

# 5W LED MR16



Edison MR16 uses high brightness LED engine which gives a superb illuminance. It is ideal for the use in tracks, rails, and pendants in exhibit, architectural and residential applications. Furthermore, the multi-selection on various colors offers a great experience in decorative and moodlighting applications.

The lamp features standard MR16 bi-pin, which offers an instant replacement in MR16 type fixtures. With a life of more than 25,000 hours, it can be used in hard-to-reach locations to prevent a regular maintenance needs.

## Features

- Compatible with traditional halogen MR16
- High power factor
- 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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## Product Nomenclature

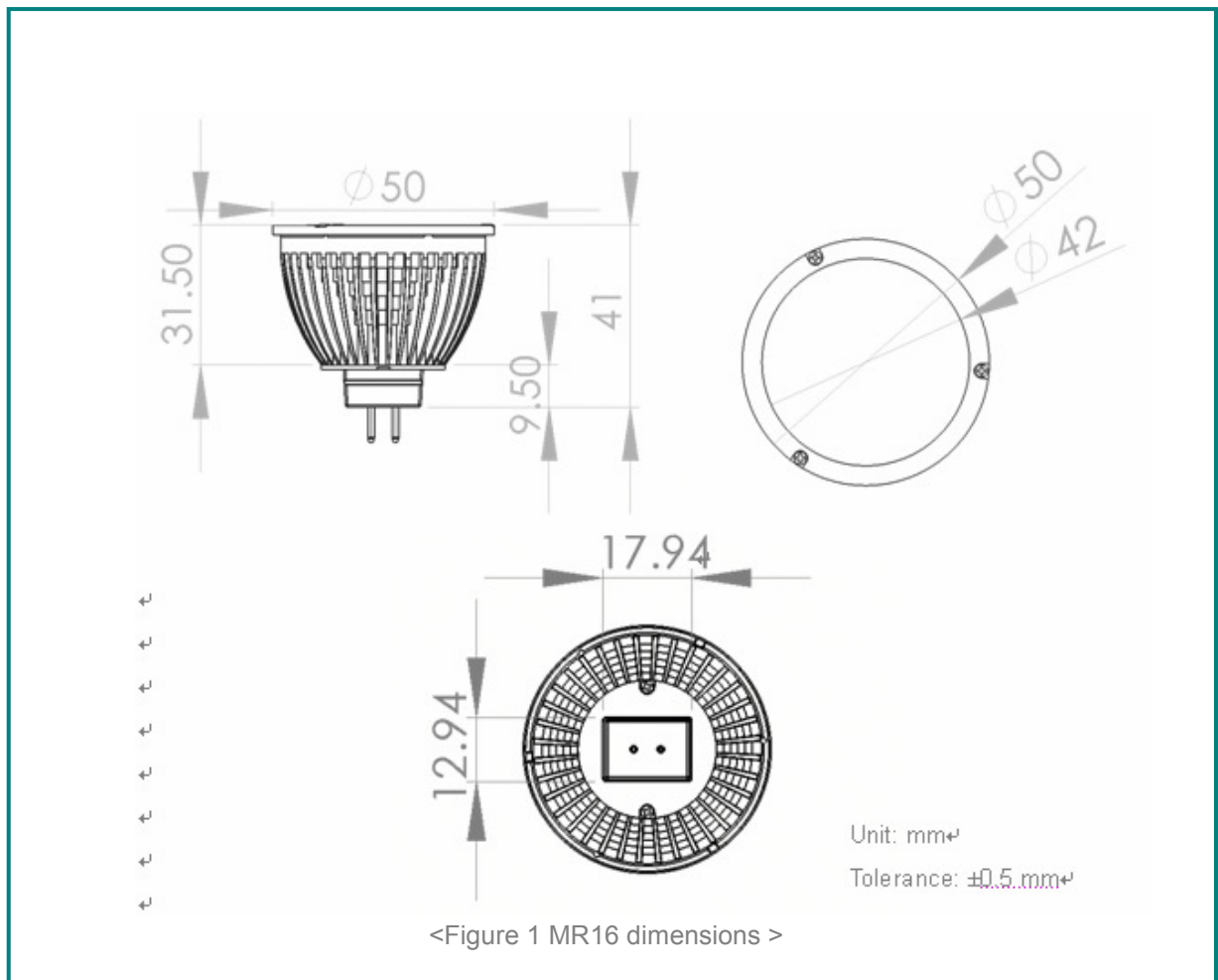
For more information regarding luminous flux and CIE color distribution, please refer to the Bin Group document.

