

1.Part code 产品型号命名原则

C LT 55 34 F80BF9GF80B - RGBWW 9C15 MD

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① COB lamp beads COB灯珠

② Light source type 光源型号

③ Product size 产品尺寸

④ Luminous surface size 发光面尺寸

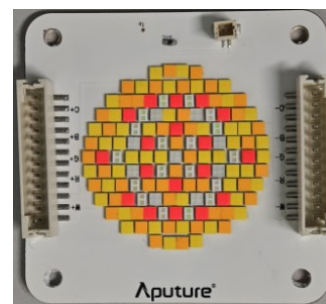
⑤ code 芯片代码

⑥ Emitting light colors 发光颜色

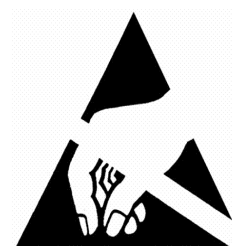
⑦ The Number of series and parallel circuits 串并联电路数

⑧ Patch module 贴膜模组

CRI 显色指数 $Ra \geq 90$



ATTENTION注意
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES
请勿裸手接触器件



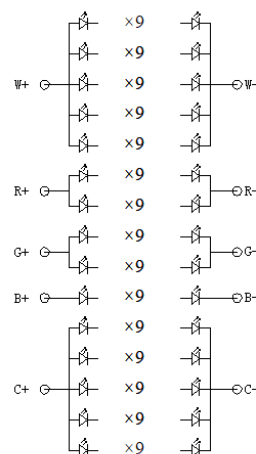
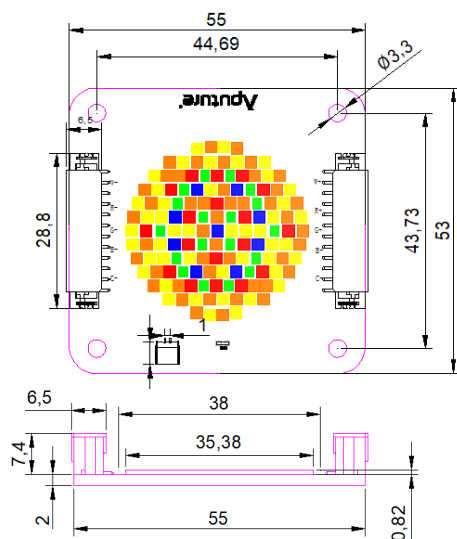
2.Features 特点

- Dimension 55mm×55mm×8.22mm : 尺寸：55mm×55mm×8.22mm
- Ceramic Module Package : 陶瓷模组封装
- RoHS compliant (ROHS标准)

3.Applications 应用

- Photo lamp 摄影灯

4.Package Dimensions封装尺寸



Tolerance unless otherwise specified: $\pm 0.3\text{mm}$.

尺寸公差为 ± 0.3 毫米除非另有说明

5.Performance 性能

(1) Absolute Maximum Ratings 绝对最大额定值

Parameter参数	Symbol符号	Rating Value值	Units单位
Power Dissipation (功耗) -W/C	Pd	265	W
Power Dissipation (功耗) -R		94	
Power Dissipation (功耗) -G		52	
Power Dissipation (功耗) -B		52	
Forward Current (正向电流) -W/C	IF	5100	mA
Forward Current (正向电流) -R		1800	
Forward Current (正向电流) -G		1000	
Forward Current (正向电流) -B		1000	
Junction Temperature结温	Tj	120	$^{\circ}\text{C}$
Storage Temperature Range储藏温度	Top	-40~85	$^{\circ}\text{C}$
Operating Temperature Range工作温度	Top	-40~85	$^{\circ}\text{C}$
Lead Soldering Temperature*引线焊接温度	T _{SOL}	Max. 350 $^{\circ}\text{C}$ for 5sec Max.	

Notes注:

1.* All high power emitter LED products mounted on aluminum metal-core printed circuit board, can be lighted directly, but we do not recommend lighting the high power products for more than 5 seconds without a appropriate heat dissipation equipment. .

所有高功率的发光LED产品安装在铝金属为核心印刷电路板，可直接点亮，但我们不建议在没有一个适当的散热设备时，照明高功率LED点亮超过5秒

2.wave peak and soak-stannum soldering etc.is not suitable for this products.

