EVERSTAR
The Brightest LED

DATA SHEET

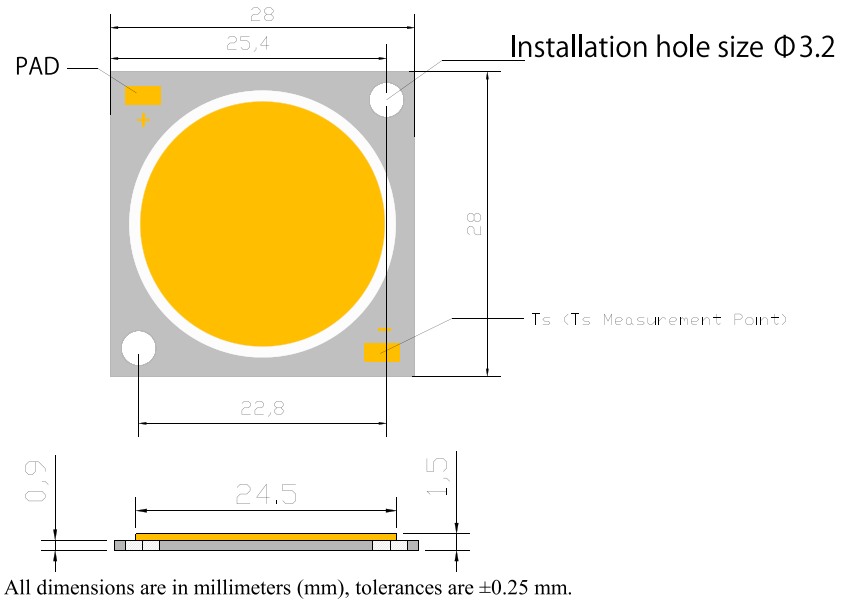
ES-24-XQ38-1050-XXXXX

CONTENTS

1. Product Description

Our product has excelllent reliability & high quality.Everstar COB series covers a wide range of luminous flux. The element arrangement of LED package is capable of utilizing light more effectively with higher performance.

2. Mechanical Dimensions



All dimensions are in millimeters (mm), tolerances are ±0.25 mm.

2. Features & Applications

FEATURES

- High color quality, high flux, h-igh efficacy
- Low thermal resistance
- Long lifetime
- Easy for assemble
- RoHS compliant
- Available white chromaticity bins form ANSI

APPLICATIONS

- LED bulb lights
- LED spot lights
- LED recessed lights
- LED miner lights
- Commercial lighting,
- Domestic lighting
- and museum lighting.

4. Electro Optical Parameters

Nominal parameters(Ta=25˚C)

Parameters	Conditions	Min	Typ	Max	Unit
Forward V	IF=1050mA	34	36	40	V
Forward A		720	1050	1800	mA
Luminous flux IF=1050mA	TC=2700K	4060	4260	4660	LM
	TC=3000K	4850	5160	5400	
	TC=4000K	5050	5370	5700	
	TC=5000K	-	-	-	
	TC=5700K	-	-	-	
	TC=6000K	4950	5270	5590	
	TC=6500K	-	-	-	
Power	IF=1050mA	-	38	57	W
Ra		80	-	-	

Note :

1) device tolerance for luminous flux:±4%

2) device tolerance for color coordinate:±0. 002

3) device tolerance for forward voltage:±0.1V

4) device tolerance for angle :±5 degrees

5. Absolute Maximum Ratings

Item	Symbol	Min	Typ.	Max	Unit
Operating Temperature	T_{opr}	-10	/	+85	°C
Storage Temperature	T_{stg}	-40	/	+100	°C
Soldering Temperature	T_{sol}	/	/	350	°C
Junction temperature	T_j	/	/	125	°C
Thermal Resistance	R_{j-c}	/	/	1.34	°C /W
Antistatic Ability	ESD	2000	/	/	V