< Table 1 MR16 series nomenclature >

E    L16    -    5    1    W    3    -    0    1  
X1    X2                    X3    X4    X5    X6                    X7    X8

<u>X1</u> LED Item		<u>X2</u> Lighting Item		<u>X3</u> Power		<u>X4</u> Angle		<u>X5</u> Color		<u>X6</u> Serial No.1	<u>X7</u> Serial No.2	<u>X8</u> Serial No.3
Code	Type	Code	Type	Code	Type	Code	Type	Code	Type			
E	Edison	L16	MR16	5	5W	1	10°	W	Cool White			
						2	38°	H	Neutral White			
						3	60°	X	Warm White			
								R	Red			
								A	Amber			
								T	True Green			
								B	Blue			

## Product Dimensions



## Material

- Heatsink: Aluminum die casting
- Bottom base: PBT, flammability V2 level
- Surface of heatsink: Anodization

## Pin type

- GU 5.3

## Absolute Maximum Ratings

<Table 2 MR16 absolute maximum ratings >

Parameter	Symbol	Rating	Unit
LED Junction Temperature	T <sub>j</sub>	125	°C
Plastic bottom 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
Heatsink Temperature	T <sub>h</sub>	75	°C
Input Voltage root-mean-square	V <sub>rms</sub>	14	V

## Specifications

<Table 3 MR16 specifications >

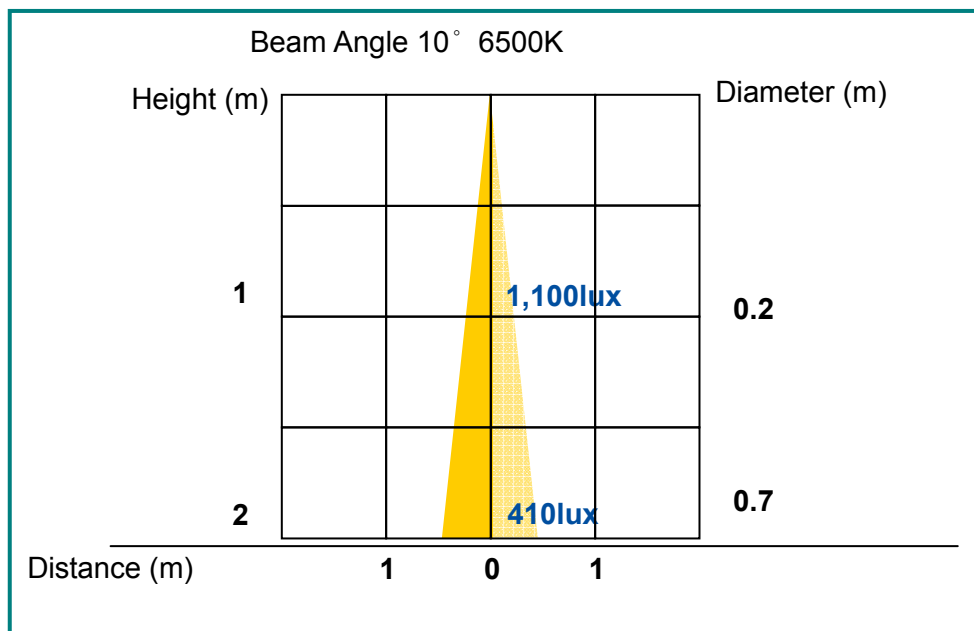
Power consumption	Part Name	Color	Beam Angle	Lux @ 1m (Typ.)
5W	EL16-51W3-00	Cool White	10°	1,100
	EL16-51H3-00	Neutral White	10°	850
	EL16-51X3-00	Warm White	10°	700
	EL16-51R3-00	Red	10°	150
	EL16-51A3-00	Amber	10°	150
	EL16-51T3-00	True Green	10°	500
	EL16-51B3-00	Blue	10°	250
Power consumption	Part Name	Color	Beam Angle	Lux @ 1m (Typ.)
5W	EL16-52W3-00	Cool White	38°	600
	EL16-52H3-00	Neutral White	38°	450
	EL16-52X3-00	Warm White	38°	300
	EL16-52R3-00	Red	38°	90
	EL16-52A3-00	Amber	38°	90
	EL16-52T3-00	True Green	38°	160
	EL16-52B3-00	Blue	38°	130