波峰焊、浸锡焊接不适合这个产品。

3.Reflow soldering should not be done more than two times.The reflow temperature we recommend is 260 $^{\circ}\text{C}$,When the temperature exceeds 260 $^{\circ}\text{C}$, the product failure of LED can be caused

回流焊不能超过两次,回流焊最高温度建议260 $^{\circ}\text{C}$ ，当温度超过260 $^{\circ}\text{C}$ 极大可能引起LED产品失效。

(2) Electro-Optical Characteristics 光电特性

Parameter参数	Symbol符号	发光颜色	Condition 条件	Min	Typ	Max	Unit单位
Forward Voltage 正向电压	VF	R	IF=1800mA	49.5	52	54.5	V
		G	IF=1000mA	49.5	52	54.5	
		B	IF=1000mA	49.5	52	54.5	
		W/C	IF=5100mA	49.5	52	54.5	
Luminous Flux 光通量	Φv	R	IF=1800mA	1700	2060	—	lm
		G	IF=1000mA	4800	5150	—	
		B	IF=1000mA	800	880	—	
		W	IF=5100mA	19000	20000	—	
		C	IF=5100mA	25000	27000	—	
CRI 显色指数	Ra	W	IF=5100mA	95	96.5	—	—
		C	IF=5100mA	92.5	93.5	—	—
Peak Wavelength 峰值波长	Wp	R	IF=1800mA	617	619	623	nm
		G	IF=1000mA	523	525	528	
		B	IF=1000mA	450	452.5	455	

Notes注:

*1.the products after this specification refer to the parameters prevail, before the release of specification without refer to the above parameters.

此规格书发布日后生产的产品以上述参数为准，发布前生产的库存品不参考上述参数。

2.Tolerance of measurement of forward voltage $\pm 3\%$ 、Color-rendering index ± 2 、luminous flux $\pm 5\%$

不同标准源测试存在仪器公差：正向电压公差为 $\pm 3\%$ 、显指公差为 ± 2 、光通量公差为 $\pm 5\%$ 。

3.Tolerance of ± 0.005 on x,y coordinates.

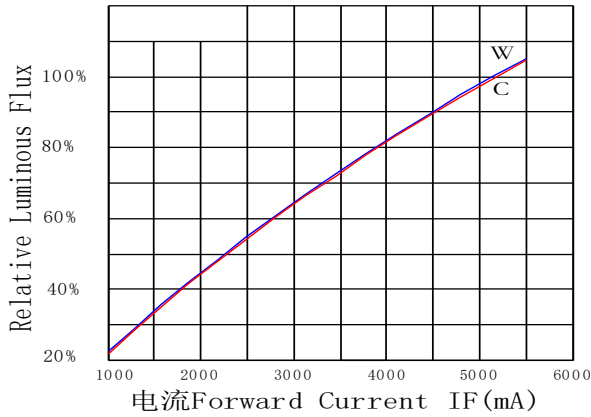
色坐标的测量误差允许在 ± 0.005



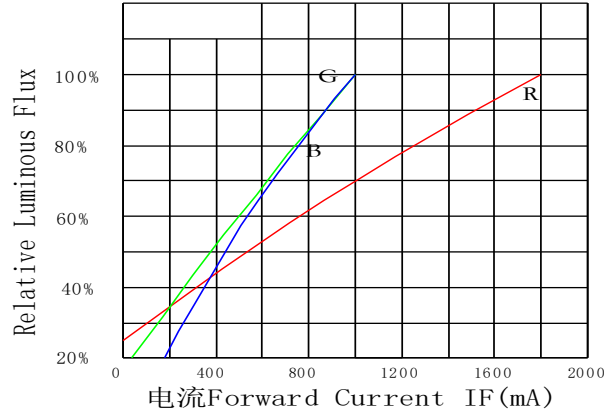
Under Development	●
Mass production	

6.Characteristics特性

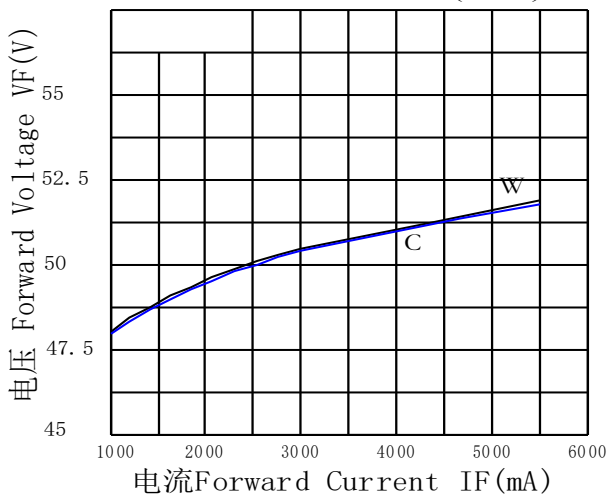
Relative Luminous Flux - IF
电流-相对光通量曲线(W&C)



