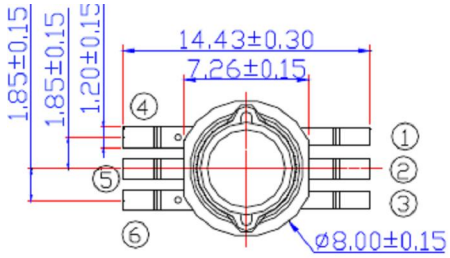
Features 特性：

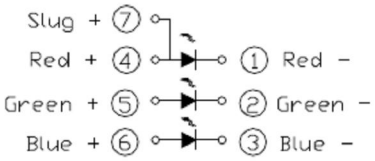
* Small package with high efficiency 小包装 高效率
* Designed for high current operation 设计用于大电流操作
* Low voltage operation, Instant light, 低压操作 瞬间照明
  Long operation life 使用寿命长
* Lead free product 无铅产品
* RoHS compliant 符合 RoHS

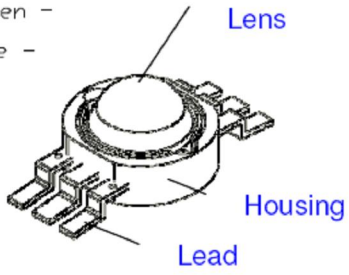
Applications 产品应用：

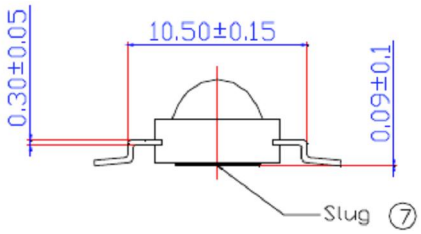
*Traditional lighting replacement 传统照明替换
*Planting lighting 植物照明
*Special lighting 特殊照明
*General use 一般应用

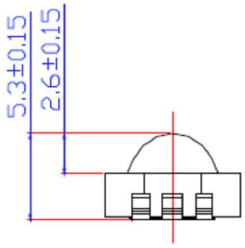
Package Dimensions 产品外观尺寸：

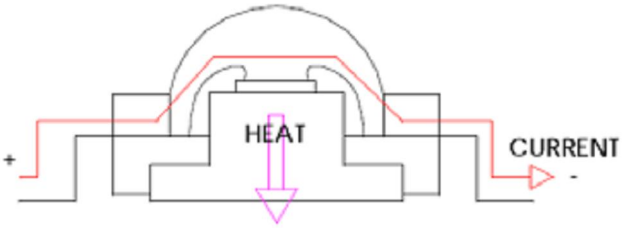












Notes:

1. All dimensions are in mm 所有尺寸单位为毫米。
2. Tolerance is ±0.3mm unless otherwise noted. 非特殊标注，公差为±0.3 毫米。

◆ Absolute maximum ratings at Ta=25℃（绝对最大额定值）

Parameters（参数）	Symbol（符号）	Value（值）	Unit(单位)
Power Dissipation（功耗）	Pd	1500	mW
Forward Current（正向电流）	IF	150*3	mA
Pulse Forward Current（脉冲电流）	IFP	700	mA
Reverse Voltage（反向电压）	VR	5	V
Electrostatic Discharge（静电）	ESD	2000(HBM)	V
Operating Temperature（操作温度）	Topr	-40 ～ +85 ℃	℃
Storage Temperature（保存温度）	Tstg	-40 ～ +100 ℃	℃

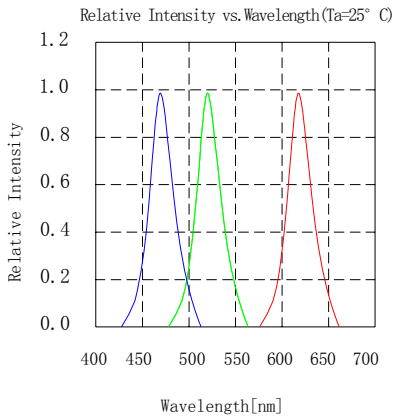
◆ Electro-optical characteristics at Ta=25℃（电光特性）