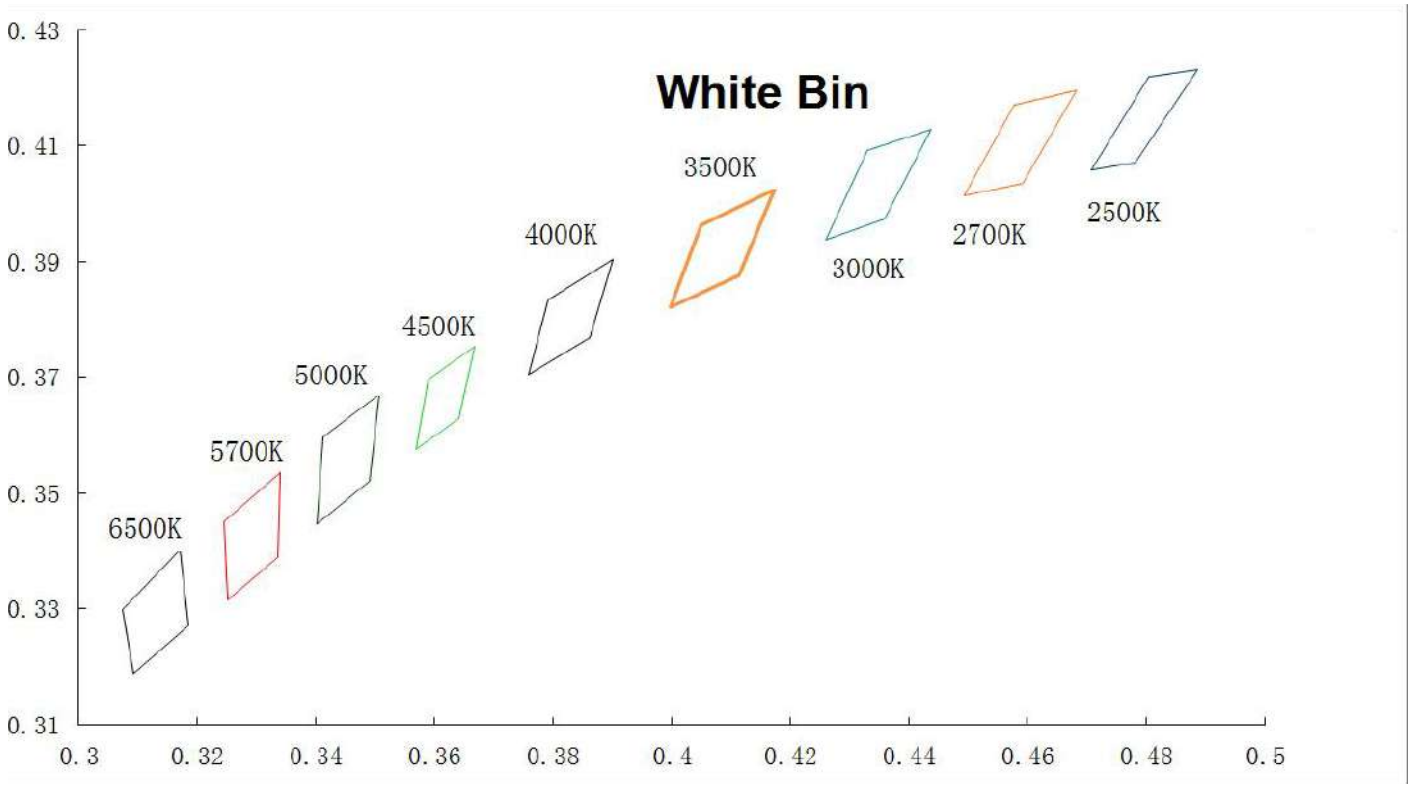
Note:

The temperature of Aluminum PCB do not exceed 85℃.