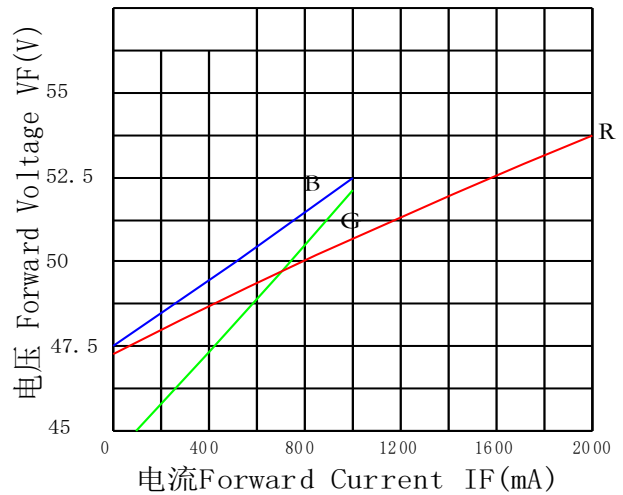
Relative Luminous Flux - IF
电流-相对光通量曲线 (R&G&B)



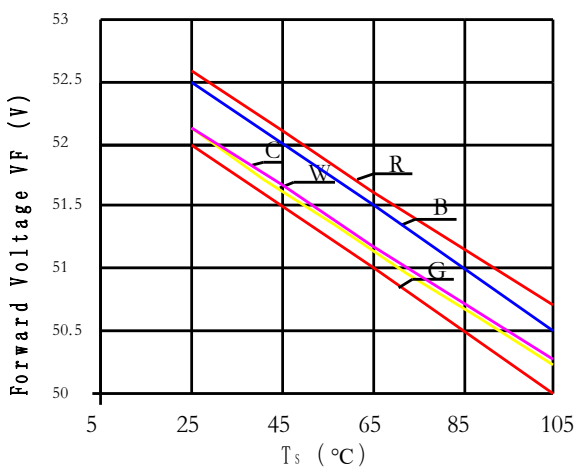
Forward Voltage vs. Forward Current
正向电压与正向电流曲线图(W&C)



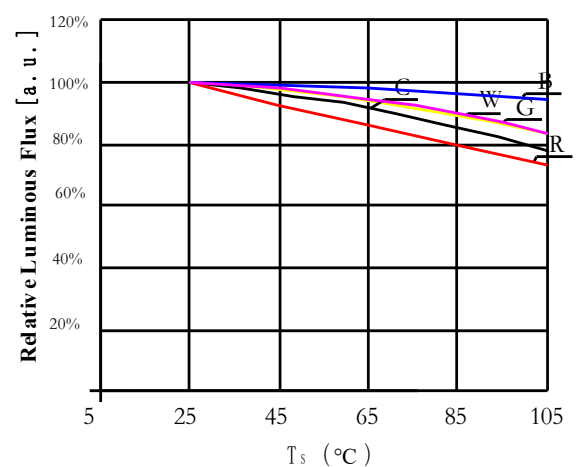
Forward Voltage vs. Forward Current
正向电压与正向电流曲线图 (R&G&B)



