

PFC Dimmable 9Watt COB LED Lamp (as option)

Circuit with PFC, 10%-100% dimmable.

Attractive COB MR16 LED lamp which is compatible with electronic transformers in AC/DC 12V.



Product Introduction

This 9W COB MR16(1pc LED) is a multi-purpose indoor spotlight, whose heat sink is made by 6063 tensile pure aluminum material.

Offer four input voltage stages to choose: 12Vdc & 12Vac & 110Vac & 230Vac. Dimmable and non-dimmable versions are optional with 110Vac or 230Vac input.

Adopt as high as 92% light transmittance PMMA material for its secondary optical lens, 24°/ 38°/ 60° lens are available.

Especially the 12V input version is compatible with Inductive Transformer, DC Power Supply and Electronic Transformer.

Measured output luminous reach up to 1180cd/1255cd, which is fully enough to replace 45-50W halogen bulbs.

Features

1. Available input options: 12Vdc & 12Vac & 110Vac & 230Vac (PF~0,83);
2. Adopt SHARP-COB LED;
3. Compatible with 98% commonly used electronic transformers in present supply markets;
4. High CRI \geq 80, multiple colour temperature options ;
5. Optional beam angles: 24°/ 38°/ 60° ;
6. High light transmittance lenser reaches up to 92% with polyhedron homogenius radiation;
7. Adopt long life-span Japanese Rubycon capacitor for all drivers ;
8. Products extra life time > 40.000 hrs while working environment temp is not more than 40°C ;
9. Measured warm white luxes reach up to 1180cd, perfect replacement for 45-50W halogen bulbs;

