



# SPECIFICATION

## 产品规格书

NO. (编号): \_\_\_\_\_

Part No.(型号): 9.3030WVV210\_S29

Description(描述): 3030 UV LED

Version NO.(版本): A1

Date(日期): 2022/02/14

CUSTOMER APPROVED (客户审核)	APPROVED (核准)	REVIEWED (审核)	ISSUED (制定)

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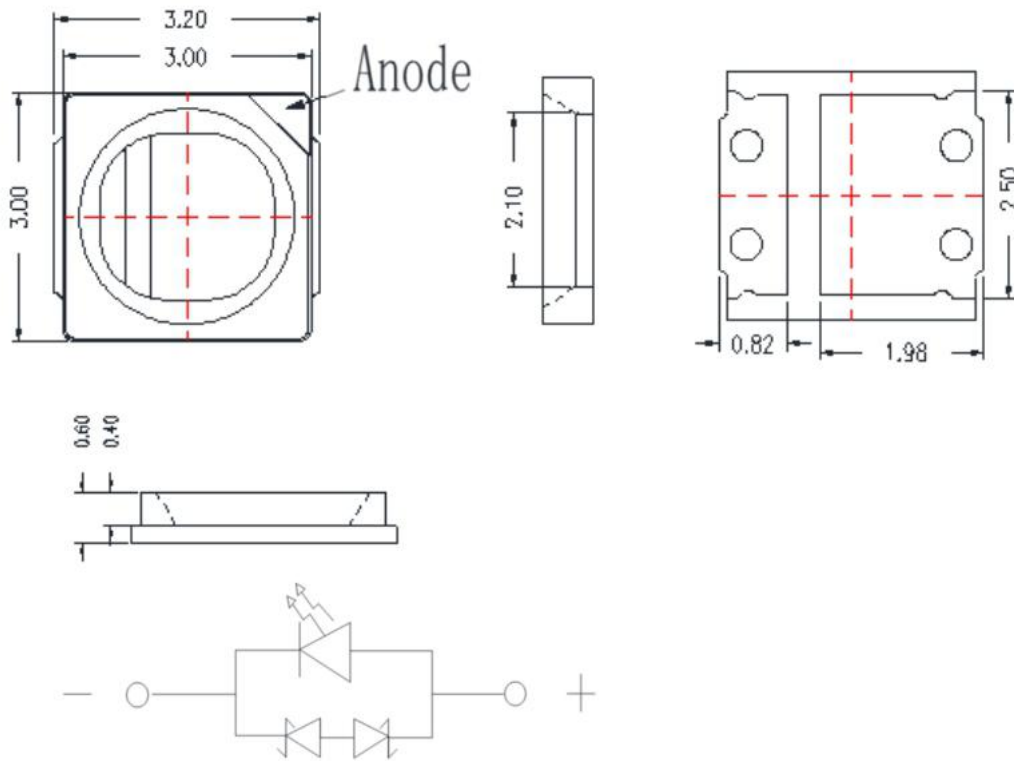
## Features 特性

- \* Small package with high efficiency 体积小，光效高
- \* Low voltage operation, Instant light 电压低，发光响应快
- \* Long operation life 工作寿命长
- \* Lead free product 不含铅，环保
- \* RoHS compliant 通过 RoHS 认证