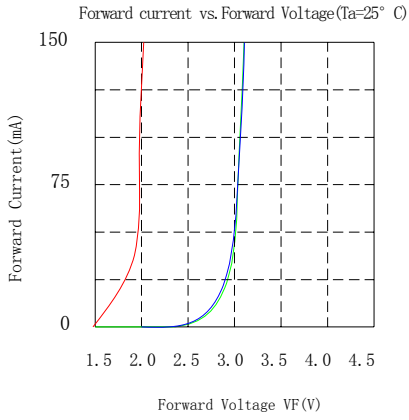
Item（项目）	Symbol（符号）		Mix（最小）	Typ（平均）	Max（最大）	Unit（单位）	Conditions（测试条件）
Forward voltage（正向电压）	VF	G	3.0		3.2	V	IF=150*3mA
		R	2.0		2.2		
		B	3.0		3.2		
Reverse current（反向电流）	IR		--	--	5	μA	VR = 5V
Dominant wavelength（主波长）	λd	G	520		525	nm	IF=150*3mA
		R	620		625		
		B	460		465		
Viewing angle (发光角度)	2 θ 1/2			120		Deg	IF=150*3mA
Luminou flux (光通量)	IV	G	30		35	Lm	IF=150*3mA
		R	15		30		
		B	8		15		

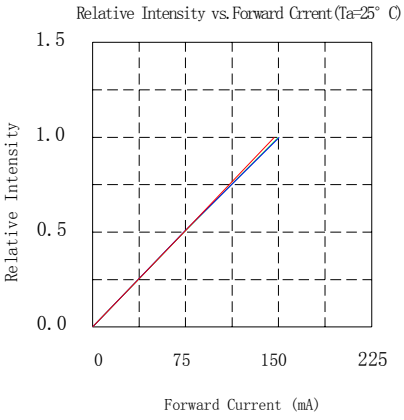
NOTE: (Tolerance: Iv ±10%, λ_d ±2nm, Vf ±0.05V) （公差：Iv ±10%, λ_d ±2nm, Vf ±0.05V）