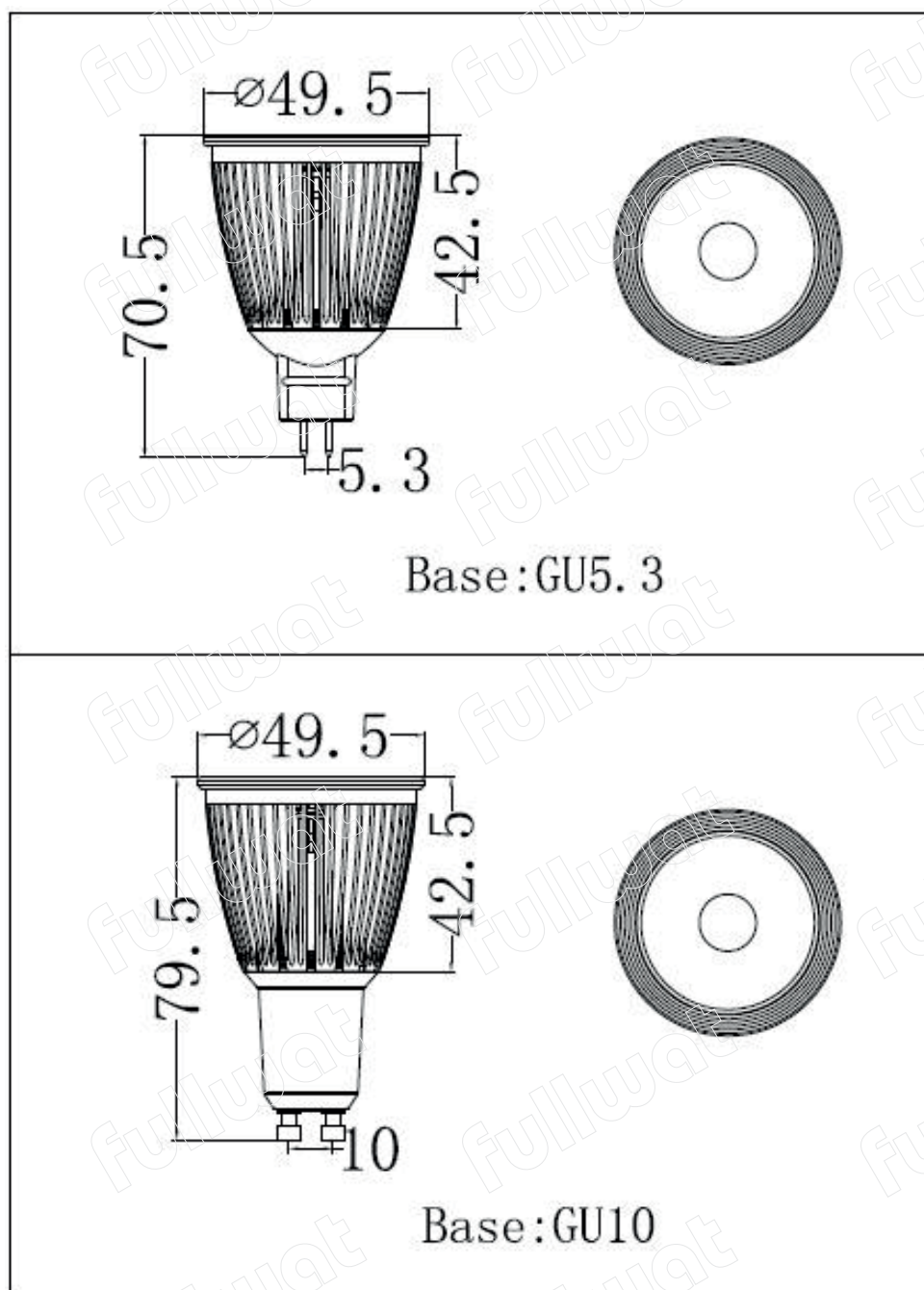
Electrical Characteristics

LED Quantity	1pcs SHARP-COB LED		
Base Types	GU5.3 , GU10		
Available Colour	Cool White, Neutral White, Warm White		
Dimmable	Dimming function is not available at 12V system		
	At 185V or 265V system, dimming funtion is optional		
Input	Voltage	GU5.3	10Vac(Min)-15Vac(Max)
		GU10	185Vac / 265Vac
	Frequency	GU5.3	47Hz-50KHz
		GU10	47Hz-63Hz
Output	Power	<9 Watt	
	Voltage	27.5Vdc Max	
	Current	210mA ±5%	
	Hot Lux	1180cd/ 1255cd	
Working& Storage Condition	Working Temperature	0°C TO +40 °C	
	Storage Temperature	-5°C TO +50°C	
	Humidity	10% To 80% RH	
Beam Angle	Suit for SHARP LED	24° / 38° / 60°	
Certificate	C E & RoHS	EN55015 , EN601547 , EN 61000, EN 60598	

Announcements

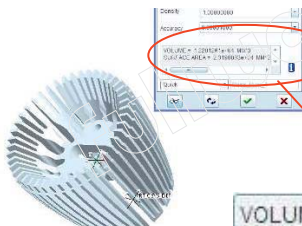


1. Please read this production specification before using the product ;
2. Usage voltage, temperature , humidity etc. should be within the rated range as above "Electrical Characteristics" diagram ;
3. The products should only be used in a well ventilated condition. Do not install the product within an airtight lighting fixture ;
4. Indoor use only;
5. Do not touch the product in working condition;
6. Before taking down the product , please put on glove and wait for at least ten minutes after power-off.
7. The products shouldn't be in stock without working more than six months. Please, try to turn on the lamps every six month for long term storage.
8. When the product is connected to inductive and electronic transformers, the maximum input voltage can not exceed 15.0Vac.

Product Assembly Picture

Dimensional Drawing (units:mm)

Product Codes

Product codes	LED qty	Voltage	Base	Lux
KRYLUX16-PF9 SERIES	1	AC/DC 12V	GU5.3	1255 max.
KRYLUX10-PF9 SERIES	1	185Vac/265Vac	GU10	1255 max.




