

深圳市晶盟电子科技有限公司

# Specification

## 规格承认书

customer(客户名称): \_\_\_\_\_

product(产品名称): \_\_\_\_\_ 2835六脚RGB灯珠 缺口为负 \_\_\_\_\_

Type(产品型号): \_\_\_\_\_ JM-2835RGB001 \_\_\_\_\_

Date(编制时间): \_\_\_\_\_

Approval		
confirmation制作	checked 审核	Approved 批准
陈权核		
Rev(版本): A/0		Date(日期):

Customer Signatures 客户回签			
Confirmtion 确认		Date 日期	

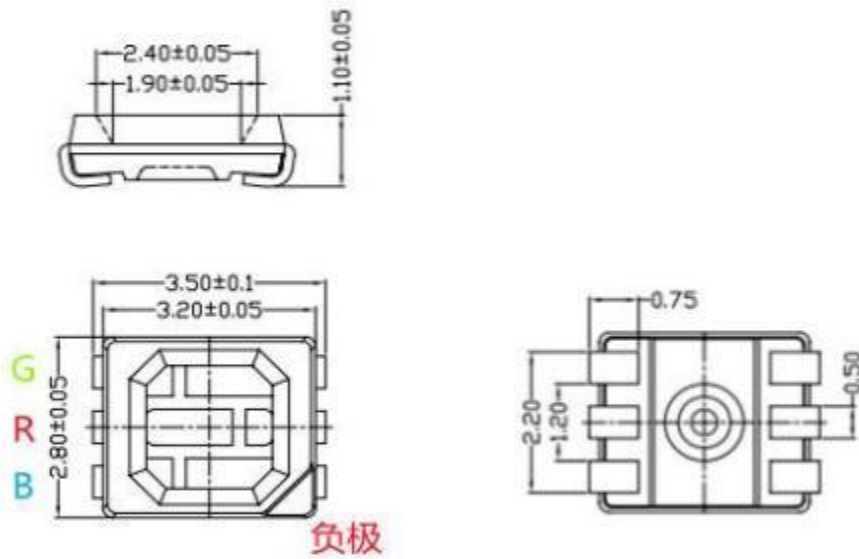
## 1. Features 特性

- Top View White LED TOP 型贴片 LED
- High luminous intensity and high efficiency 高亮度高效率
- Package size:  $2.8 \times 3.5 \times 1.1\text{mm}$  封装尺寸:  $2.8 \times 3.5 \times 1.1\text{mm}$
- Wide viewing angle :  $120^\circ$  宽角度:  $120^\circ$
- Soldering methods: Reflow soldering 可回流焊接
- RoHS compliant 符合 RoHS 标准

## 2. Applications 应用

- Indoor Lighting 室内照明
- Outdoor Lighting 室外照明

## 3. Package Dimensions 外形尺寸



Notes(备注):

- (1). 中间为红光, 缺口为负极, 蓝光;
- (2). All dimensions are in millimeters. 所有尺寸单位均为毫米;
- (3). Without special declared, the tolerance is  $\pm 0.1\text{mm}$ . 无特别注明尺寸公差为  $\pm 0.1\text{mm}$ 。

#### 4. Absolute Maximum Ratings at Ta = 25°C 极限参数(25°C)

Parameter 参数	Symbol 符号	Rating 数值	Unit 单位
R/ G/B Forward Current 正向电流	I <sub>F</sub>	20	mA
Junction Temperature 结温	T <sub>J</sub>	110	°C
Operating Temperature 工作温度	T <sub>opr</sub>	-40 to +85	°C
Storage Temperature 存储温度	T <sub>stg</sub>	-40 to +90	°C
Electrostatic Discharge 静电	ESD	1000	V
Soldering Temperature <sup>2</sup> 焊接温度	T <sub>sol</sub>	255±5	°C
Reverse Voltage 逻辑电源电压	V <sub>in</sub>	5~24	V

Notes: ( 1). 1/10 duty cycle, 0. 1ms pulse width. (2). Soldering time  $\leq$  5 seconds.