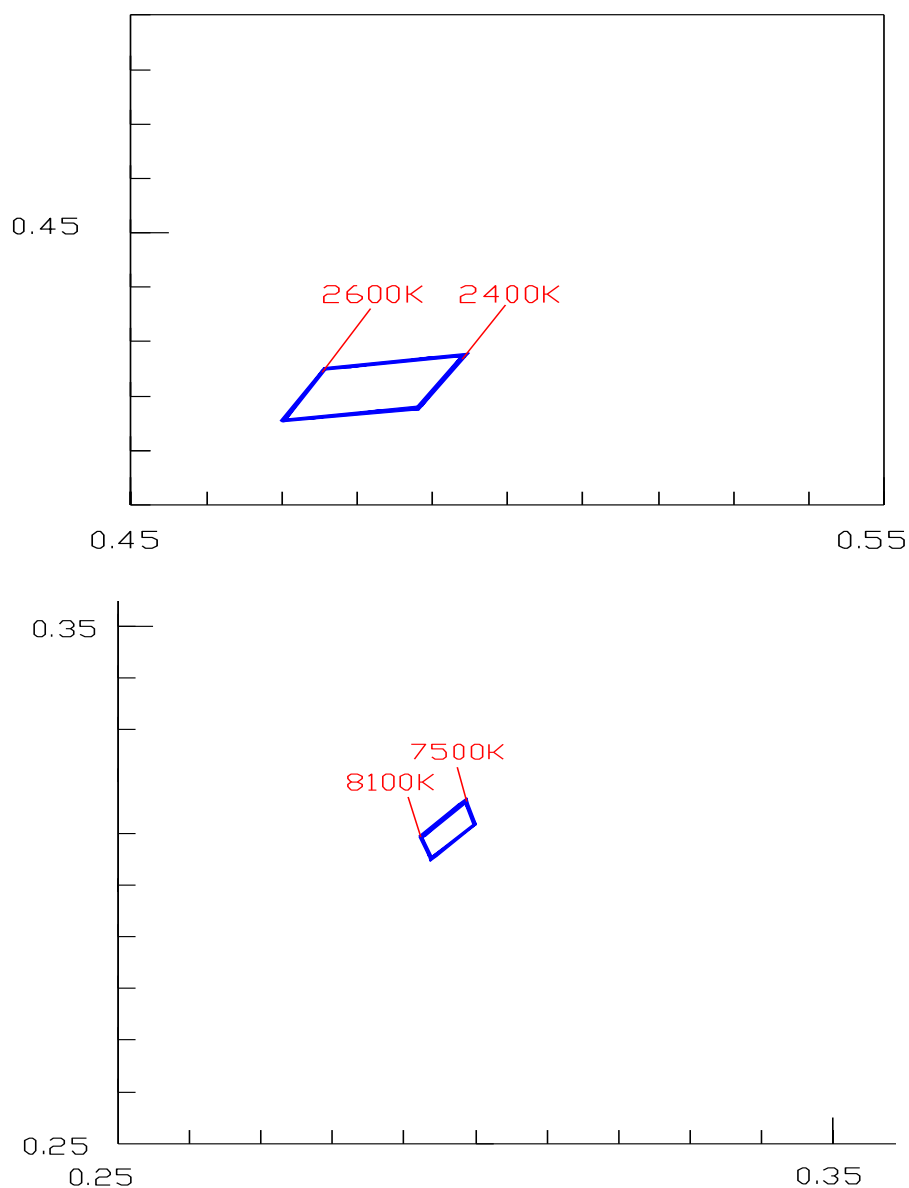
Case Temperature vs. Forward Voltage
结点温度与正向电压曲线图



Case Temperature vs. Relative Luminous Flux
结点温度与相对流明曲线图



7. Bin Range of Chromaticity Coordinate Bin区分类及色坐标范围



7500K-8100K	
X	Y
0.2924	0.3093
0.2987	0.3162
0.2999	0.3117
0.2938	0.3117

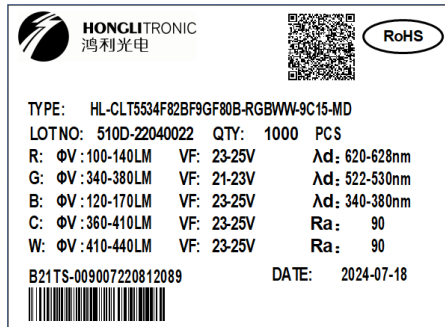
2400K-2600K	
X	Y
0.4701	0.4154
0.4881	0.4178
0.4943	0.4275
0.4758	0.425

Color region stay within MacAdam "3-step" ellipse from the chromaticity center. but does not contain the color temperature $6000 \pm 300\text{K}$. The chromaticity center refers to ANSI C78.377-2008.