When hand soldering, keep the temperature of iron below 350°C and for less than 5 seconds

6. Chromaticity Coordinate Groups

7. White bins on CIE-1931 (Ta=25°C)



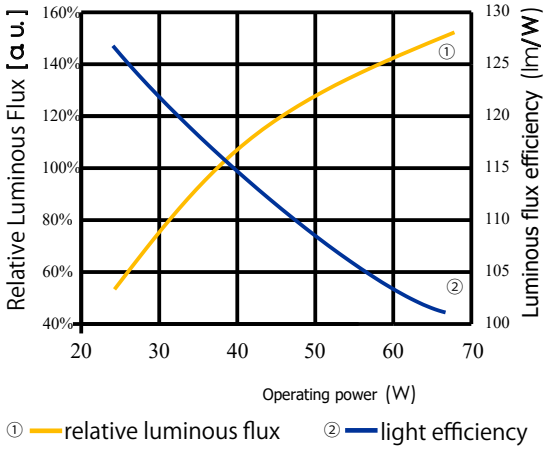
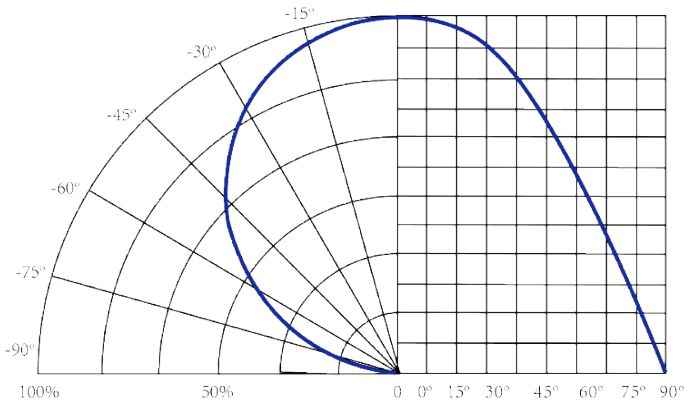
Color Temperature and BIN

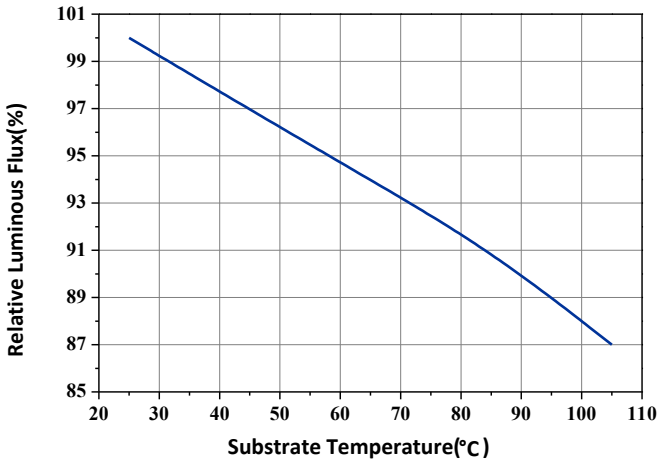
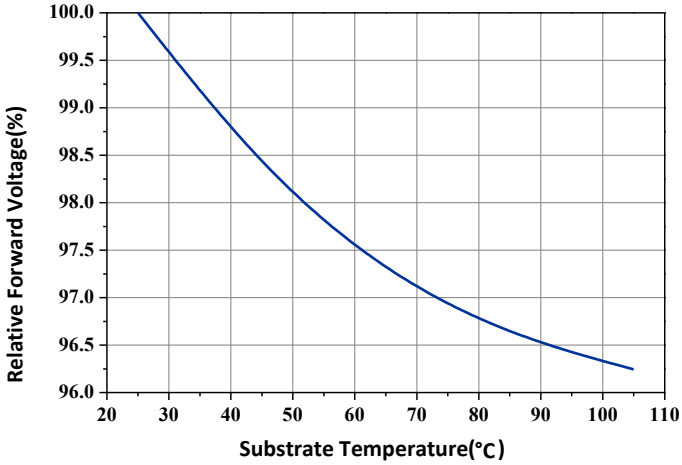
CT	2500K	2700K	3000K	3500K	4000K	4500K	5000K	5700K	6000K	6500K
CT Range	2410-255	2640-281	2940-314	3330-358	3820-412	4375-463	4840-520	5400-590	5700-630	6150-685
CT Factor	±70	±85	±100	±125	±150	±130	±180	±250	±300	±350
Center CT	2480	2725	3045	3465	3985	4503	5028	5665	6000	6530

