



5W LED MR16

# NEW 5W LED MR16

Approved By Customer	Designer	Checker	Approval

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Version : 2.1

Device No. : 3-RD-01-E0004

Plus Opto Ltd.

B13, Derwent Court, William Way,

Moss Ind. Est. Leigh, Lancs, WN7 3PT

Tel: (0) 1942 671122

Fax: (0) 1942 671133

E: sales@plusopto.co.uk

W: www.plusopto.co.uk



# 5W LED MR16



SEAM Power 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

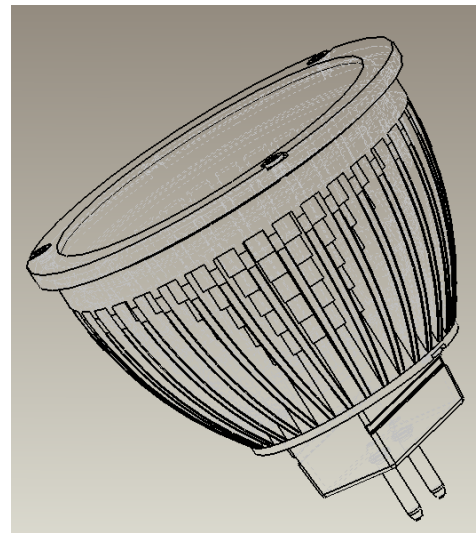
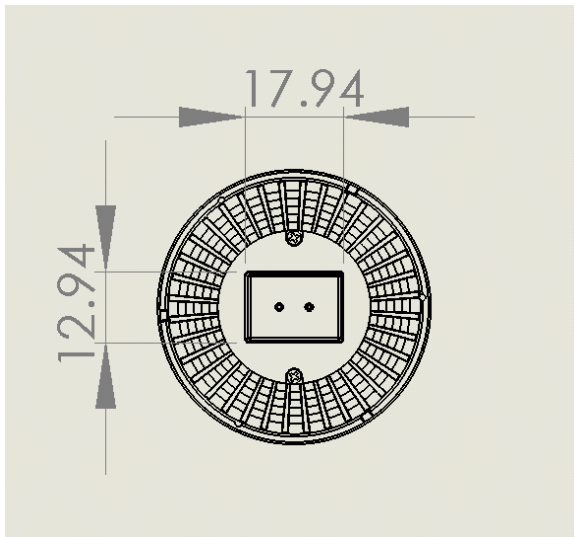
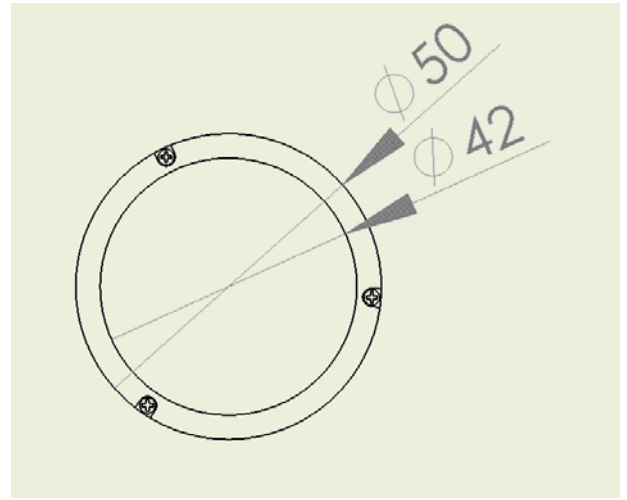
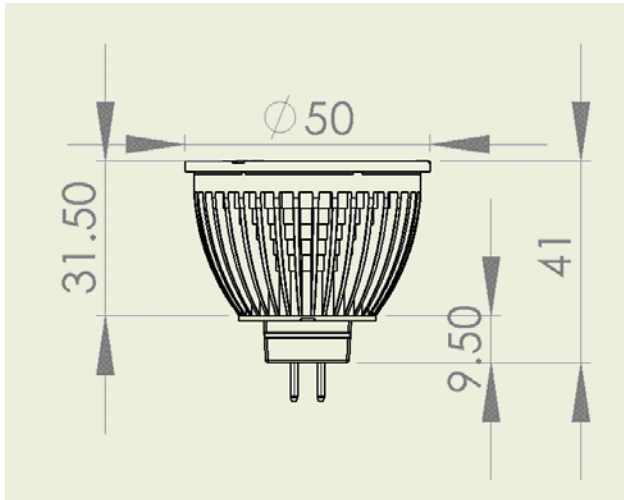
- Compatible with traditional halogen MR16
- High power factor 95%
- Excellent thermal performance
- NO UV light