## Applications 产品应用

- \*Horticulture Lighting 植物照明
- \*UV Curing 紫外固化
- \*Medical and health 医疗健康

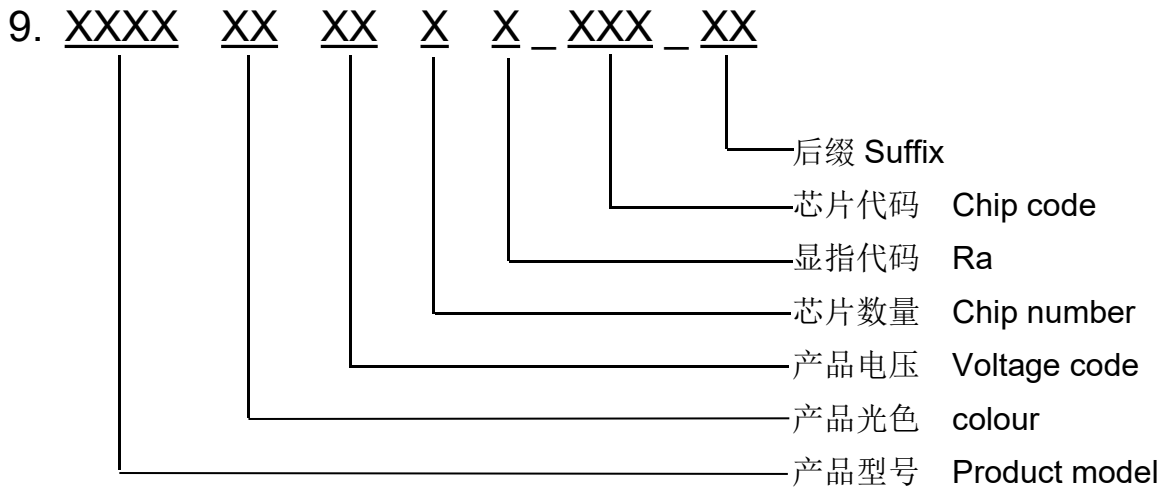
## Package Dimensions 产品外观尺寸



### Notes:

1. All dimensions are in mm 所有尺寸单位为毫米。
2. Tolerance is  $\pm 0.15$ mm unless otherwise noted. 非特殊标注, 公差为 $\pm 0.15$  毫米。

## Product coding rules 产品编码规则



## Optoelectronic Characteristics (TA=25°C) 光电特性

Parameter 参数	Test Condition 测试条件	Symbol 符号	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
Forward Voltage 正向电压	$I_F=150\text{mA}$	$V_F$	3.2	---	4.0	V
Reverse Current 反向电流	$V_R=-5\text{V}$	$I_R$	---	---	10	$\mu\text{A}$
View Angle 发光角度	$I_F=150\text{mA}$	$2\theta_{1/2}$	---	120	---	deg.
Electrostatic Discharge 抗静电	HBM	ESD	---	---	2000	V
Peak Wavelength 峰值波长	$I_F=150\text{mA}$	$\lambda_p$	---	365	---	nm
Radiant Flux 辐射通量	$I_F=150\text{mA}$	$\Phi_e$	---	150	---	mW

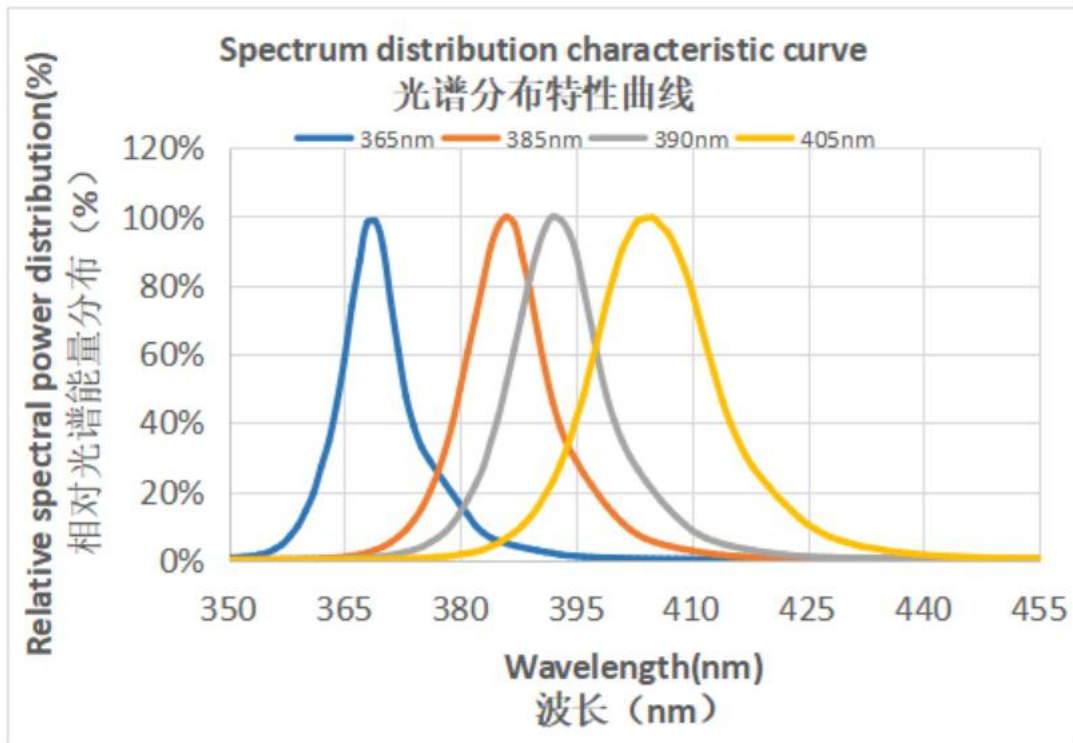
## Absolute Maximum Ratings (TA=25°C) 最大额定值

Parameter (参数)	Symbol (符号)	Rating (等级)	Unit (单位)
Forward Current 正向电流	I <sub>F</sub>	150	mA
Power Dissipation 额定功率	P <sub>O</sub>	600	mW
Pulse Forward Current 正向脉冲电流 *1	I <sub>FP</sub>	180	mA
Reverse voltage 反向电压	V <sub>R</sub>	5	V
Work pin temperature 工作引脚温度 *2	T <sub>opr</sub>	-40 to +85	°C
Storage Temperature Range 储存温度范围	T <sub>stg</sub>	-40 to +85	°C
Junction Temperature 结温	T <sub>j</sub>	125	°C
Thermal resistance 热阻	R <sub>θ</sub>	40	°C/W
Soldering Temperature 回流温度	T <sub>slid</sub>	260°C for 10sec	