◆ Typical optical characteristics curves（典型光学特性曲线）

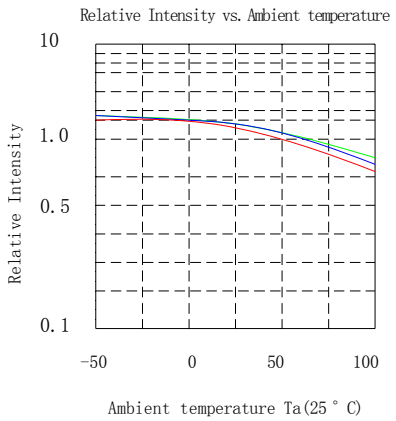
Spectral Distribution

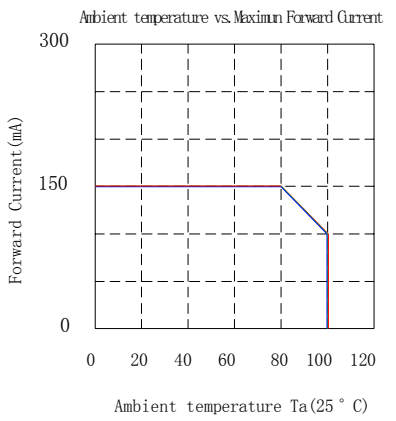






Detrating





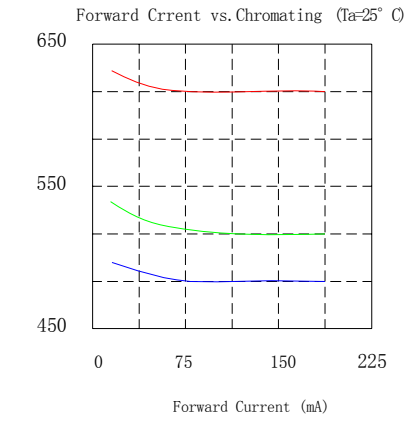
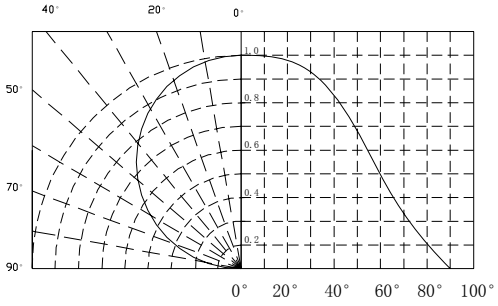


Diagram characteristics of radiation



◆ Reliability 信赖性测试项目及测试条件

1.Test Items And Results 测试项目及结果

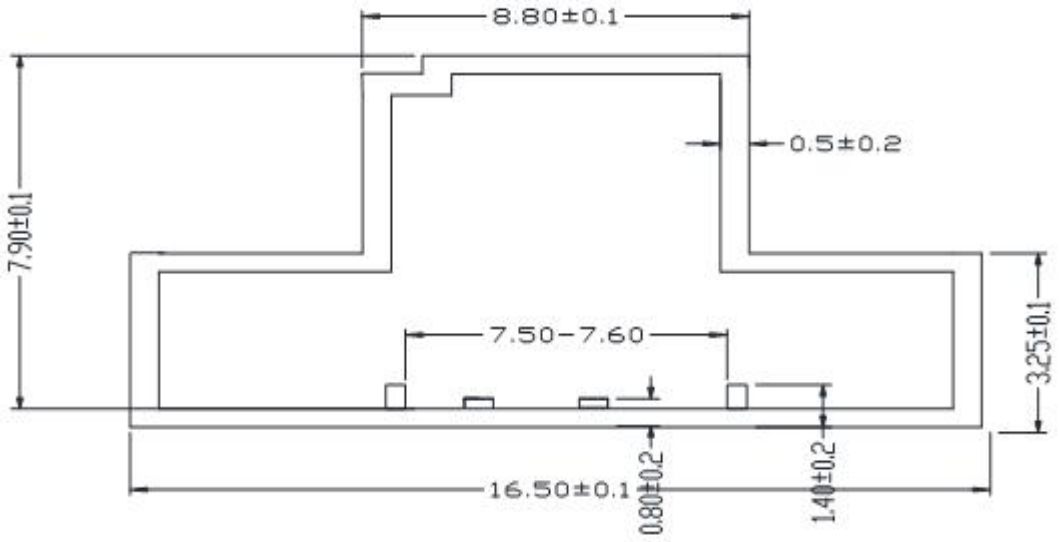
Item 项目	Test conditions 测试条件	Note 测试频率	Number of Damaged 损坏数量
Reflow 回流焊	Temp:200℃max T=40 sec	2 times	0/22
Thermal Shock 冷热冲击	-40~100℃ 30min, 10s, 30min The 300 round	100cycles	0/22
High Temperature High Humidity Storage 高温高湿储存	Ta=85℃,RH=85%	300hrs	0/22
Steady State Operating life 常温通电	Ta=25℃,I_F=150mA	1000hrs	0/22
Steady State Operating life of High Humidity Heat 高温高湿通电	Ta=85℃ RH=85%,I_F=150mA	1000hrs	0/22
High Temperature Storage 高温储存	Ta=100℃	1000hrs	0/22
Low Temperature Storage 低温储存	Ta=-40℃	1000hrs	0/22