Power consumption	Part Name	Color	Beam Angle	Lux @ 1m (Typ.)
5W	EL16-53W3-00	Cool White	60°	70
	EL16-53H3-00	Neutral White	60°	55
	EL16-53X3-00	Warm White	60°	50
	EL16-53R3-00	Red	60°	35
	EL16-53A3-00	Amber	60°	35
	EL16-53B3-00	True Green	60°	90
	EL16-53B3-00	Blue	60°	65

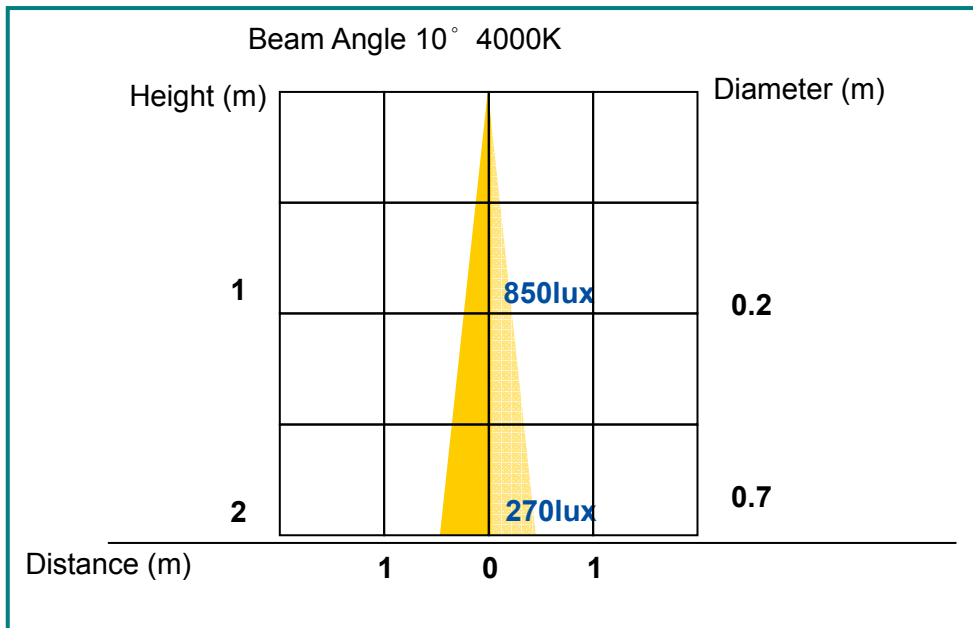
**Note:**

Lux value is measured under thermal balance condition . (i.e. after 1 hour operation)