6500K	0.3178	0.3336		0.3184	0.3271		0.3093	0.3188		0.3084	0.3243
6000K	0.3152	0.3370		0.3167	0.3241		0.3277	0.3330		0.3274	0.3470
5700K	0.3338	0.3463		0.3336	0.3390		0.3251	0.3315		0.3248	0.3383
5000K	0.3498	0.3595		0.3490	0.3520		0.3401	0.3446		0.3406	0.3521
4500K	0.3667	0.3753		0.3654	0.3691		0.3579	0.3636		0.3589	0.3697
4000K	0.3901	0.3904		0.3881	0.3836		0.3774	0.377		0.3791	0.3835
3500K	0.4173	0.4025		0.4143	0.3951		0.4023	0.3892		0.4048	0.3963
3000K	0.4436	0.4129		0.4397	0.4051		0.4294	0.4015		0.4328	0.4092
2700K	0.4681	0.4196		0.4636	0.4116		0.4535	0.4092		0.4577	0.4171
2500K	0.4885	0.4232		0.4833	0.4152		0.414	0.422		0.4885	0.4232

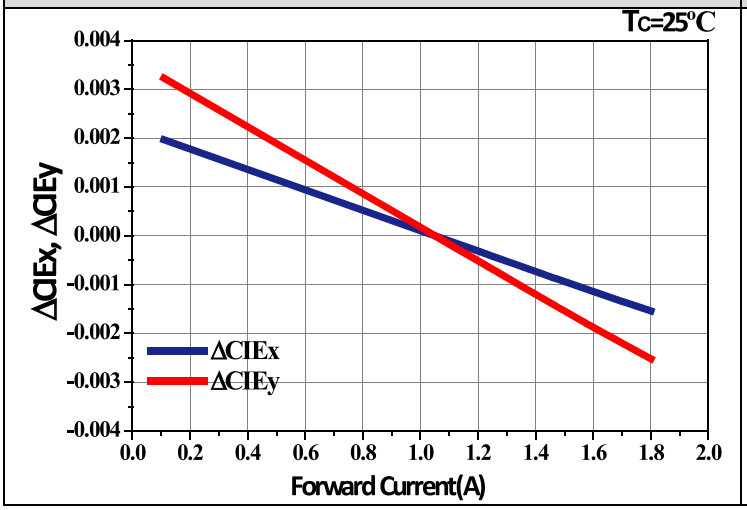
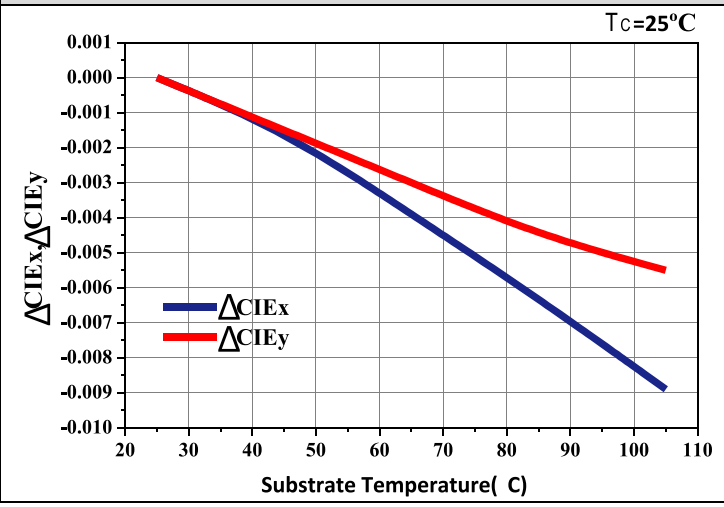
7. Characteristic Curves

