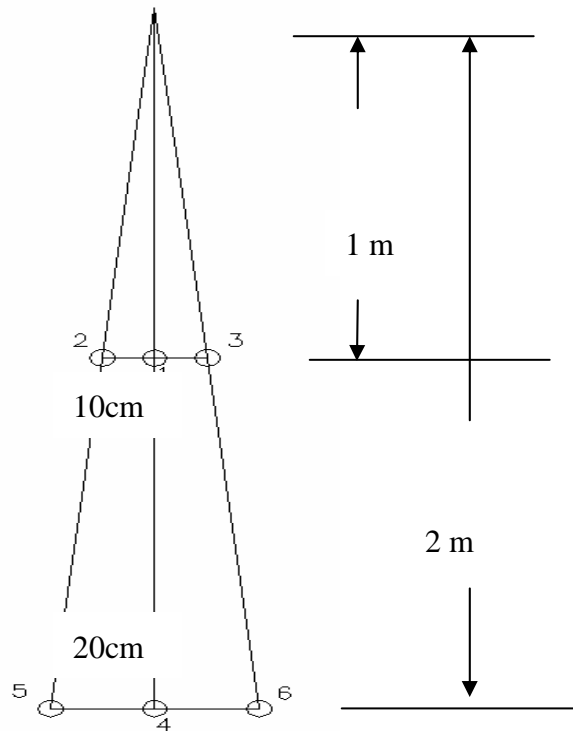
## Specification

Power consumption	Part Name	Color	Beam Angle	Lux@ 1m
5W	EL16-51W1	White	10°	1800
	EL16-51X1	Warm White	10°	900
	EL16-51R1	Red	10°	1100
	EL16-51A1	Amber	10°	1100
	EL16-51T1	True Green	10°	1100
	EL16-51B1	Blue	10°	600
Power consumption	Part Name	Color	Beam Angle	Lux@1m
5W	EL16-52W1	White	38°	1000
	EL16-52X1	Warm White	38°	500
	EL16-52R1	Red	38°	600
	EL16-52A1	Amber	38°	600
	EL16-52T1	True Green	38°	600
	EL16-52B1	Blue	38°	300
Power consumption	Part Name	Color	Beam Angle	Lux@1m
5W	EL16-53W1	White	60°	80
	EL16-53X1	Warm White	60°	50
	EL16-53R1	Red	60°	50
	EL16-53A1	Amber	60°	50
	EL16-53T1	True Green	60°	50
	E16L-53B1	Blue	60°	25

## Photometrics

Color	Dominant Wavelength ( $\lambda_d$ )nm/CCT	Half Width (nm)
White	6000~7200 K	
Warm White	2700~3100 K	
Red	620~630	25
Amber	585~595	25
True Green	520~530	35
Blue	460~470	25

## Performance



10° white

distance \ NO.	1	2	3
	1 m	1800 lux	780 lux
	4	5	6
2 m	510 lux	210 lux	210 lux

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38° white

distance \ NO.	1	2	3
1 m	1000 lux	500 lux	500 lux
2 m	250 lux	150 lux	150 lux

60° white

distance \ NO.	1	2	3
1 m	80 lux	60 lux	60 lux
2 m	40 lux	20 lux	20 lux

**CCT ranks**

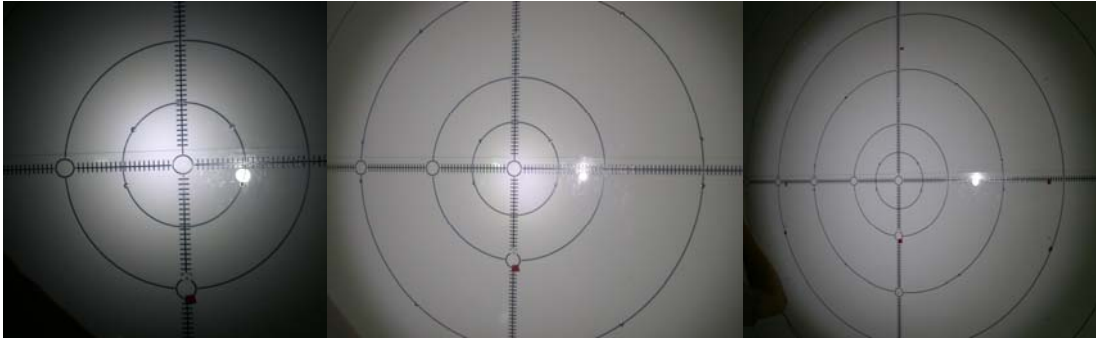
CCT Group	CCT (°K)
<b>Warm White</b>	<b>2700 ~ 3100</b>
X1	2700 ~ 2900
X2	2900 ~ 3100
<b>White</b>	<b>6000 ~ 7200</b>
W3	6000 ~ 6400
W4	6400 ~ 6800
W5	6800 ~ 7200

