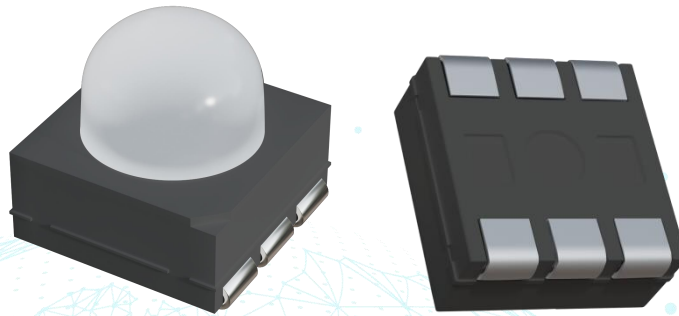


5050 Dome lens RGB -45° (Optical design)



承认书 Approve

产品 /Product		LED	
型号/Part Number		YLL-T50GRB-3-CE-D45-H	
物料编码 (Material Code)			
客户规格/customer specification			
客户/Customer			
亮度(mcd)/波长 (nm)		R:3000-5000mcd/620-630nm G:3000-4500mcd/515-530nm B:500-1000mcd/460-470nm	
电压/VF (V)		R:2.0-2.4V/G:2.8-3.4V/B:2.8-3.4V	
色区等级/Color Bin			
显色指数/CRI			
色容差/SDCM			
备注/remarks			
制定/Maker			
制作/Prepared	审核/Checked	客户回签/Customer Confirmation	

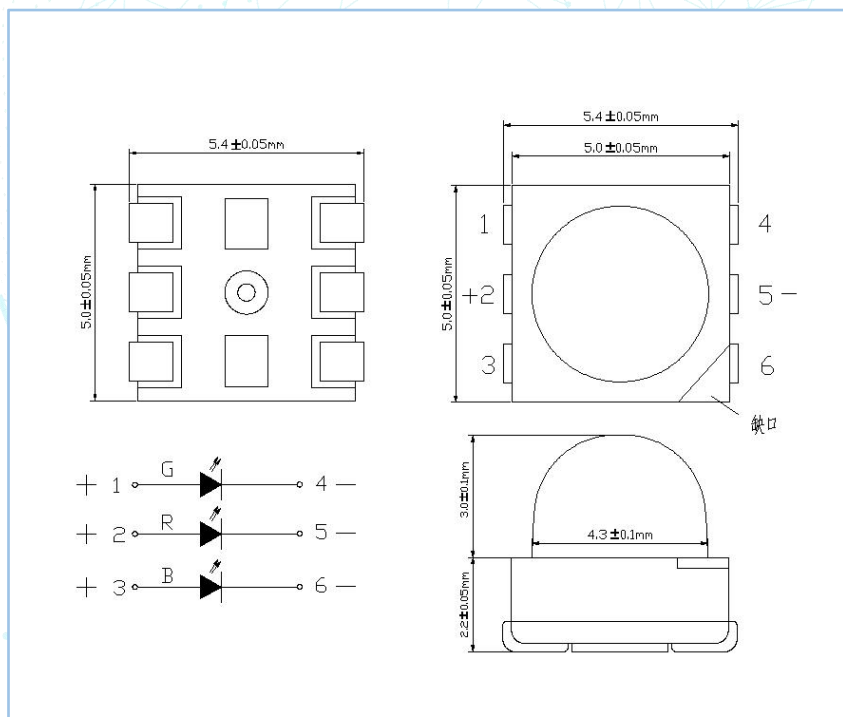
特性 (Feature)

- Size (mm): 5.0*5.0mm
尺寸 (mm): 5.0*5.0mm
- 0.5W Low Power LED
0.5W 小功率 LED 产品
- 高度: 2.2mm
Height (mm): 2.2mm
- Suitable for all SMT assembly
适用于所有的 SMT 组装和焊接工艺
- Moisture sensitivity level: Level 4.
防潮等级 Level 4.