## Typical Applications

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

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**Package Outlines:**



Unit:mm

Tolerance:±0.5 mm

**Material:**

**Heat sink: Aluminum die casting**

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

**Surface of heat sink: anodization**

**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	SFNMR16-51B2	Blue	10°	600
	SFNMR16-51T2	True Green	10°	1100
	SFNMR16-51A2	Amber	10°	1100
	SFNMR16-51R2	Red	10°	1100
	SFNMR16-51W2	White	10°	1800
	SFNMR16-51X2	Warm White	10°	900

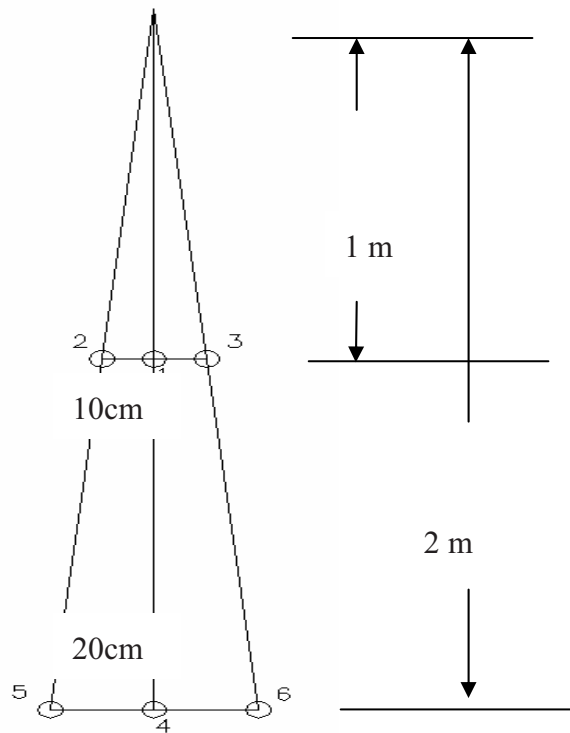
Power consumption	Part Name	Color	Beam Angle	Lux@1m
5W	SFNMR16-52B2	Blue	38°	300
	SFNMR16-52T2	True Green	38°	600
	SFNMR16-52A2	Amber	38°	600
	SFNMR16-52R2	Red	38°	600
	SFNMR16-52W2	White	38°	1000
	SFNMR16-52X2	Warm White	38°	500

Power consumption	Part Name	Color	Beam Angle	Lux@1m
5W	SFNMR16-53B2	Blue	60°	25
	SFNMR16-53T2	True Green	60°	50
	SFNMR16-53A2	Amber	60°	50
	SFNMR16-53R2	Red	60°	50
	SFNMR16-53W2	White	60°	80
	SFNMR16-53X2	Warm White	60°	50

## 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

NO. distance	1	2	3
1 m	1800 lux	780 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**

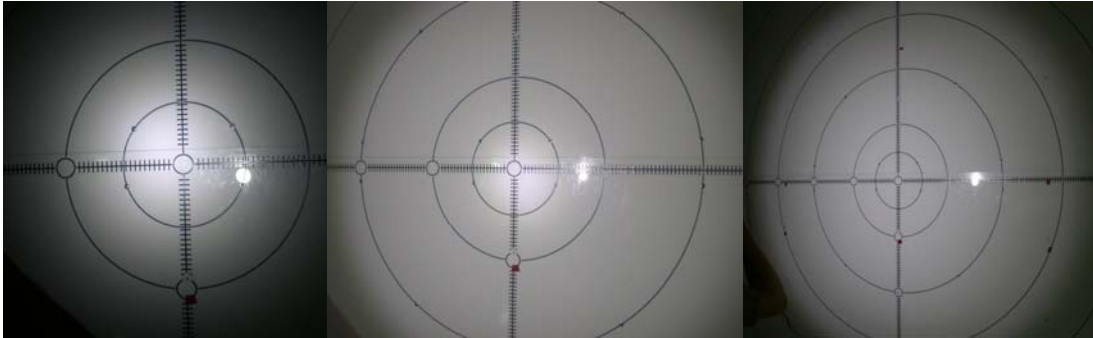
CCT Group	CCT (°K)
<b>Warm White</b>	<b>2700 ~ 3100</b>
X1	2700 ~ 2900
X2	2900 ~ 3100
<b>White</b>	<b>6000 ~ 7200</b>
W3	6000 ~ 6400
W4	6400 ~ 6800
W5	6800 ~ 7200