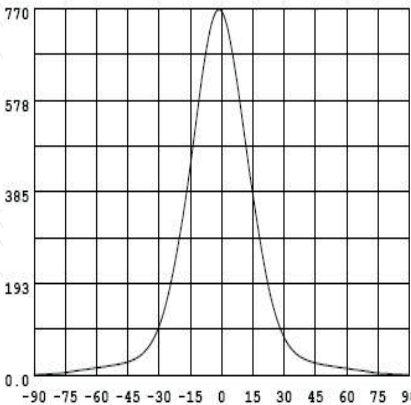
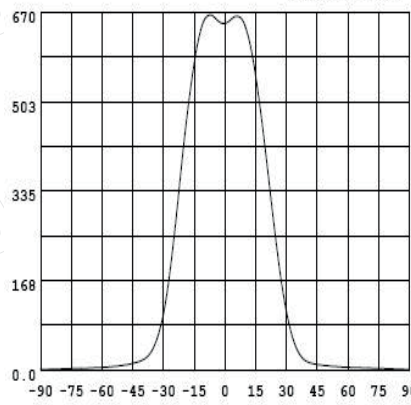
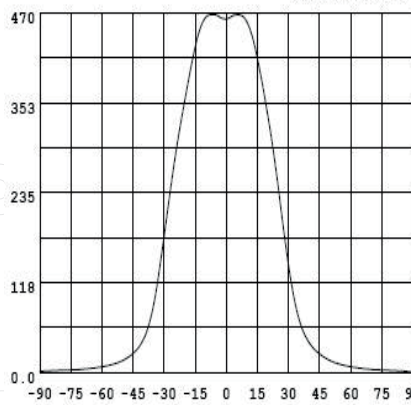
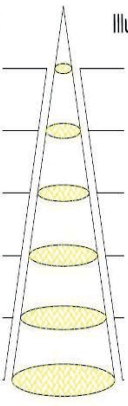
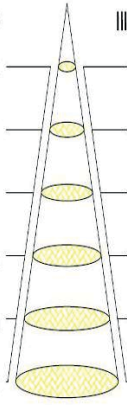
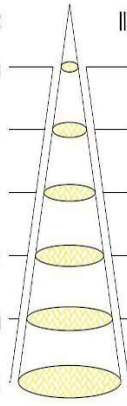
Working Temperature and Cooling System

Housing / Heat Sink Model	KRYLUX PF9 SERIES Housing	
Effective heat dissipation area of heat sink (mm ²)	23190.8 mm ²	 <p>VOLUME = 1.2201261e+04 MM^3 SURFACE AREA = 2.3190893e+04 MM^2</p>
Contact area between heat sink and PCB. (mm ²)	106.3mm ²	 <p>Surface area = 106.367</p>
Temp. of heat sink	T03=73.9°C	 <p>TOPTTEST 多路温度测试仪</p> <p>上限报警值: +0119°C 下限报警值: +0003°C</p> <p>T01=+0077.1°C T02=+0033.4°C T03=+0073.9°C T04=+0032.0°C T05=+0078.3°C T06=+0032.6°C T07=+0075.9°C T08=+0032.6°C</p> <p>2012-08-23 13:47:57</p>
Temp. of PCB	T05=78.3°C	
Ambient Temp.	T08=32.6°C	