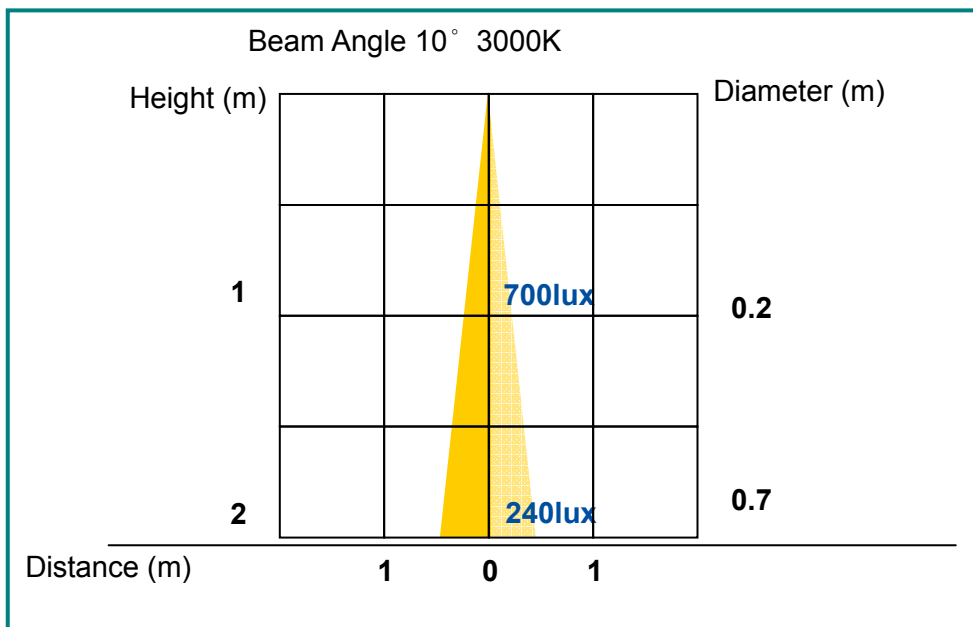
**Performance**



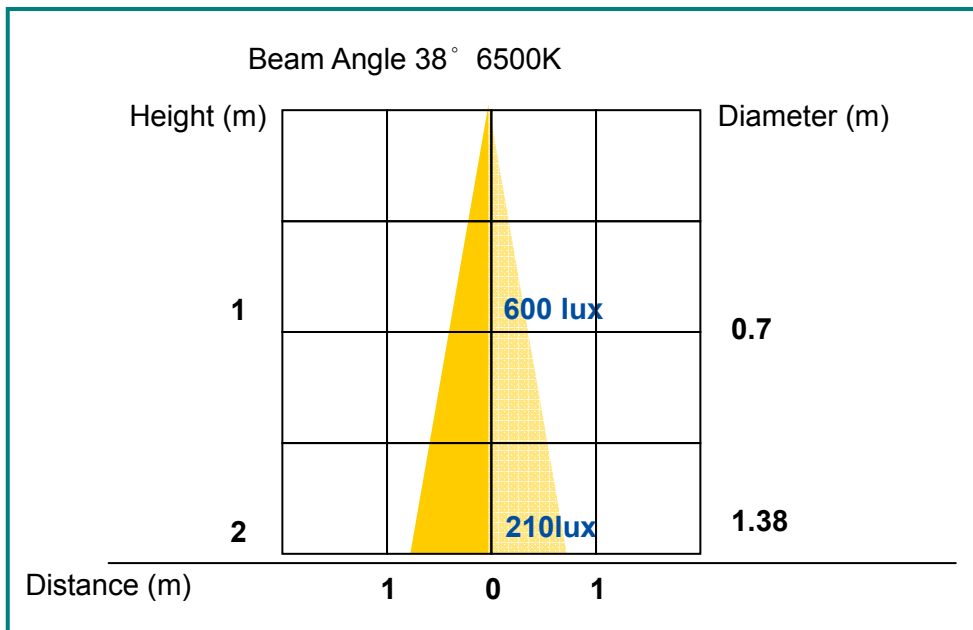
<Figure 2 MR16 beam angle 10 degree of cool white color >