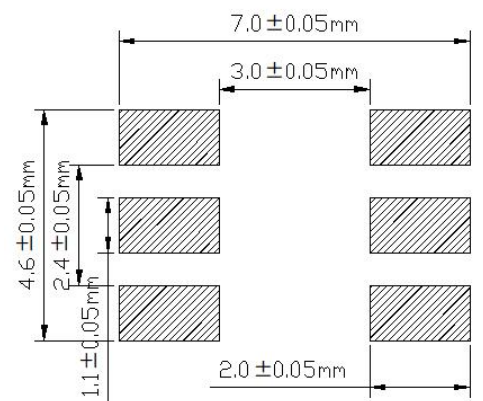
建议使用范围 (Suggested scope of use)

- ◆ Outdoor Brightening Lighting
户外亮化照明
- ◆ Application of car lights, traffic lights, wooden wall screens and pixel screens
车灯、交通灯、木墙屏、像素屏应用

产品尺寸图 Product Structure diagram.



Recommend pad design



Notes: (备注)

All dimension units are millimeters.
所有标注尺寸单位为毫米.

材质说明 Material Description

型号 Part No.	芯片材料 Chip Materials	胶体类型 Lens Type
YLL-T50GRB-3-CE-D45-H	InGaN / AlGaInP	Fog colloid (雾状胶体)

极限参数范围值 Absolute Maximum Ratings at TA=25°C

参数 (Parameter)	符号 (Symbol)	值 (Rating)	单位 (Units)
消耗功率 (Power Dissipation)	Pd	500	mw
连续工作电流 (Continuous Forward Current)	IF	3*50	mA
顺向脉冲电流 Pulsed Forward Current (1/10Duty Cycle, 0.1ms Pulsewidth)	IFP	3*80	mA
反向电压 (Reverse Voltage)	VR	5	V
静电 (Electrostatic Discharge) (HBM)	ESD	R 3000	V
		G 2000	
		B 2000	
操作温度 (Operating Temperature)	Topr	-40 to +85	°C
储存条件 (Storage Condition)	Tstg	-40 to +40	°C
	Humidity	<60	%
结温 (Junction Temperature)	Tj	≤125	°C

备注 (Note) :

脉宽 0.1ms, 周期 1/10 (1/10 Duty cycle, 0.1ms pulse width.)