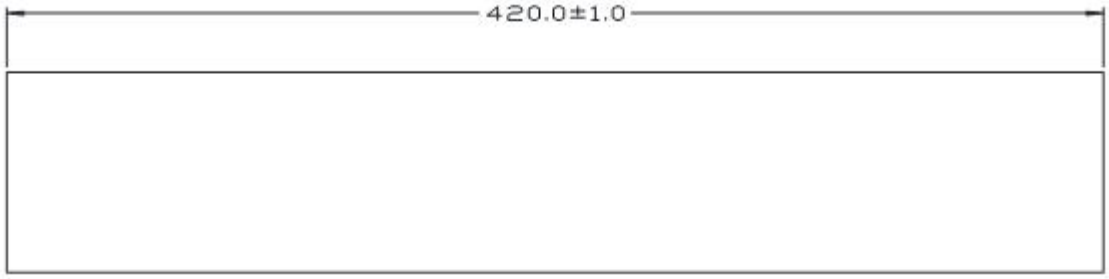
2. Criteria for Judging The Damage 失效判定标准

Item 项目	Symbol 符号	Test Conditions 测试条件	Criteria for Judgment 判定标准	
			Min.最小	Max.最大
Forward Voltage 正向电压	V_F	I_F=150mA	---	Initial Data 初始数据×1.1
Luminous Intensity 发光强度	I_V	I_F=150mA	Initial Data 初始数据×0.7	---
Reverse Current 反向电流	I_R	V_R=5V	---	≦10μA