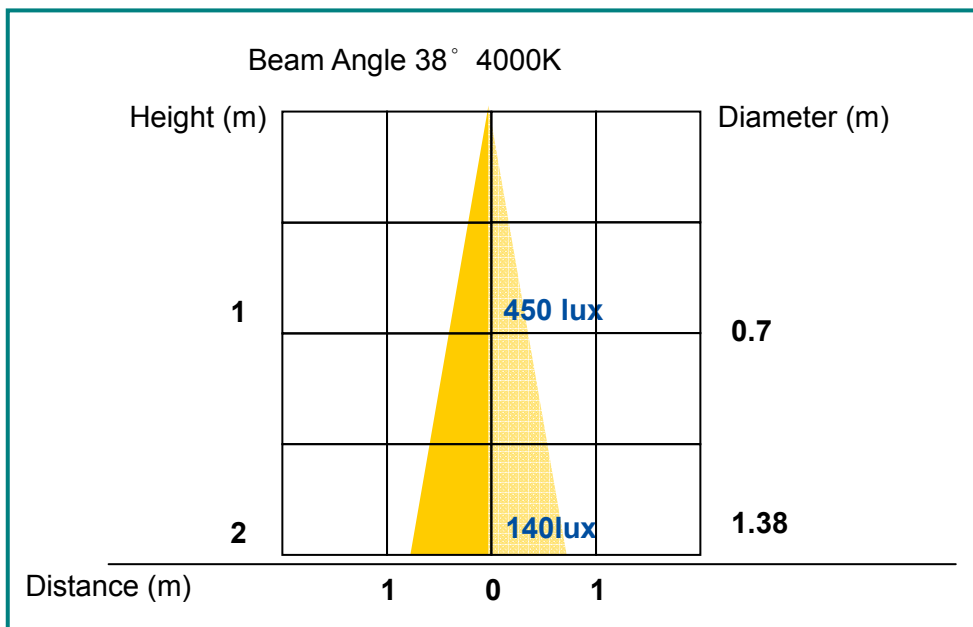
<Figure 3 MR16 beam angle 10 degree of neutral white color >