#### 5. Electro-Optical Characteristics (Ta=25°C) 光电参数 (25°C)

Parameter 参数	Symbol 符号	Conditions 条件	Min. 最小值	Typ. 典型值	Max. 最大值	Unit 单位	
Forward voltage 正向电压	V <sub>F</sub>	I <sub>F</sub> =20mA	R	1.8	2.0	2.2	V
			G	2.8	3.2	3.4	
			B	2.8	3.2	3.4	
Main wavelength 主波长	$\lambda_d$	I <sub>F</sub> =20mA	R	620	--	625	nm
			G	520	--	525	
			B	465	--	472	
Luminous Flux 光强	$\Phi$	I <sub>F</sub> =20mA	R	500	--	800	mcd
			G	1000	--	1300	
			B	300	--	500	
Viewing angle 角度	2 $\theta_{1/2}$	I <sub>F</sub> =20mA	--	120	--	Deg	
Reverse current 反向电流	I <sub>R</sub>	V <sub>R</sub> =5V	--	--	10	$\mu$ A	

Notes(备注):

( 1). 2  $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2  $\theta_{1/2}$  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

## 6. Reliability test items and conditions 性赖性测试项目及条件

### ● Test Items 测试项目

Item 项目	Test Conditions 试验条件	Test Hours/ Cycle 测试时间	Sample Size 样品数量
Solder Heat 回流焊	Tsol=260℃, 10sec (Pre-treatment 30℃, 70%, 168h)	2 times	22 pcs
Temperature Cycle 温度循环	-40℃ 30min~25℃, 5min ~ 100℃, 30min~25℃, 5min	300 cycles	22 pcs
Thermal Shock 冷热冲击	-40℃, 15min~125℃, 15min	300cycles	22 pcs
High Temperature Storage 高温存储	Ta= 100℃	1000 hrs	22 pcs
Low Temperature Storage 低温存储	Ta=-40℃	1000 hrs	22 pcs
Wet High Temperature Storage 高温高湿存储	Ta=60℃, 90% RH	1000 hrs	22 pcs

### ▪ Failure Criteria 失效标准

Items 项目	Symbols 符号	Test Conditions 测试条件	Limits 判定标准
Forward Voltage 正向电压	V <sub>F</sub>	I=20mA*3	> U.S.L*1.1
Luminous Flux 光强	Φ	I=20mA*3	< L.S.L*0.7

Notes: U.S.L : Upper Specification Limit; L.S.L : Lower Specification Limit.