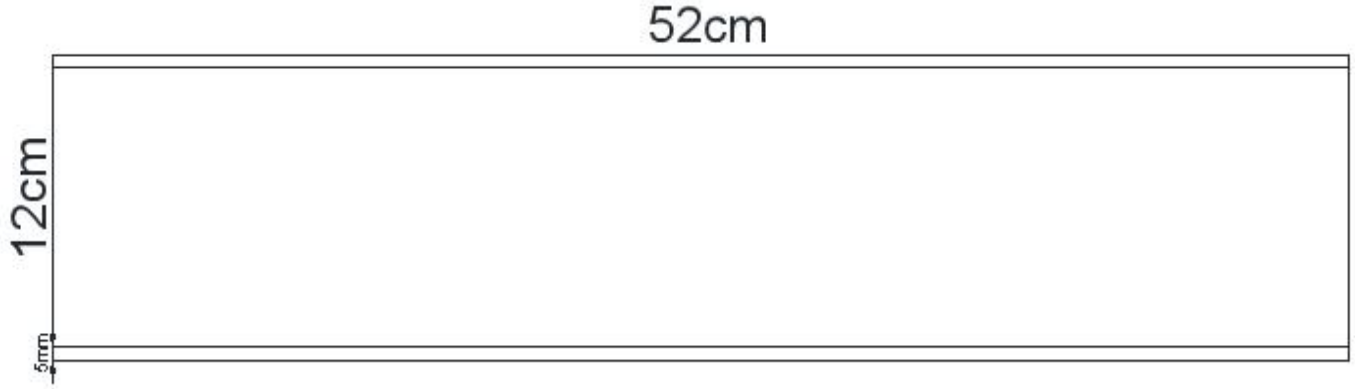
◆ Packaging Specifications 包装规格

1、 Material pipe Packaging 料管包装

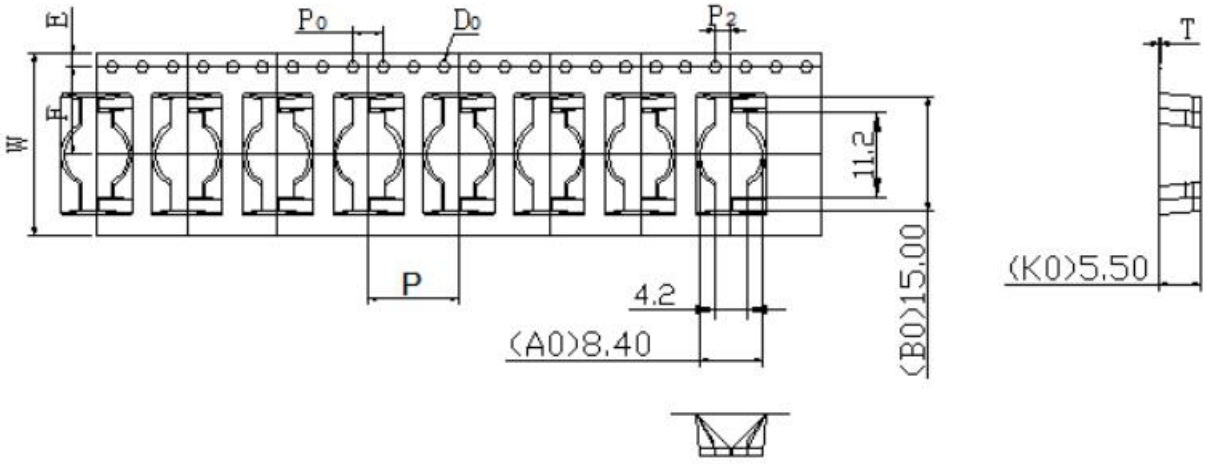




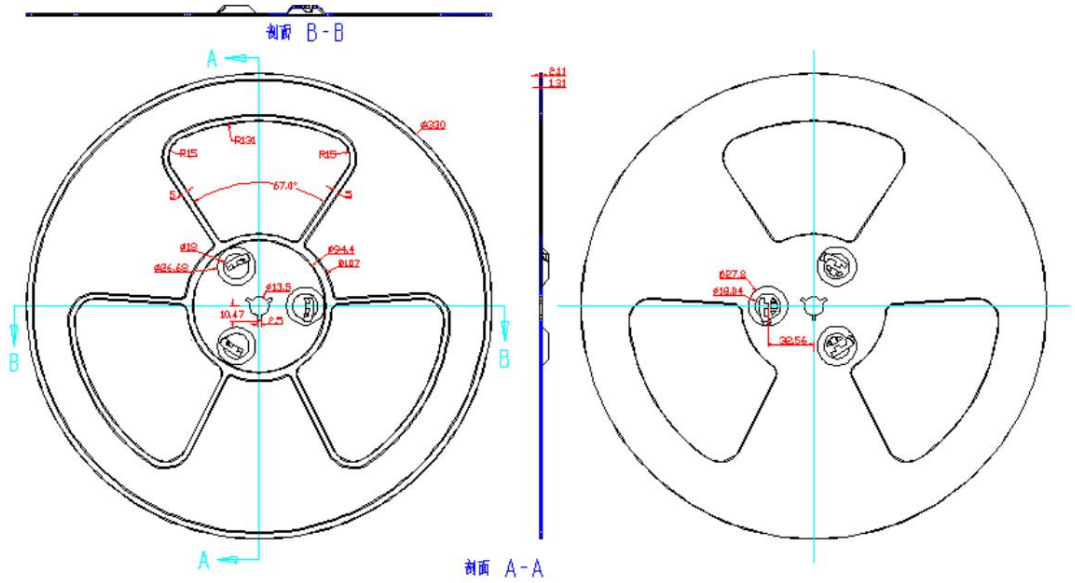
Electrostatic bag specification 静电袋规格



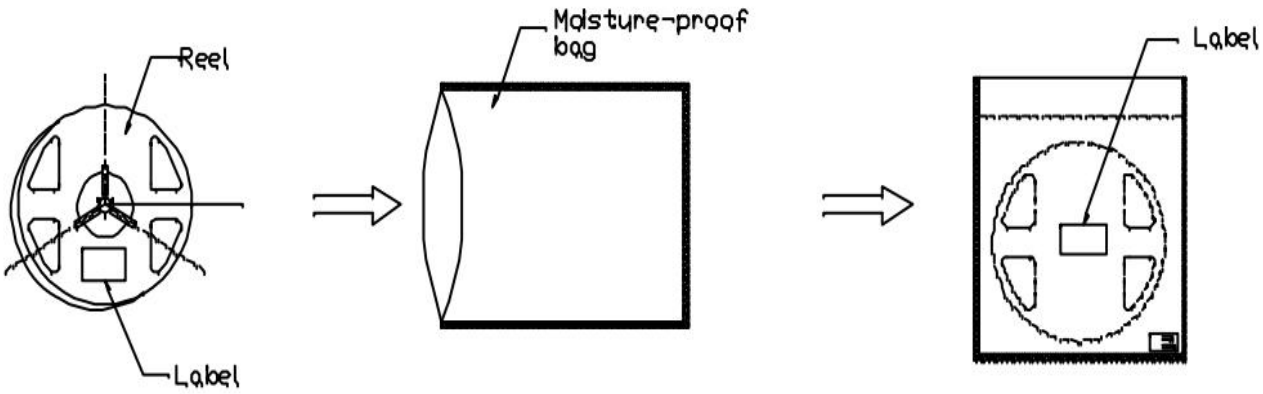
2、Carrier specification　载带规格



Dimensions of Reel　卷盘规格(一卷盘 1K　One reel 1K)



Packaging　specifications　包装规格



Label(标签):

Part NO：产品型号 Product model

Q’ty：数量 Quantity

VF/IF：电压/电流 Voltage /Electric current

等级：产品品质级别 Level