<Figure 4 MR16 beam angle 10 degree of warm white color >

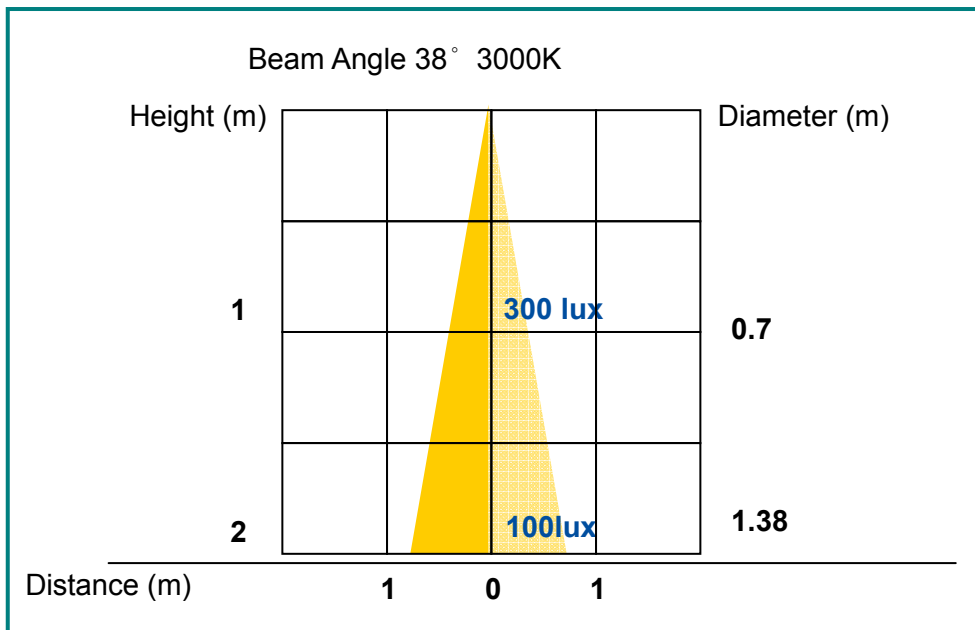


<Figure 5 MR16 beam angle 38 degree of cool white color >

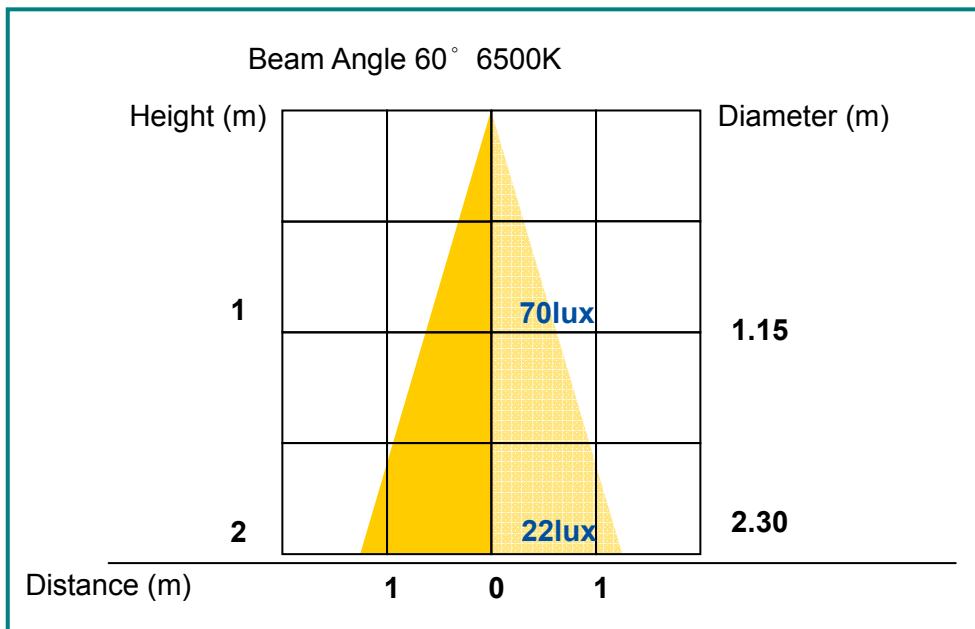


<Figure 6 MR16 beam angle 38 degree of neutral white color >

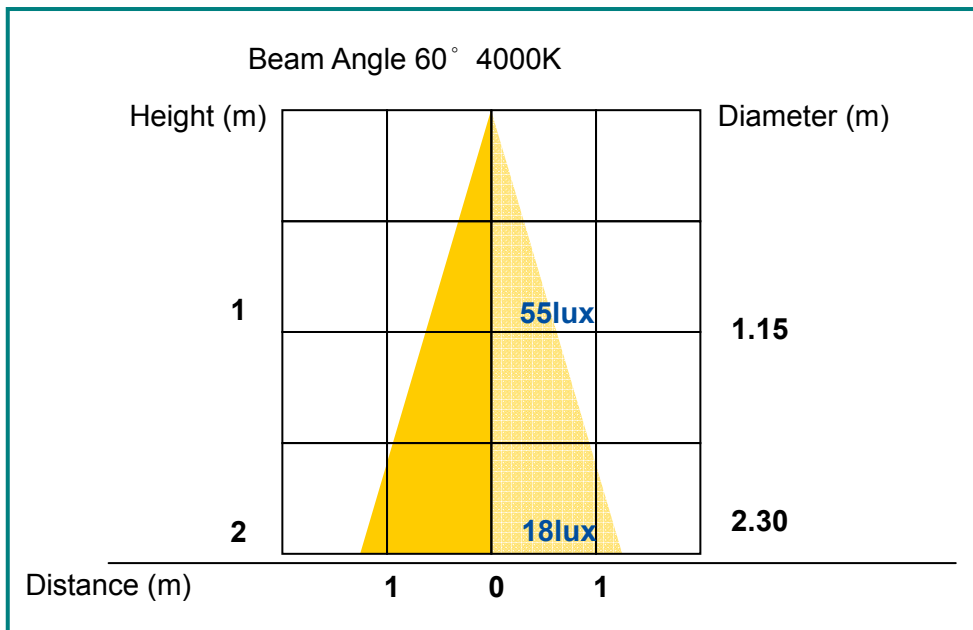




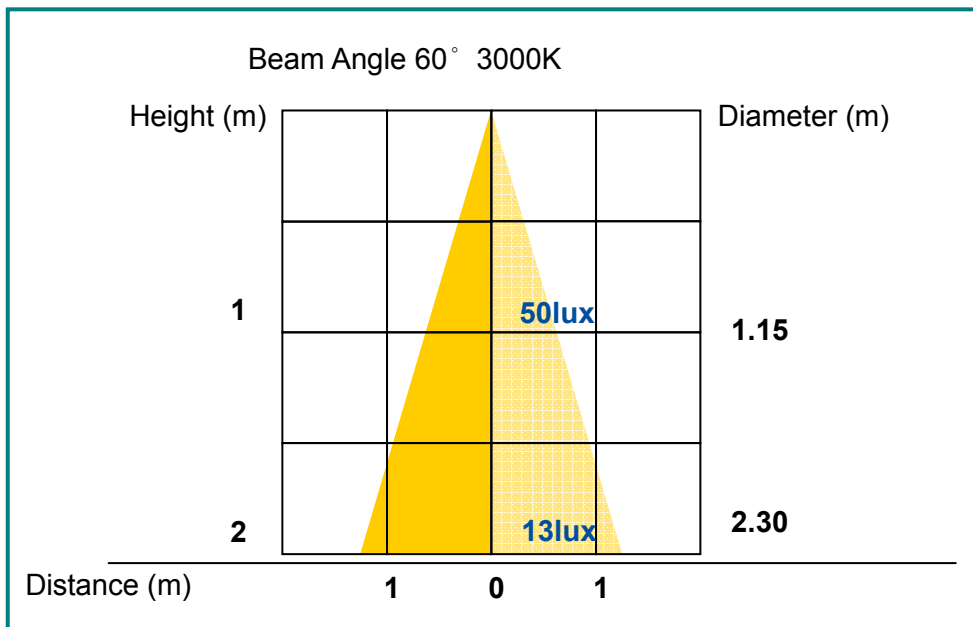
<Figure 7 MR16 beam angle 38 degree of warm white color >



<Figure 8 MR16 beam angle 60 degree of cool white color >

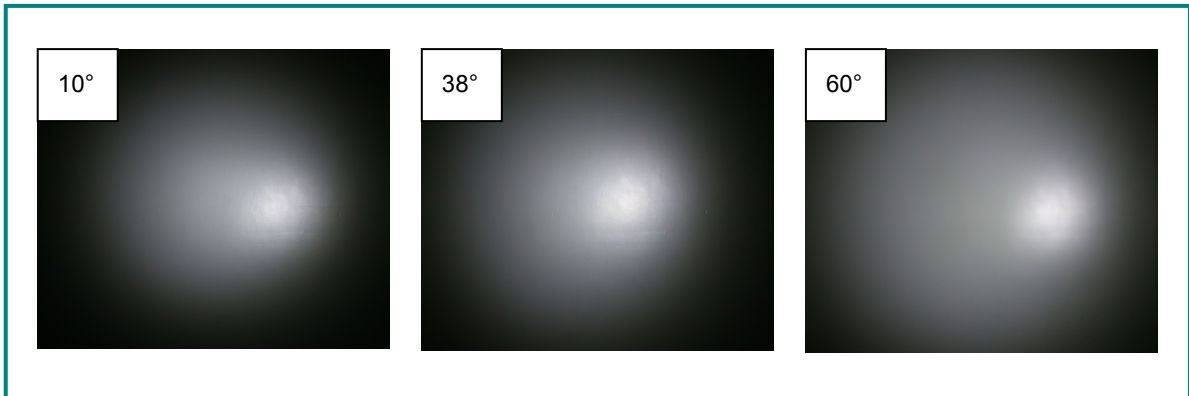


<Figure 9 MR16 beam angle 60 degree of neutral white color >



<Figure 10 MR16 beam angle 60 degree of warm white color >

Light Pattern 10°/38°/60°



<Figure 11 Different beam angle from 1 meter picture >

ASSIST FORM for LED System

When  $T_s=65^{\circ}\text{C}$  ( heat sink temperature ) and  $T_j=90^{\circ}\text{C}$

$L_{70\%}$                       25,000hrs

## Package Dimensions

Dimension: 55 mm(L) x 60 mm(W) x 65 mm(H) mm

Weight: 83 g ( 10 degree light pattern)

83 g ( 38 degree light pattern)

53 g ( 60 degree light pattern)



<Figure 12 Package appearance >

**Note:**

1. Do not connect more than one LED MR16 to a transformer.
2. Make sure the transformer's output voltage- $V_{rms}$  do not exceed 15V as this will damage the LED MR16 built-in circuitry.
3. Do not use this product with ambient temperature over  $40^{\circ}\text{C}$ .
4. This product should only be used in a well ventilated condition. Do not install this product within an airtight lighting fixture.
5. Some electronic transformers may cause flickering phenomenon due to insufficient electronic power supply.
6. Indoor use only