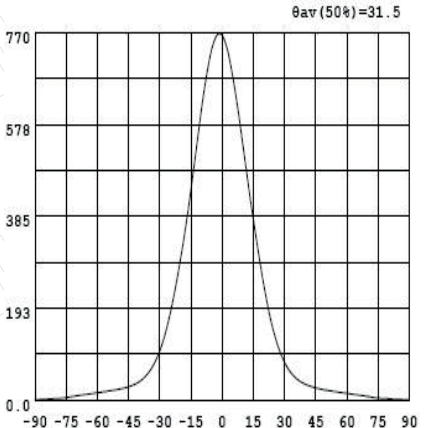
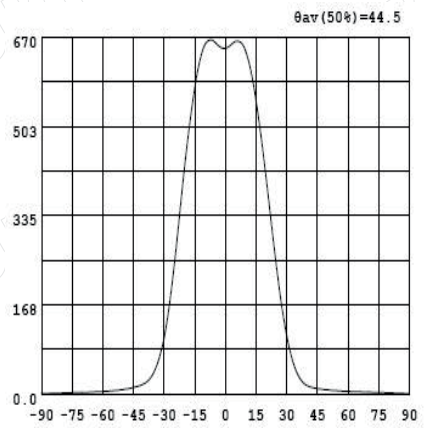
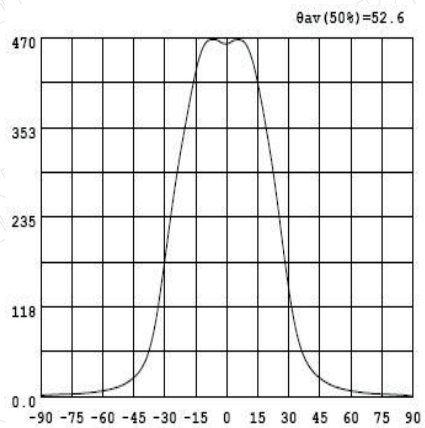
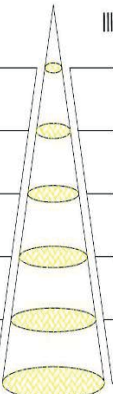
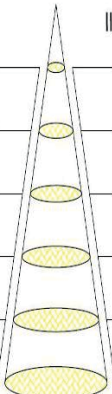
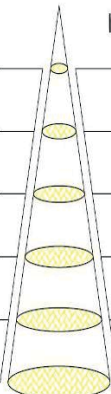
Remarks

1. The above testing are based on using inductive transformers.
2. The output voltage of the Inductive transformer will change according to the mains voltage.
3. Recommend our clients to use electronic transformers or DC power supply.




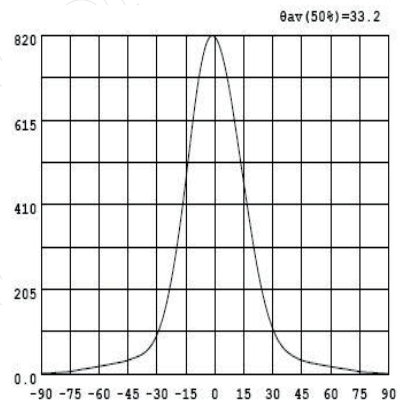
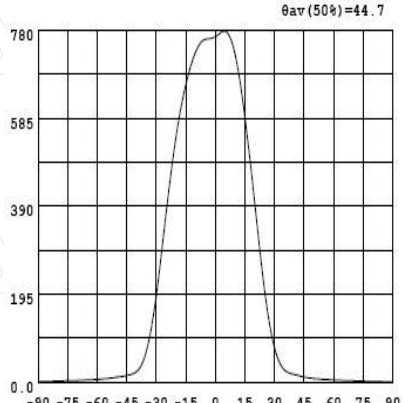
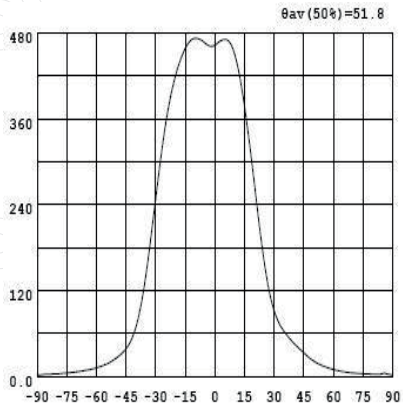
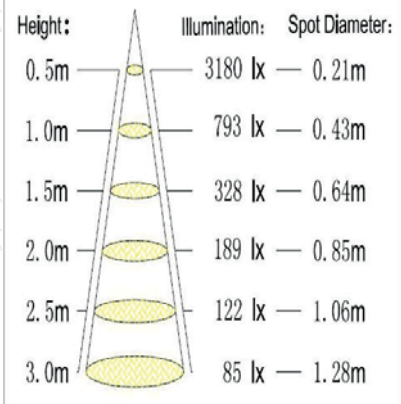
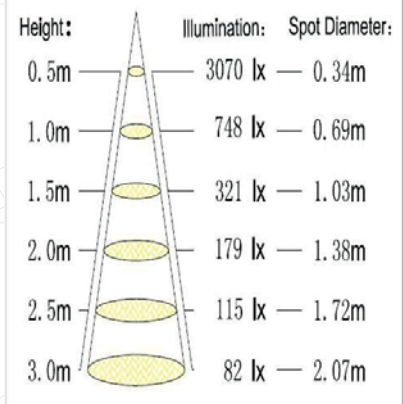
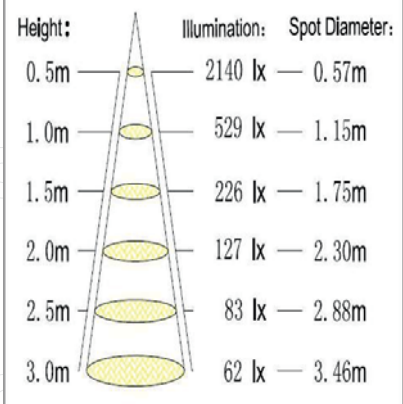
Light Characteristic (2700K)