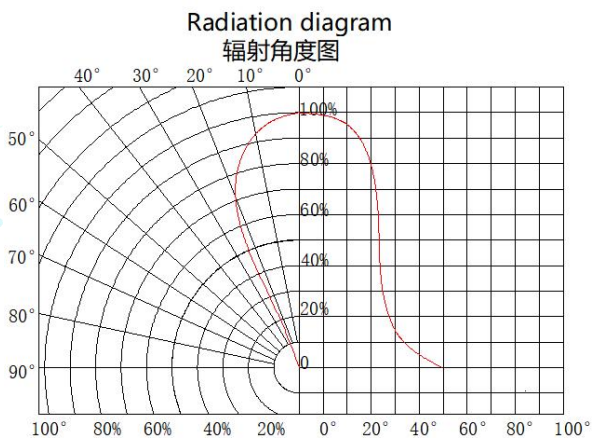
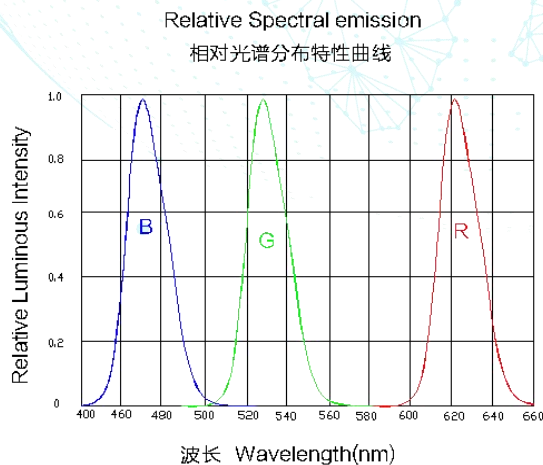
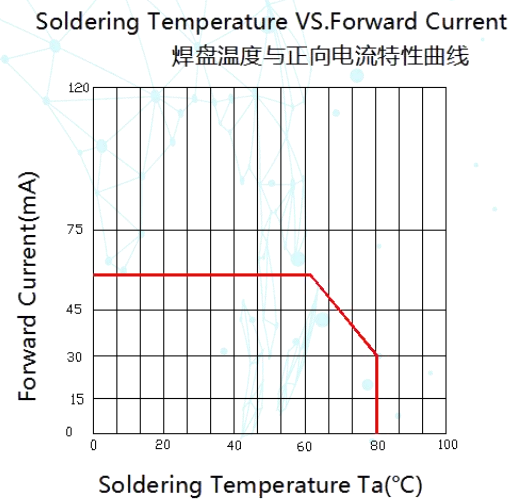
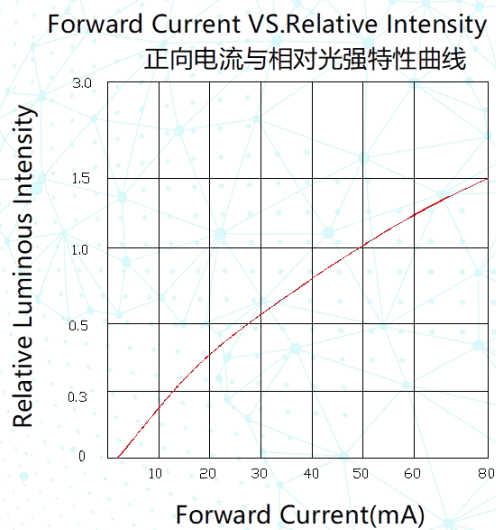
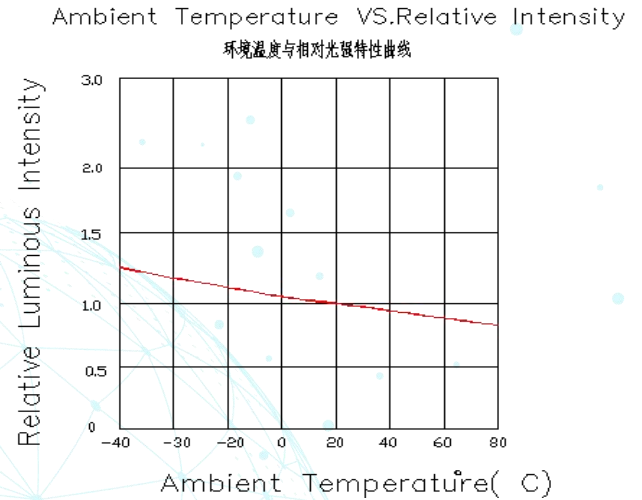
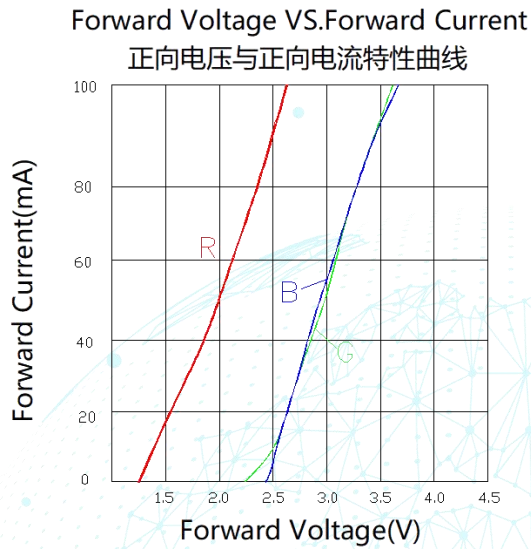
光电参数特性 Electrical / Optical Characteristics at TA=25°C