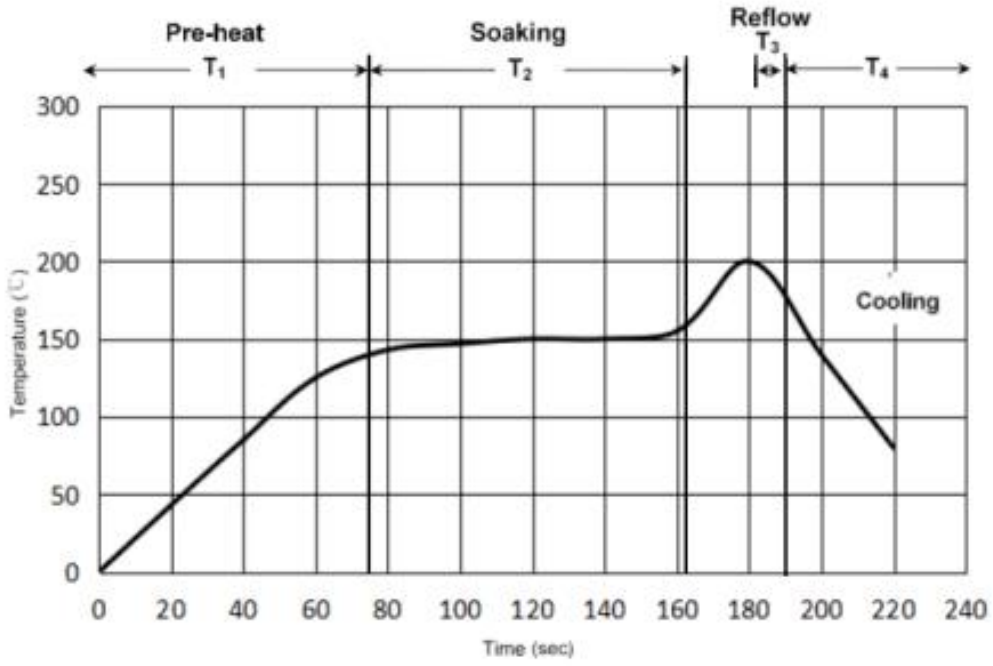
Φ：光通量/功率 Luminous flux /Power

Bin：班别-Bin 号 Class-Bin

代码：产品代码 Product code

CCT/XY：色温/色区

◆ SMT Reflow Soldering Instructions SMT 回流焊说明



1. Reflow soldering should not be done more than two times

   回流焊不可以做两次以上

2. When soldering, do not put stress on the LEDs during heating

   当焊接时，材料受热，不可以用力按压胶体表面

3. reflow soldering is recommended for high temperature lenses, and reflow soldering is not recommended for medium and low temperature lenses