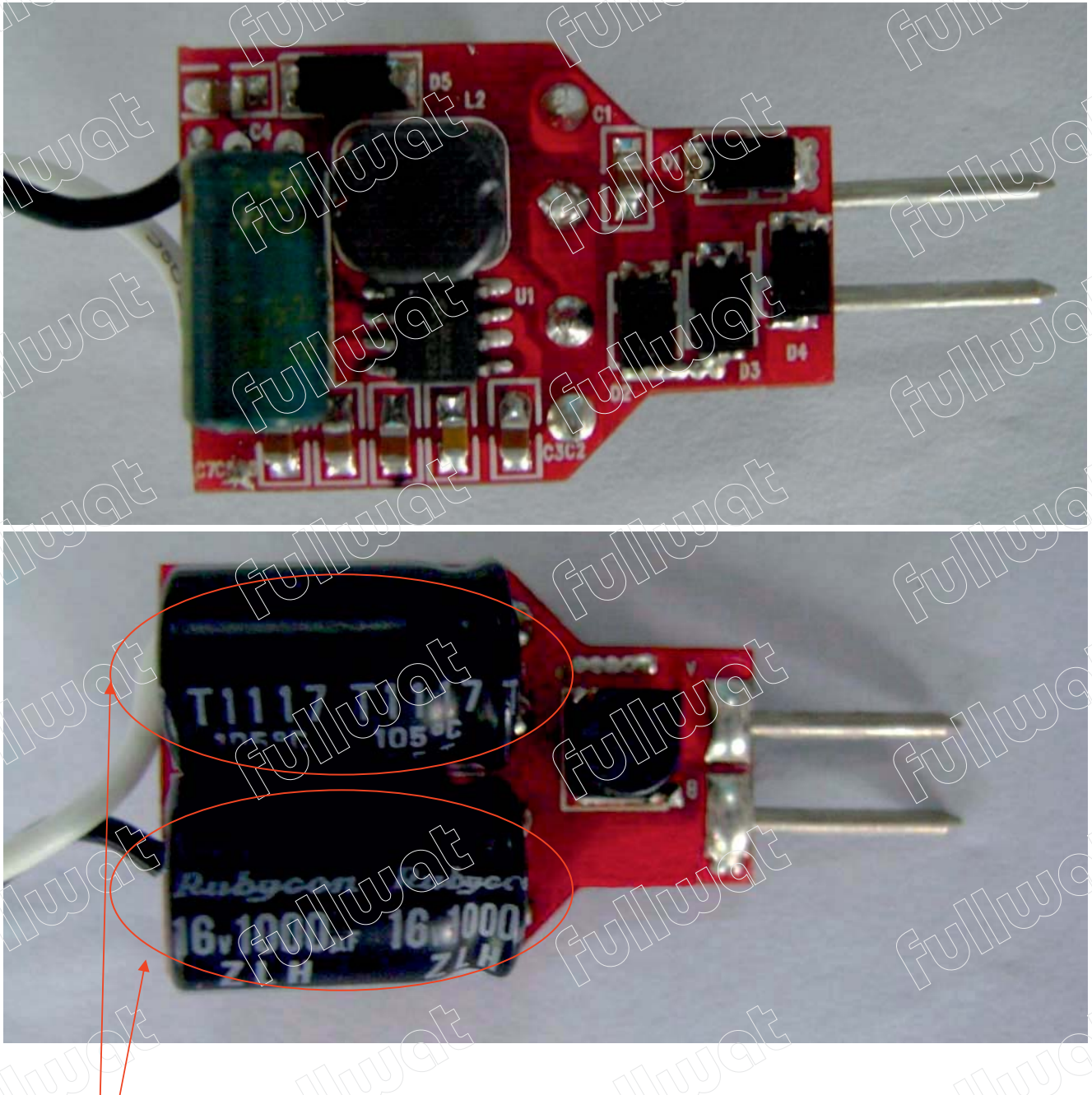
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Light Characteristic (3000K)