Parameter	符号 Symbol	最小值 Min	中间值 Typ	最大值 Max	单位 Unit	测试条件 Test Condition
亮度 Luminous Intensity	IV	R 3000		5000	mcd	IF=3*50mA
		G 3000		4500		
		B 500		1000		
发光角度 Viewing Angle	2 θ 1/2	20		50	deg	Note 1
波长 Dominant Wavelength	λ d	R 620		630	nm	IF=3*50mA
		G 515		530		
		B 460		470		
电压 Forward Voltage (R)	VF	R 2.0		2.4	V	IF=3*50mA
		G 2.8		3.4		
		B 2.8		3.4		
反向电流 Reverse Current	IR	—	—	10	μ A	VR=5V

Note (备注) :

- 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value
1/2 是半值角, 指光强是光学中心线光强的 1/2 处到光学中心线的角度
- The above luminous flux measurement allowance tolerance is ±15%.
上述发光通量的测试允许公差为±15%
- The above Color Rendering Index measurement allowance tolerance is ±2
以上显色性指数的测试允许公差为±2
- The above forward voltage measurement allowance tolerance is ±0.1V
以上所示电压测量误差±0.1V

典型光学特性曲线 Typical optical characteristics curves



信赖性测试项目及条件 Reliability Test Items And Conditions

Test Items 项目	Ref. Standard 参考标准	Test Condition 测试条件	Time 时间	Quantity 数量	Ac/Re 接收/拒收
回流焊 Reflow	IEC/TR 60068-3-12-2014	Temp: 260°C max T=8 sec	3 times	22PCS	0/1
温度循环 Temperature Cycle	IEC60068-2- 14 : 2009	120°C±5°C 30min ↑↓ 5 min -40°C±5°C 30min	100Cycles	22PCS	0/1
高温高湿老化测试 High Humidity Heat Life Test	IEC60068-2-78: 2001	Ta=85°C RH=85% IF=3*50mA	500H	22PCS	0/1
高温储存 High Temperature Storage	Tested with yuliang standard	Temp: 85°C±5°C	1000H	22PCS	0/1
储存条件 Storage Condition	IEC60068-2-1: 2007	Temp: -40°C±5°C	1000H	22PCS	0/1
常温通电老化 Life Test	Tested with yuliang standard	Ta=25°C±5°C IF=3*50mA	1000H	22PCS	0/1

失效判定标准 Failure Criteria

Test Items	符号 Symbol	测试条件 Test Condition	判定标准 Failure Criteria	
			最小 (MIN)	最大 (MAX)
正向电压	VF	IF=3*50mA	--	U. S. L*) x1.1
反向电流	IR	VR = 5V	--	10uA
光通量	Im	IF=3*50mA	L. S. L*) x0.7	