色域可控制在色温中心坐标的3阶麦克亚当椭圆之内，但不包括色温 $6000 \pm 300\text{K}$ ，色温分bin参考ANSI C78.377-2008。



8.Packing Specifications 包装规格



Label on ESD shielding 静电袋上标签

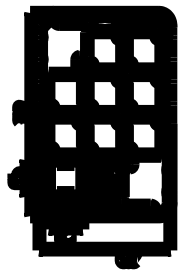
ΦV: Luminous Flux rank 光通量档次范围

VF: Forward voltage rank 正向电压档次范围

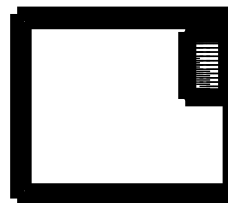
TC: Color temperature 色温

SDCM: 相对色容差

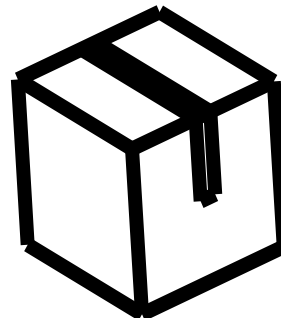
■ Packing figure 包装图



Tray: 10pcs
L*W*H=307*208*20mm



1Tray/ESD Shieding Bag:10pcs



10 ESD Shieding Bag/Outer Box:100pcs
L*W*H=395*255*365mm

10. Precaution for use (防护措施)

1. Storage 储存

To avoid moisture, we recommend storage conditions for the unopened LED +5 ~ +30 °C, relative humidity <60%. LED should be used within 168 Hrs. of opening the package. Please make sure to dehumidify and vacuum pack the remaining/ unused LED. Dehumidifying condition: +120 ° C ± 5 ° C, 04 Hrs. Effective age for the sealed led is one year.

为避免受潮的影响，我司建议产品在未开包装前储存条件为 5-30° C，相对湿度小于 60%。已开包装的 LED 光源请在 168H 内使用安装完毕，如未用完之产品，请进行除湿并抽真空后密封保存。除湿条件：120° C ± 5° C，4H。产品密封保存有效使用期为一年。

2. The soldering precautions 组装注意事项：

Soldering conditions: Reflow soldering is not recommended for this LED. If hand soldering, **set soldering iron temperature at 350°C and soldering time not More than 5 seconds**, **Contacts number of soldering bit should be within twice for each terminal**, after the first soldering, make sure the substrate surface temperature returns to ambient temperature before a second soldering. Please make sure when soldering, there is no external force on the soldering surface and silicon batardeau (such as pressure, friction or sharp metal nails, etc.), to avoid gold wire deformation or damage and other abnormalities. If beyond recommended conditions, we cannot guarantee the LED stability, please do the risk assessment first.

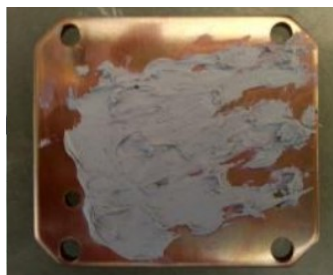
During assembly, please ensure that a good quality thermal paste is applied and distributed evenly over the surface. While using thermal pad (Heat Sink), make sure LED is firmly tightened and there is no gap between surfaces. In such heat-media products, through a pressure test of at least 500 volts.

焊接条件：此产品不推荐使用回流焊接的作业方式，手工焊接烙铁温度设定 350°C，**焊接时间不可超过 5 秒**，**当手工焊接时，烙铁的温度必须小于350°C，时间不能超过5秒**，**焊接次数控制在两次以内**，第一焊点焊接后请确保基板表面温度恢复到环境温度，方可进行第二次的焊接。焊接时请注意不可有外力作用于胶体表面及外圈的围堰胶上（如压力，摩擦或锋利金属钉等），以免造成金线变形或断线等异常；如果超出此使用条件，鸿利智汇将不能保证产品的稳定性，如需使用超出的操作条件，请务必进行风险评。

为确保在组装时降低接触热阻，请注意导热膏涂布均匀且分布面积合理，不可出现导热膏太少或涂抹高低不平等现象。如使用导热胶垫时，请确保螺丝安装后基板与导热胶垫的完全接触，不可存在中空现象。产品在此类耐热介质下，能通过至少500伏的耐压测试。



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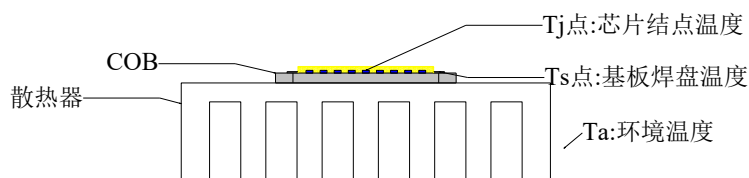
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3. Anti-Static Measures防静电措施：

Please take adequate measures to prevent electrostatic generation, such as wearing electrostatic ring or anti-static fingerstall etc; any relative products like plant equipment, machinery, carrier and transportation units shall be connected to discharging unit/ ground. The ESD sensitivity of this product is > 1000V(HBM), after assembly the final lamp, please make sure to discharge Static Electricity by proper ESD equipment.