Tolerance: +/- 30K

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### **Light Pattern 10°**

**The photo distance from MR16 is around 1 meter**



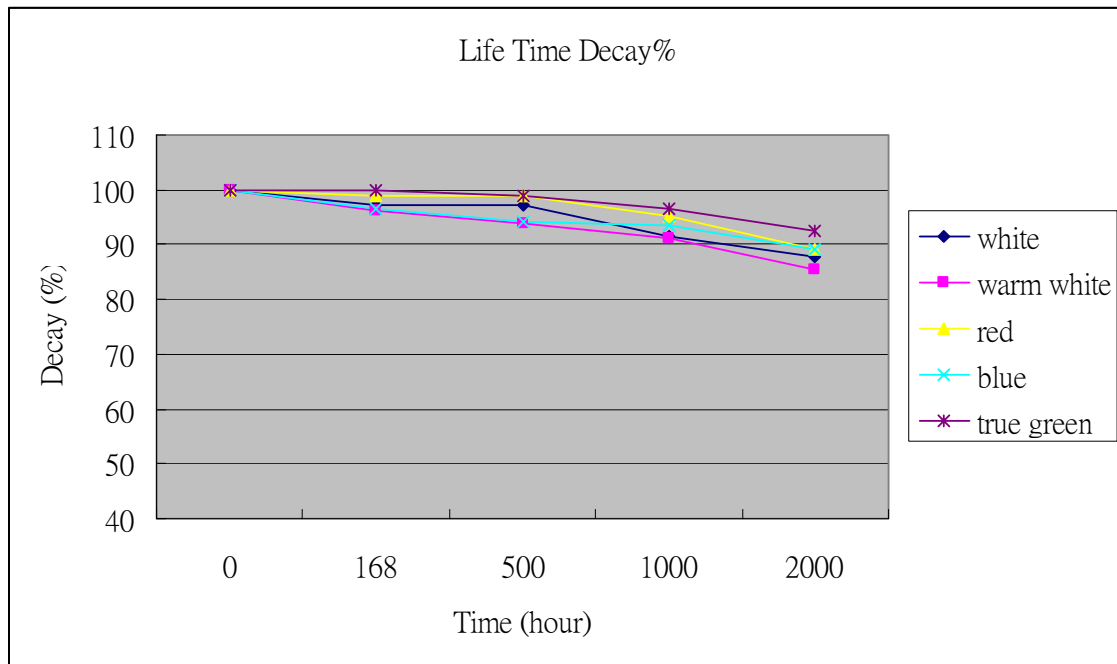
**The light area is around 18x18 cm<sup>2</sup> for 10°**

**The light area is around 40x40 cm<sup>2</sup> for 38°**

**The light area is around 52x52 cm<sup>2</sup> for 60°**

**Reliability**

Color	Initial lux	168 hr. lux	500 hr. lux	1000 hr. lux	2000 hr. lux	Decay %
White	1750	1700	1700	1600	1535	-12.3%
Warm White	800	770	750	730	685	-14.3%
Red	840	830	830	800	750	-10.7%
Blue	700	675	660	655	625	-10.7%
True Green	860	860	850	830	800	-7.5%



**ASSIST FORM for LED Systems**

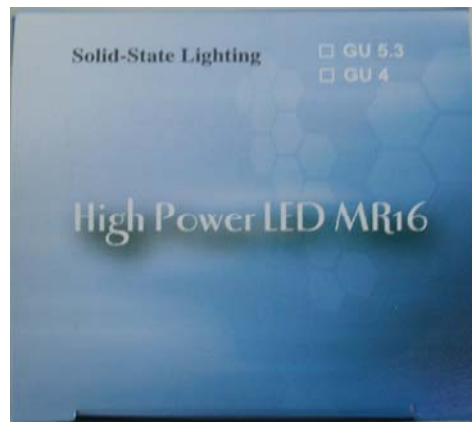
**Ts=65°C ( heat sink) Tj=90 °C**

**L<sub>70%</sub> 25,000hrs**



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## Package Dimensions



**Dimension: 55 (width) x 60 (length) x 65 (height) mm**

**Weight: 93.5 g ( 10 degree light pattern)**

**79.5 g (38 degree light pattern)**

**63.5 g ( 60 degree light pattern)**

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## Electronic Transformer Recommendation

Company: ANCHORN ENTERPRISE, LTD

Website: <http://www.globalmarket.com/hsinchang>

Model No.

### 1. AET-H050-B

Input: AC 120V 50/60Hz

Output: AC 12V 50W/MAX



### 2. AET-3202R1

Input: AC 230V 50Hz

Output: AC 11.5V 60W/MAX



### 3. AET-D0501

Input: AC 120V 50/60Hz

Output: AC 11.5V 50W/MAX



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**Revised History**

<b>Rev.</b>	<b>Issue Date</b>	<b>Revised Item</b>	<b>Note</b>
1.1	2006/02/06	Form changed	
1.2	2006/03/21	1. Add Vrms 2. Add bin group 3. Add transformer recommendation	P. 3 P. 4 P. 7
1.3	2006/05/24	1. Add 38° data 2. Add assist form	P.3 P. 7