Forward Current / Radiation/ Temperature Characteristics

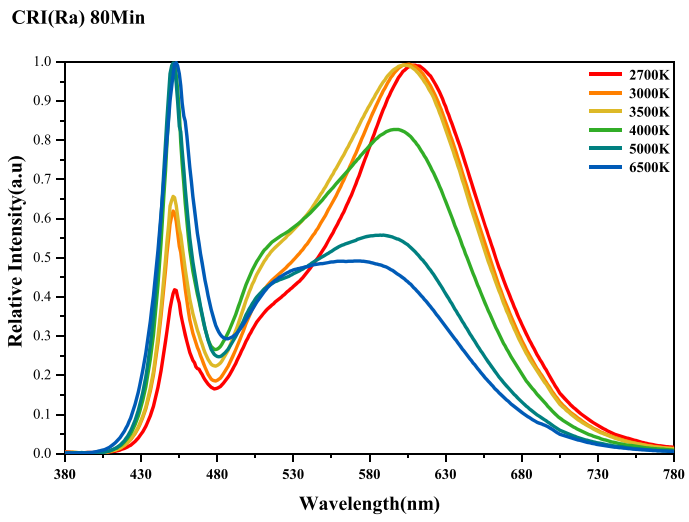
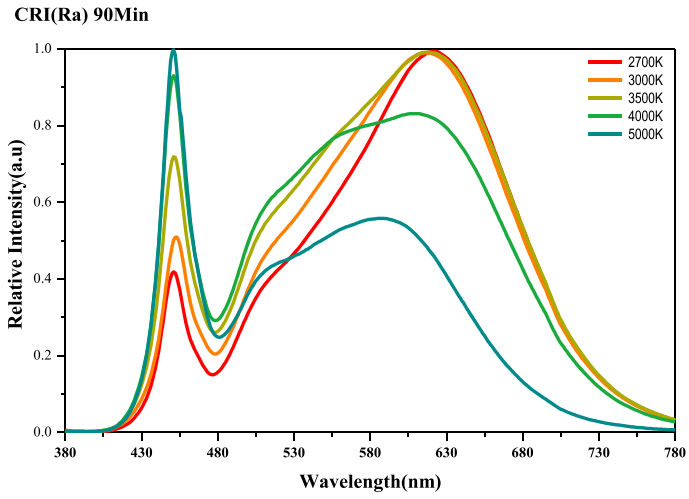
Luminous flux efficiency vs Operating power(blue line) Relative Luminous Flux vs Operating power (yellow line)	Radiation Angle
	

Relative Luminous Intensity vs Substrate Temperature	If= 1050mA	Forward Voltage vs Substrate Temperature	If= 1050mA
			

Color Shift Charact eristics

Δ CIE x,ΔCIE y vs Forward Current CRI(Ra)=80 Tc =25℃ If =1050mA	Δ CIE x,ΔCIE y vs Substrate Temperature CRI(Ra)=80 Tc=25℃ If =1050mA
	