请采取足够的措施来防止静电产生，比如带静电环或防静电手指套等；每个制造厂关于产品（工厂、设备、机器、载波机和运输单位）应当连接到底面，请避免产品电气带电；本产品的防静电敏感度超过1000V（HBM），装配后的最终灯具产品（S）建议检查是否损坏LED（漏电现象）。

4. Temperature Control温度控制：



$$T_j = T_s + R_{j-s} \cdot P_i$$

其中 T_j = 芯片结点温度， T_s = 基板测试焊盘温度， P_i = 输入功率

T_j : Chip junction temperature， T_s : pad temperature， P_i : power

Recommended temperature conditions for enhanced product life: the T_s point (negative pads) should not exceed the absolute maximum rating in LED illumination system，COB recommendation colloid surface temperature control $\leq 160^\circ\text{C}$.

保证散热前提条件为：请务必将 T_s 点（负极焊盘）控制在对应系统最高范围内，建议COB胶体表面温度控制 $\leq 160^\circ\text{C}$ 。

5. The drive control驱动控制：

Drive this product at constant current. Output current range specifications should be according to the operational and other conditions, as mentioned in data sheet. Before using a constant voltage source or altered specifications other than recommended, please consider risk factors.

本产品需使用恒流源进行驱动，且输出电流符合规格书上的功率使用范围，如需使用恒压源或其他使用条件，请进行使用效果风险评估。

The Peak Current: The LED chip will be burned easily if the LED is shocked by the current which is higher than the rated current in a short time. Please make sure that the current of the LED is less than the maximum current when the power is on.

电流尖峰：LED受到一个短暂大于额定电流的冲击，容易造成芯片烧毁现象。请务必保证电源开启瞬间电流小于光源使用最大电流。

6. a minimum current value 最小电流值点亮

A minimum current value of lighting of Per die is less than 1mA. When a minimum current is applied, LED dice may look different in their brightness due to the individual difference of the LED element, But does not affect the use, if one of the chip is particularly bright, then we need to evaluate its using effect.

COB产品每颗芯片单颗电流小于等于1mA进行点亮检测，LED芯片的亮度可能会有所不同，但不影响使用，如出现某颗芯片特别亮，需评估其使用效果。

7. Other其他：

Product is not suitable to use in following conditions

本产品不可在以下条件下使用，如果产品在以下条件下使用，评估其使用效果和风险是有必要的：

Direct or indirect wet / damp conditions, such as rain, etc.;

直接或间接的打湿或受潮，比如淋雨等；

In contact with sea water and erosive materials

被海水损害或侵蚀；

Exposed to corrosive gases (e.g., Cl₂, H₂S, NH₃, SO_x, NO_x, etc.);

被暴露于腐蚀性气体(如 Cl₂, H₂S、NH₃、SO_x、NO_x等)；

Exposed to dust, liquids or oils;

被暴露于粉尘、液体或油；

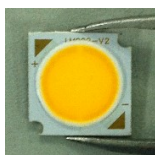
镜面铝基板防硫化标准：

Standard for vulcanization resistance of mirror aluminum substrates. From the date of COB shipment, the sulfur concentration of the Luminaire should be less than 2000PPM, and the surface temperature should be within the required range of our company. Luminaire sulfur element can be sulfur compound, except the elemental sulfur, as the volatilization of elemental sulfur will cause the protective layer of the substrate damaged and blackened at high temperature

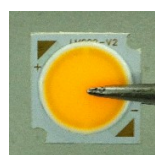
COB从出货日起，灯具硫浓度小于2000PPM，胶面温度在我司要求范围内。灯具硫元素可为硫化合物，不能出现单质硫，单质硫在高温情况下挥发将引起基板保护层破坏，发黑。

Other points for attention, please refer to our LED user manual, In accordance with the user manual, the product shelf life is 24 months, If there is a warranty agreement, the warranty agreement shall prevail. After the product life cycle for recycling.

其它注意事项请参照我们的LED使用手册，符合使用手册的情况下，产品质保期为24个月，有保质协议的则以保质协议为准。产品生命周期后进行回收处理。



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修订次数	修订人	修订内容	修订日期	版次
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