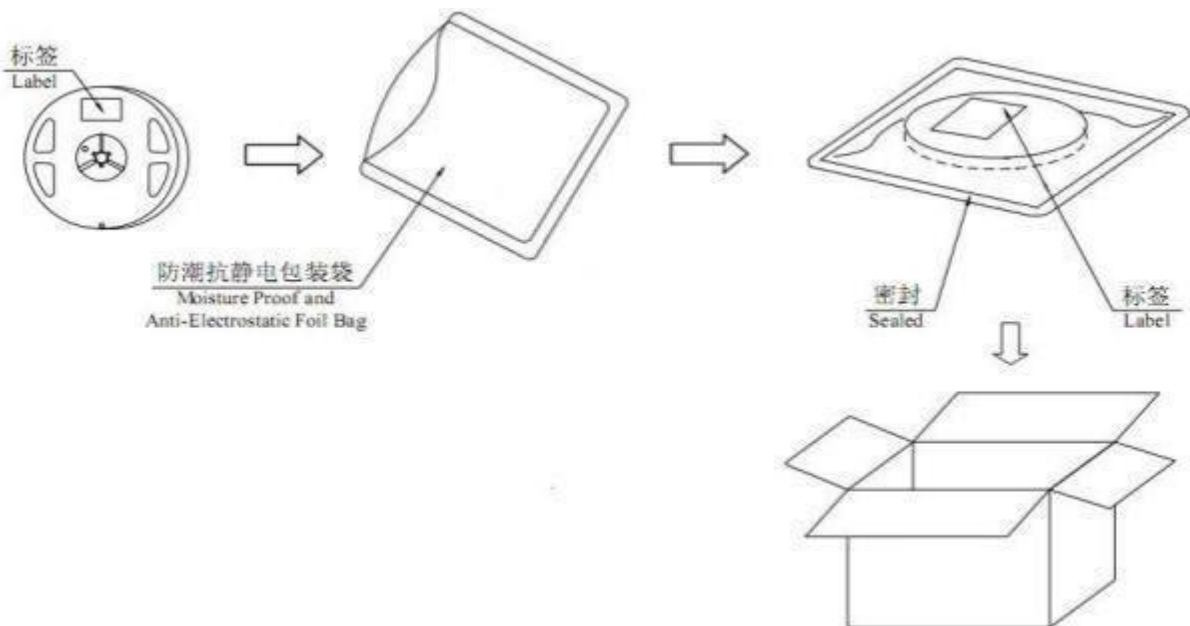
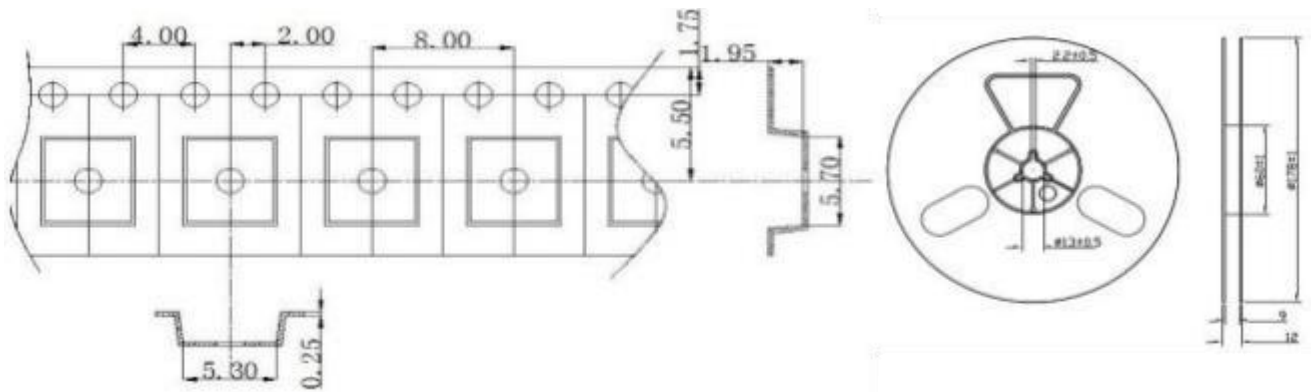
U.S.L : 规格上限值; L.S.L : 规格下限值。

## 7. Packing Quantity Specification 包装规格

- Tape Dimensions: Loaded Quantity 5000 pcs per reel.  
载带尺寸(每小卷 1000 pcs, 每大卷 5000 pcs)

Notes:

- (1). All dimensions are in millimeters.  
所有尺寸单位均为毫米。
- (2). Without special declared, the tolerance is  $\pm 0.1$  mm.  
无特别注明尺寸公差为 $\pm 0.1$  mm。



## 8. Precautions For Use 使用注意事项

### ● Storage 存储

- a) Do not open moisture proof bag before the products are ready to use.  
未准备使用时，不能打开密封防潮袋。
- b) Before opening the package, the LEDs should be kept at 30 °C or less and 60% RH or less.  
开封前，产品需存放于温度不高于 30 °C，湿度不超过 60%的环境中。
- c) After opening the package, the LEDs should be stored at 30 °C or less and 10% RH or less, and be soldered within 24 hours. It is recommended that the product be operated at the workshop condition of 30 °C or less and 60% RH or less.

开封后，产品需存放于温度不高于 30 °C，湿度不超过 10%的环境中，且应该在 12 小时内使用完，建议工作环境温度不高于 30 °C，湿度不超过 60%

- d) If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed on the following condition: 80 °C for 24 hours.