Spectrum Distribution

Relative Intensity vs Wavelength	If=1050mA
	

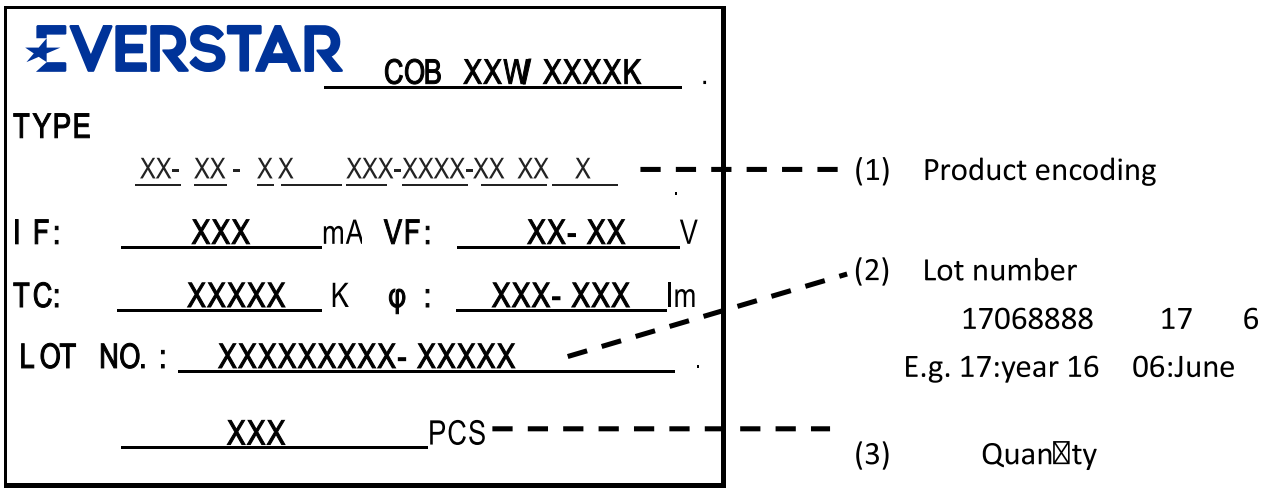
8. Encoding

XX-	XX	-	XX	XXX-XXXX-XX	XX	X
[1]	[2]		[3]	[4] [5] [6]	[7]	[8]

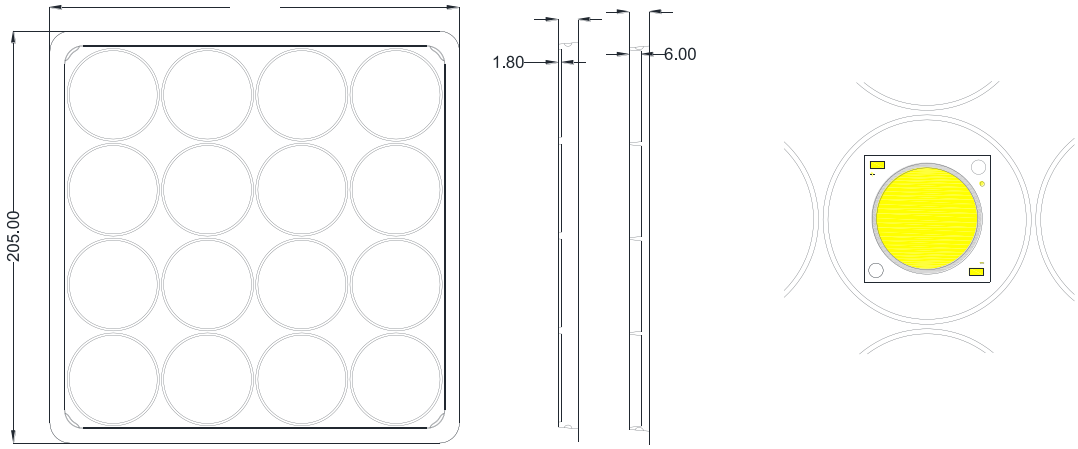
[1]	(Product code)
[2]	(Emitting Surface Code)
[3]	(Product Series Type Example LQ)
[4]	(Power) e.g.24W 024
[5]	If typical Current (mA)
[6]	(CCT) e.g.R3000K 30
[7]	(CRI) 80
[8]	(Revision) e.g.A