24° lens	38° lens	60° lens
Spot picture	Spot picture	Spot picture
		
optical curve picture	optical curve picture	optical curve picture
		
illumination picture	illumination picture	illumination picture
<p>Height: Illumination: Spot Diameter:</p> <p>0.5m — 2850 lx — 0.21m</p> <p>1.0m — 706 lx — 0.43m</p> <p>1.5m — 308 lx — 0.64m</p> <p>2.0m — 162 lx — 0.85m</p> <p>2.5m — 120 lx — 1.06m</p> <p>3.0m — 80 lx — 1.28m</p> 	<p>Height: Illumination: Spot Diameter:</p> <p>0.5m — 2622 lx — 0.34m</p> <p>1.0m — 660 lx — 0.69m</p> <p>1.5m — 260 lx — 1.03m</p> <p>2.0m — 160 lx — 1.38m</p> <p>2.5m — 107 lx — 1.72m</p> <p>3.0m — 79 lx — 2.07m</p> 	<p>Height: Illumination: Spot Diameter:</p> <p>0.5m — 1820 lx — 0.57m</p> <p>1.0m — 467 lx — 1.15m</p> <p>1.5m — 190 lx — 1.75m</p> <p>2.0m — 110 lx — 2.30m</p> <p>2.5m — 80 lx — 2.88m</p> <p>3.0m — 60 lx — 3.46m</p> 

Light Characteristic (5000K)