   建议高温透镜过回流焊，中低温透镜不建议过回流焊

◆ Instructions for product use 产 品 使 用 说 明

一、 storage 储存

1. In order to avoid moisture absorption, it is recommended to store the product in a drying cabinet with desiccant at 5℃~30℃ and humidity ≤ 60% hr;

1、为避免吸潮建议将产品贮存在放有干燥剂的干燥柜中，贮存温度为：5℃~30℃，湿度：≤60%HR；

2. After storage for six months, it is recommended to use it after re-splitting and color separation to prevent the photoelectric parameters from changing。

2. 储存六个月之后建议重新分光分色后使用，防止光电参数发生变化。

二、If the product is encapsulated by silica gel 如产品为硅胶封装

1. It is recommended to dry products that have been sealed and stored for more than one month before use. The drying conditions are 65℃ 5℃ for 10 hours;

1. 密封储存一个月以上的产品使用前，建议干燥，干燥条件为：65℃±5℃10 个小时 ；

2. The product needs to be used within 24 hours after opening, otherwise it needs to be baked at 65℃ for 4-6 hours before reflow soldering;

2. 产品开封 24h 内需使用完毕，否则需 65℃ 烘烤 4-6h 后再过回流焊；

3. Do not press the silicone surface with any sharp objects (such as tweezers). Do not leave fingerprints on the surface of silica gel. The normal pressing force on the front of silica gel should be less than 2 Newton, and the pressing times should be less than 3 times; The pressing force on the side of the silica gel body is less than 1.5 Newton, and the pressing times are less than 3 times. Pick up materials correctly (as shown below)

3. 请勿以任何尖锐物体（例如镊子）按压硅胶表面。 请勿在硅胶表面留下指印。 硅胶体正面法向承受按压力需小于 2 牛顿，按压次数小于 3 次；硅胶体侧面承受按压力小于 1.5 牛顿，按压次数小于 3 次。正确拾取材料（如下图）

三、After reflow soldering, rapid cooling is not allowed

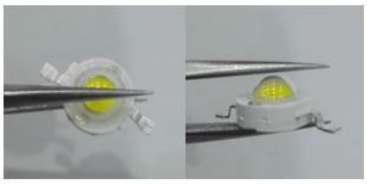
回流焊后，不允许快速冷却

四、Hand welding with soldering iron at 300℃/3sec

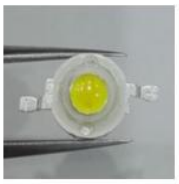
采用烙铁手工焊接，条件为 300℃/3sec

五、Welding on deformed PCB is prohibited

禁止焊接在变形 PCB 板上。



NO



OK

六、Products shall not come into contact with water,

产品不得接触水、油、有机溶液。

七、The LED junction temperature should be considered when the product uses working current.

产品使用工作电流大小值应考虑 LED 结温。

八、Unpacked unused products are sealed in moisture-proof bags and stored in dry places.

重新包装未使用的产品置防潮袋密封好之后贮存在干燥的地方。

九、The external dimensions of products can be changed without prior notice.

产品外观尺寸可更改而不另行通知。

十、Anti-static requirements: When using products, you must wear anti-wrist strap or anti-static gloves, and all equipment, devices and machines must be effectively grounded.