U. S. L: Upper Specification Limit 规格上限

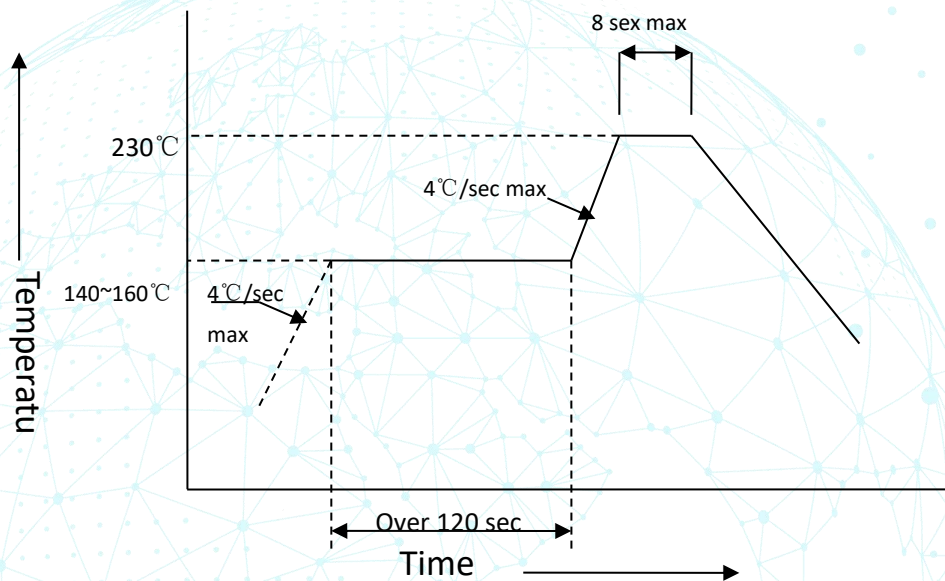
L. S. L: Lower Specification Limit 规格下限

回流焊说明 SMT Reflow Soldering Instructions SMT

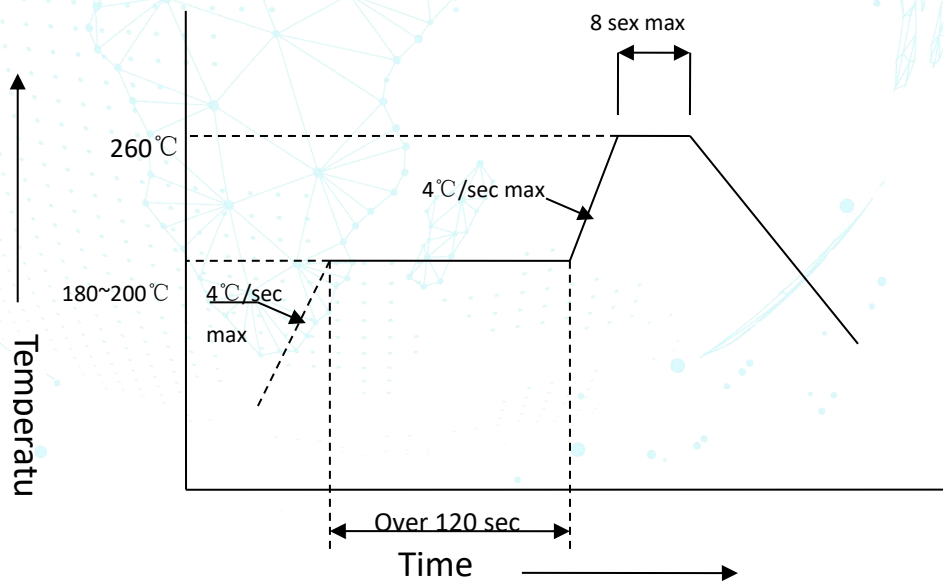
回流焊说明 Reflow Soldering Instructions

本产品最多只可回焊一次 Number of reflow process shall be less than 1 times

有铅回焊 Lead Solder



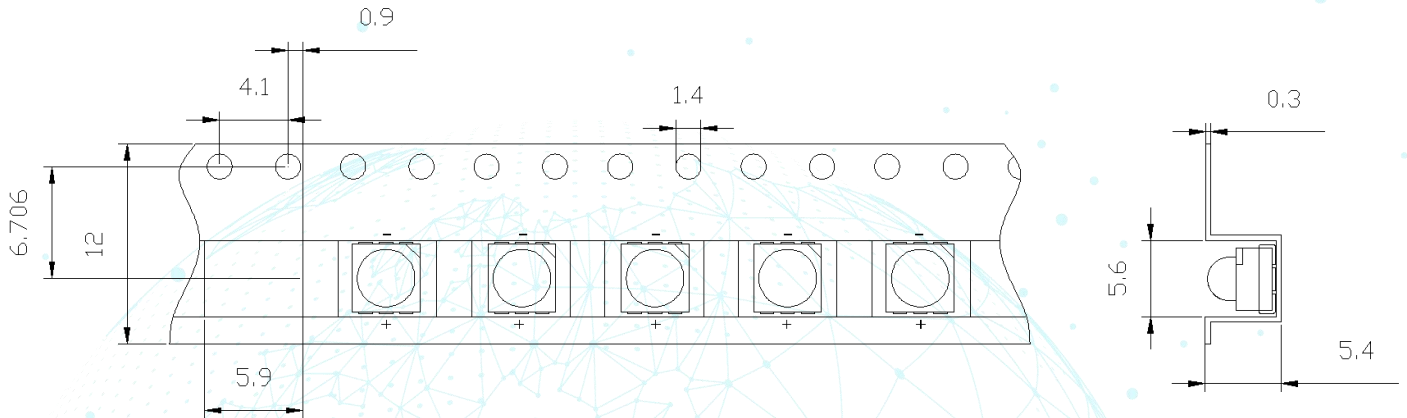
无铅回焊 Lead-Free Solder



包装 Packing

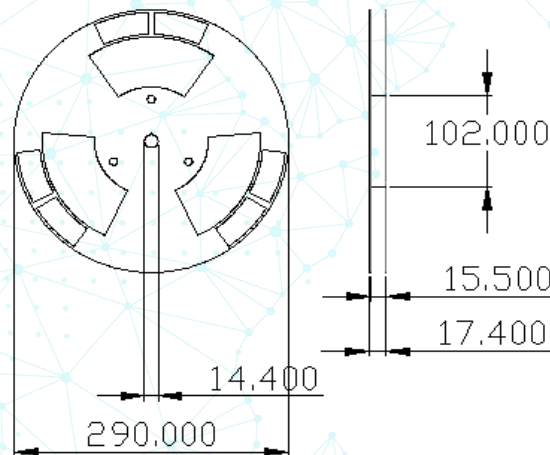
载带规格 (单位: mm) Tape Specifications (Units : mm)

Packing unit 1002PCS/reel

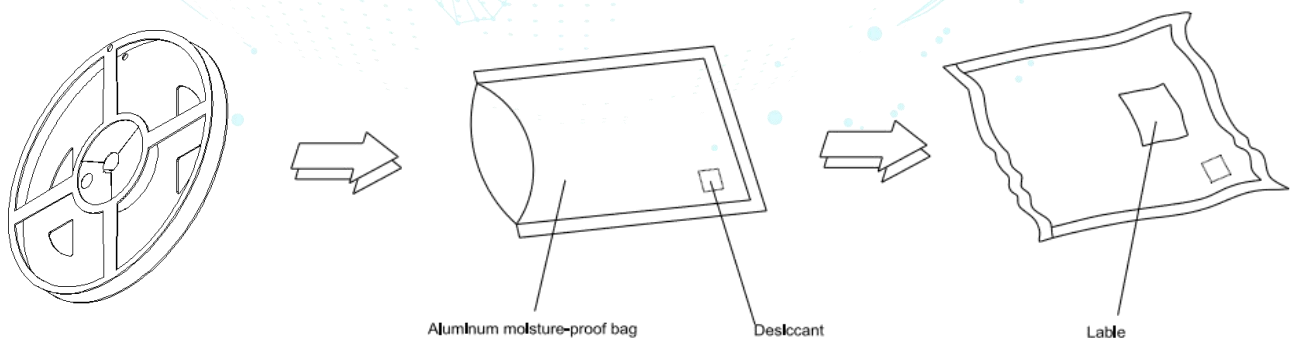


Adhesion Strength of Cover Tape : Adhesion strength to be 0.1 – 0.7N when the cover tape is turned off from the carrier at 10° angle to be the carrier tape. (盖带力度: 当盖带与载带成10度角时力度为0.1 – 0.7N)

卷轴尺寸 Reel Dimensions



防潮带包装 Moisture Resistant Packaging



SMD 贴片灯珠使用操作说明

致：尊敬的合作伙伴！

感谢贵司一直以来对我司的信任与支持。为了增进您对我公司的产品特性的了解，方便您在使用过程中掌握其使用特性，尽量减少或避免因人为因素造成不必要的产品损坏或者性能不匹配。特在此说明。

一 物料确认

请先检查包装是否漏气，是否有其他破损，检查标签是否与贵司的要求吻合。若发现异常请及时联系我司。

二 未开包的灯珠存放

未开包的灯珠尽量不要长期存放，由于存放环境不易控制。可以根据订单选择近期交货。存放的环境最好选择防潮柜，温度在 30 度左右，湿度在 60%以下,这种情况下产品可以存放 180 天。