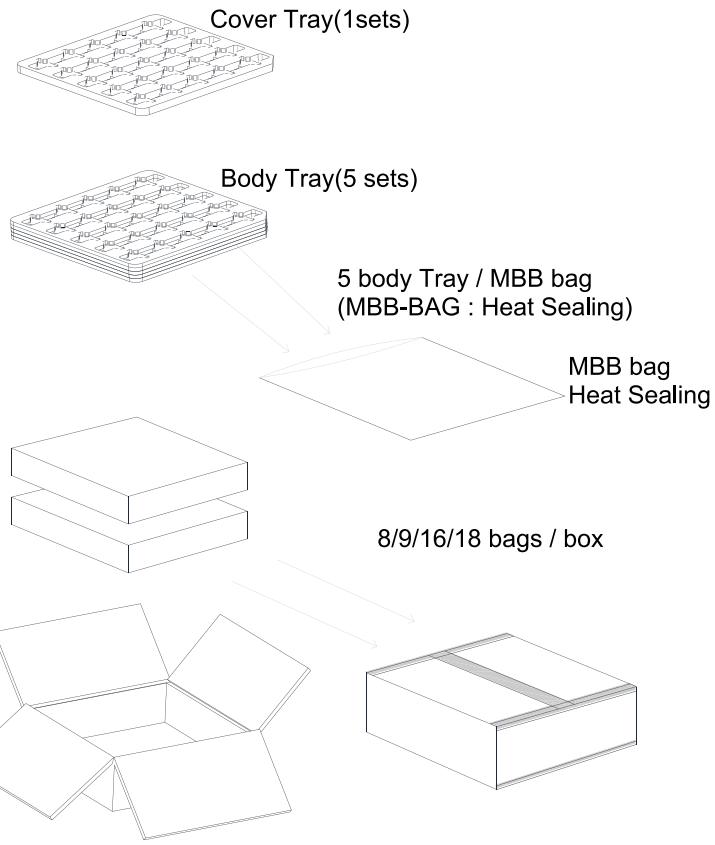
9 Packing Specification

Label information



Manner of packing





An electrostatic bag contains five sets, and a set contains 16 PCS COB .(Smallest packing unit:80 PCS)

A label whit product name, quantity and lot number is placed on the electrostatic bag.(Tray Dimension: 205*205*8 mm)

10. Cautions

Storage

Store the parts in a dry, nitrogen- purged cabinet or container that actively maintains the temperature at 20 - 30 and the RH at no greater than 60%.

Precautions for Use

By using anti - static - electricity bracelets/ cushions/ overalls/ shoes/gloves andanti - static - electricity containers, it can effectively prevent static electricity and surge.
The soldering iron point should be properly grounded. When hand soldering, keep the temperature of iron below less 350°C and less than 5seconds.

ESD Protection

You need to take the protective measures for the product being sensitive to static electricity. It can lead to product damage electricity is beyond the maximum rating. The ground resistance if the high voltage current made by static can't beyond 10 Ω.

Cleaning

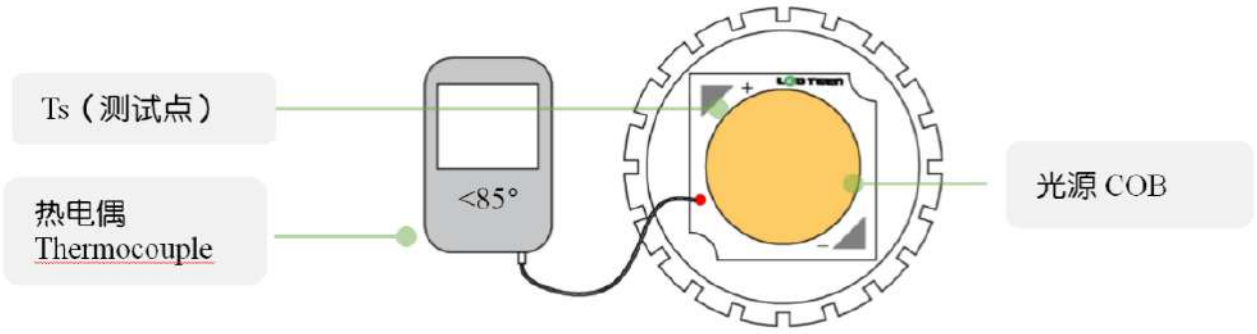
Please do not make the thermal grease, oil exposed to the light-emitting surface. Airguncan be used to remove dirt. Gun's Pressure: 0.5MPa, Time: 1 to 2 seconds, Distance: more than 20cm.

Overcurrent Protection

It is recommended to design PCB with ground circuit. Pay special attention to the operating environment of the products: Humidity must be between 50% and 80%, or else ectrostatic breakdown and overcurrent damage occur. The operating temperature is -10°C ~ 85°C. When using this product, please observe the absolute maximum ratings and the instructions for operating outlined in these data sheets. Company do not assume any responsibility for any damage, resulting from use of product which does not comply with the absolute maximum rating. maximum ratings and the instructions included in these data sheets.

Thermal Design

The thermal design to draw heat away from the LED junction is most critical parameter for an LED illumination system.High operating temperatures at the LED junction adversely affect the performance of LED's light output and lifetime. Therefore the LED junction temperature should not exceed the absolute maximum rating in LED illumination system.



Safety Tips

During using this product, the country relative safety standards (eg. GB7000.1 - 2007) should be accorded with. We will not be liable for the users' acts of non - observance of the country safety standards.