Tolerance: +/- 30K

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## Light Pattern 10°

The photo distance from MR16 is around 1 meter



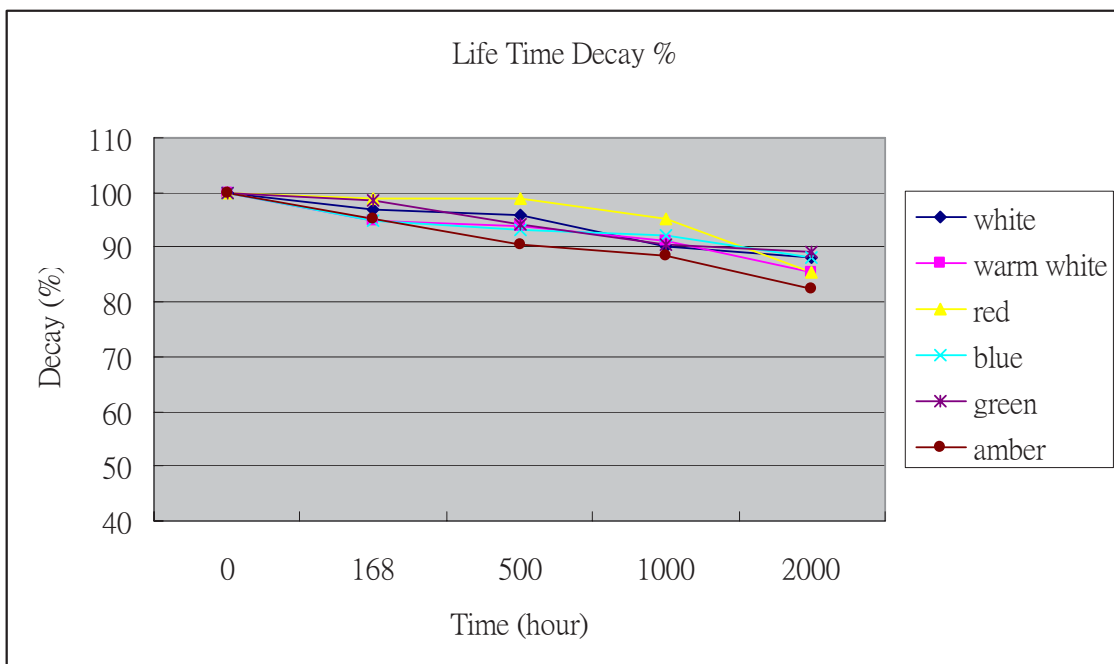
The light area is around  $18 \times 18 \text{ cm}^2$  for  $10^\circ$

The light area is around  $40 \times 40 \text{ cm}^2$  for  $38^\circ$

The light area is around  $52 \times 52 \text{ cm}^2$  for  $60^\circ$

**Reliability**

Color	Initial lux	168 hr. lux	500 hr. lux	1000 hr. lux	2000 hr. lux	Decay %
White	1750	1452	1440	1350	1320	-12.0%
Warm White	820	779	769	748	702	-14.4%
Red	850	840	840	809	727	-14.5%
Blue	720	684	670	662	634	-12.0%
True Green	900	886	848	814	803	-10.8%
Amber	880	838	796	770	726	-17.5%



**ASSIST FORM for LED Systems**

**Ts=65°C ( heat sink) Tj=90 °C**

**L70% 25,000hrs**

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## Package Dimensions



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

**Weight: 83 g ( 10 degree light pattern)**

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

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