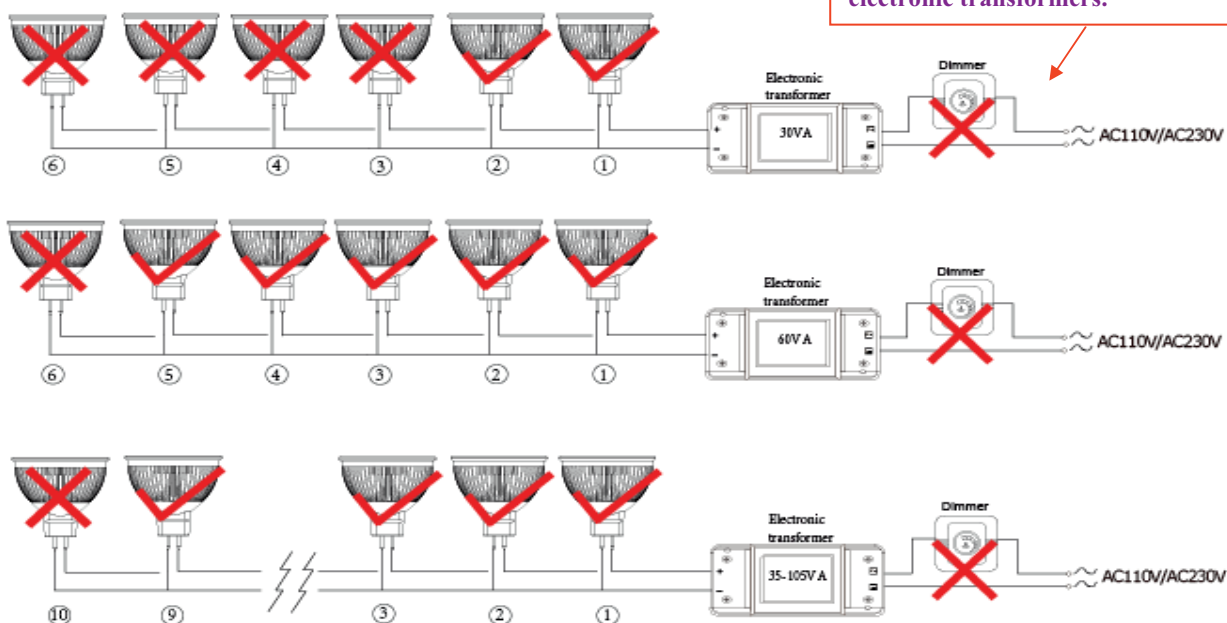
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PCBA (LED Driver)


1. Adopt long life-span Japanese Rubycon ZLH capacitor(10,000 hrs at 105°C) for LED drivers.
2. Rubycon capacitor's working life is sure to be over 40,000 hrs while environment temperature doesn't exceed 40°C.
3. For more specification please refer Rubycon website <http://www.rubycon.co.jp/en/index.html>

Electronic Transformer Application Notice

Note :there shouldn't be dimmers ahead of electronic transformers.



FULLWAT have tested a lot of electronic transformers, till now five kinds of electronic transformers as below are found not compatible with this MR16 COB lamp.



①



②



③



④



⑤

Inductive Transformer Application. Traditional Magnetic Ballast.

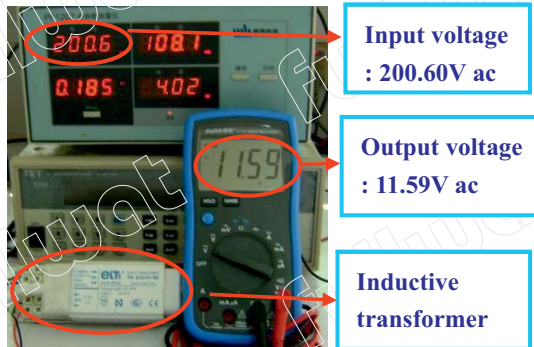


Diagram 1



Diagram 2



Diagram 3



Diagram 4



Diagram 5



Diagram 6



Diagram 7



Specification parameter of this inductive transformer

1. From diagram 1 to diagram 6, we can see the inductive transformer's output voltage risen up with the increasing of input voltage.
2. In diagram " 7 ", the inductive transformer's output voltage is 15.24Vac, which already exceeds the rated input voltage as above Electrical Characteristics diagram showing. The product can't work normally with such input AC voltage close to 265 Vac. Please do refer the electric parameters in this specification before installing and operating our products.
3. From the comparison between diagram 1 and diagram 4, diagram 2 and diagram 5, diagram 3 and diagram 6, we can see the inductive transformer's output load voltage reduced with the decrease of input voltage. Therefore, inductive transformer can connect some few lamps.

Package

Unit white box : L50mm*W50mm*H85mm

Inner foam : L49mm*W49mm*H53mm

Inner carton : L270mm*W220mm*H100mm

Outer carton : L285mm*W235mm*H555mm