对于尚未焊接的 LED，如果吸湿剂或包装失效，或者产品没有符合以上有效存储条件，烘焙可以起到一定的性能恢复效果。烘焙条件：70 °C，持续 24 小时。同时联系我司安排退换货处理。

### ● Static Electricity 防静电

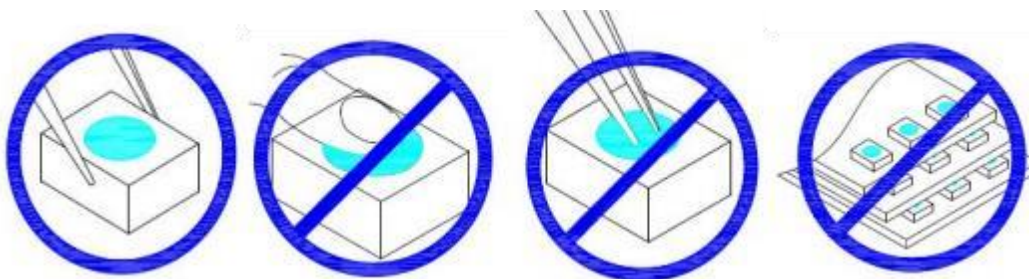
- 1) The LEDs are sensitive to the static electricity and surge voltage. Damaged LEDs may show some unusual characteristics such as increase in leak current, lowered turn-on voltage, or abnormal lighting of LEDs at low current.

LED 对静电和浪涌电压很敏感。因此损坏的 LED 会导致某些产品特性发生变化，例如启动电压降低，漏电流增大，如果情况严重甚至损毁产品。

- 2) All devices, equipment and machinery must be properly grounded. It is recommended that wrist band or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs.

所有相关设备和机器都应该正确接地。在使用 LED 时，建议使用防静电的手环、垫子、手套，防静电电容器等工具。

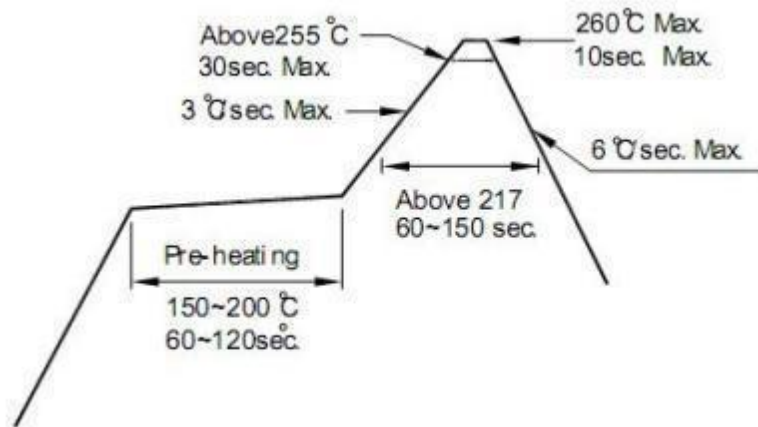
### ● Handling Indications 处理防备措施



- 1) Handle the component along the side surface by using forceps or appropriate tools.  
通过使用适当的工具从材料侧面夹取。
- 2) Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.  
不可直接用手或尖锐金属压胶体表面,它可能会损坏内部电路。
- 3) Do not stack together assembled PCBs containing the internal circuitry.  
不可将模组材料堆积在一起,它可能会损坏内部电路。

● Soldering Conditions 焊接条件

Reflow Soldering Conditions (Pb Free) 无铅回流焊条件



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

回流焊不可超过两次。

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

当回焊时，不可用力压胶体表面。

For Manual Soldering 手工焊接条件

1) When hand soldering, the temperature of the iron must less than 300°C for 3 seconds.

当手工焊接时，烙铁的温度必须小于 300°C，时间不可超过 3 秒。

2) The hand solder should be done only one times

手工焊接只可焊接一次。

● Repairing 维修

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

LED 回流焊后不应该修补，当修复是不可避免的时，必须使用双头烙铁（如下图），但必须事先确认此种方式会不会损坏 LED 本身的特性。