防静电要求：使用产品时，必须戴防静电环或防静电手套，所有设备、装置、机台必须有效接地。

十一、When the LED is working, the recommended PCB temperature should not exceed 60° C.
当 LED 工作时，推荐 PCB 板的温度不要超过 60℃。

十二、Precautions for reflow soldering [for reflow soldering products.
回流焊注意事项[如需回流焊产品。

1. Scrape the heat conductive solder paste on the aluminum substrate. Before scraping the solder paste, the solder paste should be stirred clockwise for 10-15 minutes. Put the aluminum substrate on the soldering paste scraping tool. The solder paste should be scraped evenly and with appropriate thickness;

1、在铝基板上刮导热锡膏,刮锡膏前锡膏要顺时针搅拌 10-15 分钟,把铝基板放在刮锡膏工装上,锡膏要刮的均匀，厚度要适宜 ；

2. Scraping solder paste steel mesh needs to be made into a cross, so that air can circulate and avoid poor heat dissipation of LED light source caused by lifting solder paste;

2、刮锡膏钢网需做成十字架，好让空气流通，避免锡膏抬起造成 LED 光源散热不良；

3. Pay attention to that the lamp should be installed flat, and the two pins of the LED light source should be installed on the pad position of the aluminum substrate;

3、注意灯要装平，LED 光源的两个管脚有要装在铝基板的焊盘位上；

4. All the aluminum substrates scraped with solder paste should be equipped with light sources within 2 hours. After the light sources are installed on the aluminum substrate, the operator should check whether the light sources are installed (there can be no reverse direction, and the bottom of the light source is suspended). Check each light source at an angle of 45 degrees;

4、刮好锡膏的铝基板在 2 小时内要全部装好光源，光源的装在铝基板后，作业员要自检光源是否装好（不能有反向，光源底部悬空）要倾斜 45 度角检查每颗光源 ；

5. Reference for temperature setting of reflow oven (it is recommended not to exceed 200 degrees)

5、回流焊机的温度设置参考（建议不超过 200 度）

焊接剂 = 低温无铅锡	焊接剂 = 无铅锡
温度上升斜率= 4°C/s 最大	温度上升斜率=4℃/s 最大
预热温度 = 100°C ~160°C	预热温度 = 130°C ~200°C
预热时间 = 60s 最大	预热时间 = 90s 最大.
温度下降斜率为 6°C/s 最大	温度下降斜率为 6°C/s 最大
峰值温度 = 160°C 最大	峰值温度 = 200°C 最大
在峰值温度±5℃时间不能超过 10s	在峰值温度±5℃时间不能超过 10s
160℃的温度的时间不能超过 60s	200°C 的温度的时间不能超过 60s

6. After reflow soldering, the lens and the filling glue will be layered, and it is normal to produce mirror surface, which will not affect any use and performance;

6、过完回流焊后透镜与填充胶会分层，产生镜面属正常现象，不影响任何使用及性能；

7. After reflow soldering, check whether the light source is on the pad position, without eccentricity. Otherwise, the wire will be pulled off during the second light distribution lens, causing an open circuit.

7、过完回流焊后要检查光源是否在焊盘位置上，不能有偏心现象，否则在上二次配光透镜时会把线拉断，造成开路。

十三、Anti-vulcanization, chlorination, bromination and other treatments:

防硫化、氯化、溴化等处理：

In a closed and high-temperature environment, there may be sulfur/chlorine/bromine and other substances in the lamps, which will volatilize into gas and corrode the LED light source. Because LED sealing silica gel has porous structure, it reacts with silver plating layer of light source. After the vulcanization reaction of LED light source, the functional area of the product will be blackened, the luminous flux will gradually decrease until it is slightly bright, the color temperature will drift obviously, and the LED light source will eventually fail. It is recommended to test the sulfur discharge of lamps first to ensure that LED light sources work in an environment free of sulfur, chlorine, bromine and other substances.

在密闭、高温的环境中，灯具内可能含硫/氯/溴等物质，这些硫、氯和溴元素会挥发成气体并腐蚀 LED 光源。因为 LED 封密硅胶具有多孔性结构，与光源镀银层发生硫化反应。LED 光源出现硫化反应后，产品功能区会黑化，光通量会逐渐下降直至微亮，色温出现明显漂移，LED 光源最终会失效。 建议先进行灯具排硫测试，确保 LED 光源在无硫/氯/溴等物质环境进行工作。