无论存放时间是否超期，生产前请务必进行首件测试。如果发现问题请第一时间联系我们。

三 开包装后的预防措施

收到我司灯珠后，请尽快安排生产，由于各家仓库存储环境不同，不建议做大批量的备库存货，开包后请在 24 小时内将产品用完。

四 不建议将不同批次灯珠进行混用：

生产前按照首检标准进行测试，如果发现灯珠出现异常请联系我司。贵司在生产过程中请不要把不同批次的灯珠混在一起使用。如果避免不了，需要使用上个批次的灯珠，请先确认包装是否正常，再做首件确认。最后将此批灯珠生产的产品进行单独区分。

五 不建议对拆包后的灯珠进行存储，请准确计算好产线的需求量。如果需要存储，建议使用 60 度烤箱存放。

六 贵司在生产过程中，贴片完成后请及时过回流焊，建议减少重复性回流焊接，在焊接以及组装过程请检查静电防护措施是否到位。

七 户外使用的灯珠，成品设计尽量采用盖透镜，然后灌封胶密封。不建议直接在灯珠表面封胶。灌封胶尽量选择透气透氧率较低，对铝材粘接性较好的胶水。控制器的负压要降到最低。

八 户外已经安装的成品灯具，在调试完成后，如果不能及时使用的，请注意要进行定时老化，老化前期请用小电流将所有芯片点亮，不要进行扫描程序。老化两小时后将电流逐渐放大，不要扫描程序，进行常亮老化 4 小时。每月一次。在使用初期，请将控制器的速度调到最慢，颜色转换速度最慢。

Instructions for the use of SMD LED

To: Dear Partners!

Thank you for your trust and support to our company. In order to enhance your understanding of the characteristics of our company's products, it is convenient for you to master its use characteristics to minimize or avoid unnecessary product damage or performance mismatch caused by human factors. It is hereby explained.

1. Material confirmation

Please check the packaging for air leakage and other damage, and check whether the label matches your company's requirements. If you find any abnormalities, please contact us in time.

2. Storage of unopened led

Try not to store the unopened led for a long time as the storage environment is not easy to control. Near-term delivery can be selected based on the order. The best environment for storage choose a moisture-proof cabinet with a temperature of about 30 degrees and a humidity below 60%, in which case the product can be stored for 180 days.

Regardless of whether the storage time is overdue or not, be sure to test the first article before production. If you find any problems, please contact us as soon as possible.

3. Precautionary measures after opening the package

After receiving our led, please arrange production as soon as possible, due to the different storage environments of customer, it is not recommended to do a large batch of stocking, please use the product within 24 hours after opening the package.

4. It is not recommended to mix different batches of led

Before production, test according to the first inspection standard, if you find that the led is abnormal, please contact our company. Please do not put different batches led in the production process. If it's cannot be avoided, please confirm whether the packaging is normal first, and then do the first piece confirmation. Finally, please distinguish the products produced by this batch of led.

5. It is not recommended to store the led after unpacking, please accurately calculate the demand of the production line. If storage is required, it is recommended to store in a 60-degree temperature oven.

6. In the production process, please reflow soldering in time after the patch is completed, it is recommended to reduce repetitive reflow soldering, and check whether the electrostatic protection measures are in place during the soldering and assembly process.

7. **For outdoor usage**, the finished product design should be covered with a lens as much as possible, and then sealed with potting glue. It is not recommended to seal directly on the surface of the led. Try to choose a glue with low air permeability and oxygen permeability and good adhesion to aluminum. The negative pressure of the controller should be reduced to a minimum.

8. After the commissioning, the finished lamp that have been installed outdoors, please pay attention to the timing of aging if they cannot be used in time, before aging test light up all the chips with a low current and do not perform the scanning procedure. After two hours of aging, amplified gradually the current, at the same time do not scan the program, and proceed aging-test for 4 hours once a month. At the beginning of use, set the speed of the controller to the slowest and the color conversion speed to the slowest.