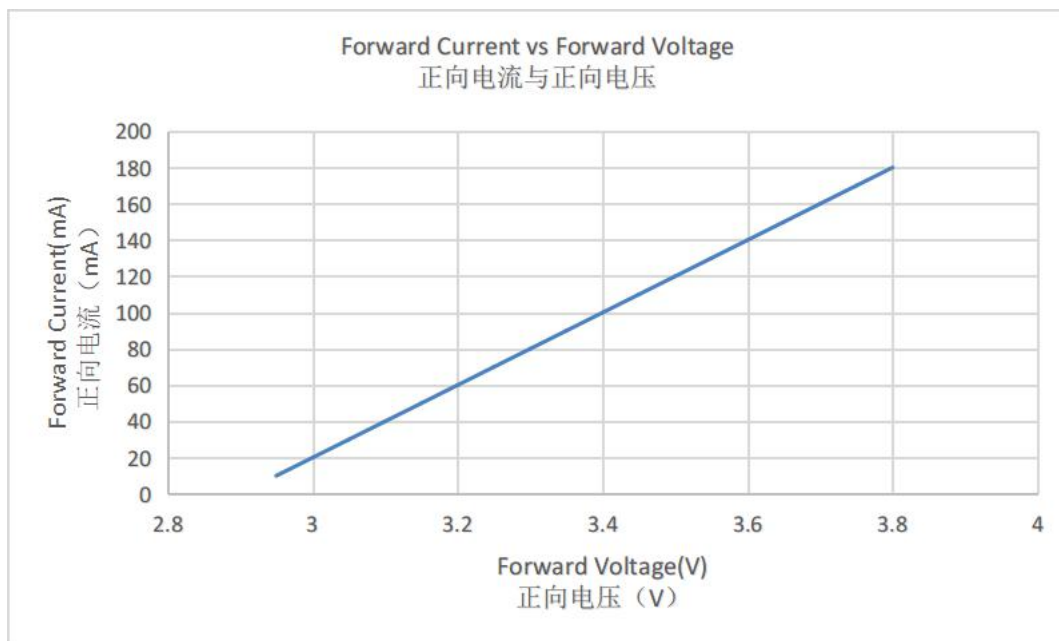
### Notes:

1. Frequency 10KHz, duty ratio ≤10% 频率 10KHz , 占空比≤10%
2. The maximum allowable temperature of the pin depends on the current value applied to LED, and the reference chart of “forward current and pin temperature” is required. 引脚的最大允许温度取决于施加在 LED 的电流值, 需参考 “正向电流与引脚温度” 图表。
3. The forward pulse current is the maximum current used by the chip at 25 °C.  
正向脉冲电流为芯片在 25°C 下使用的最大电流。

## Spectral Distribution 光谱分布特性曲线

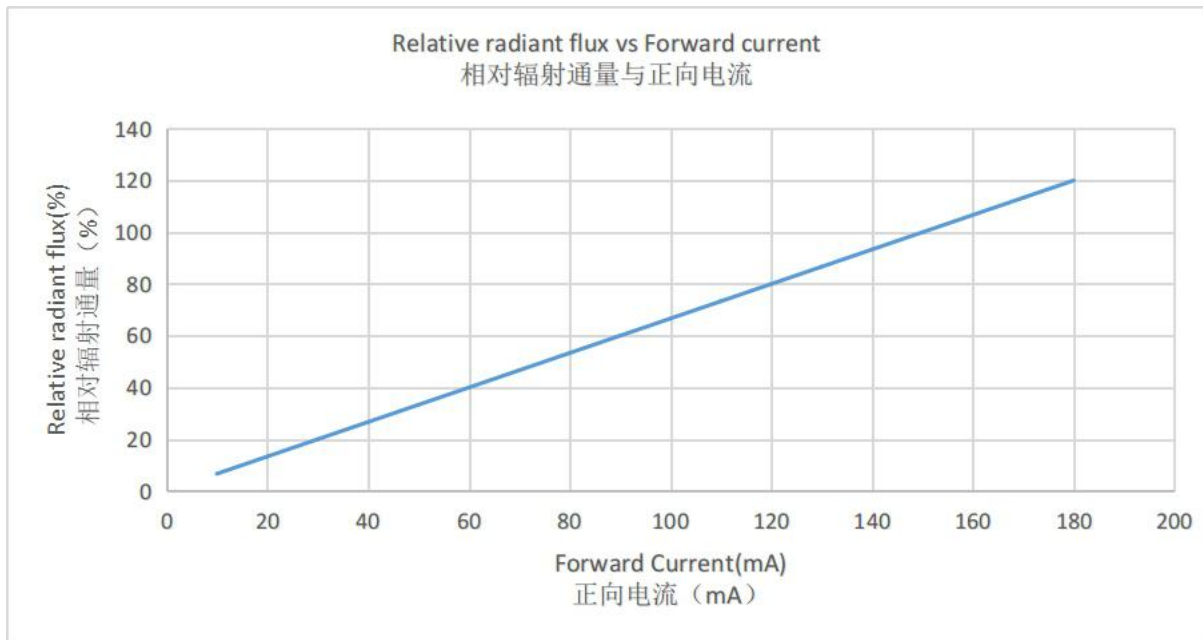


## Forward Voltage vs Forward Current 伏安特性曲线

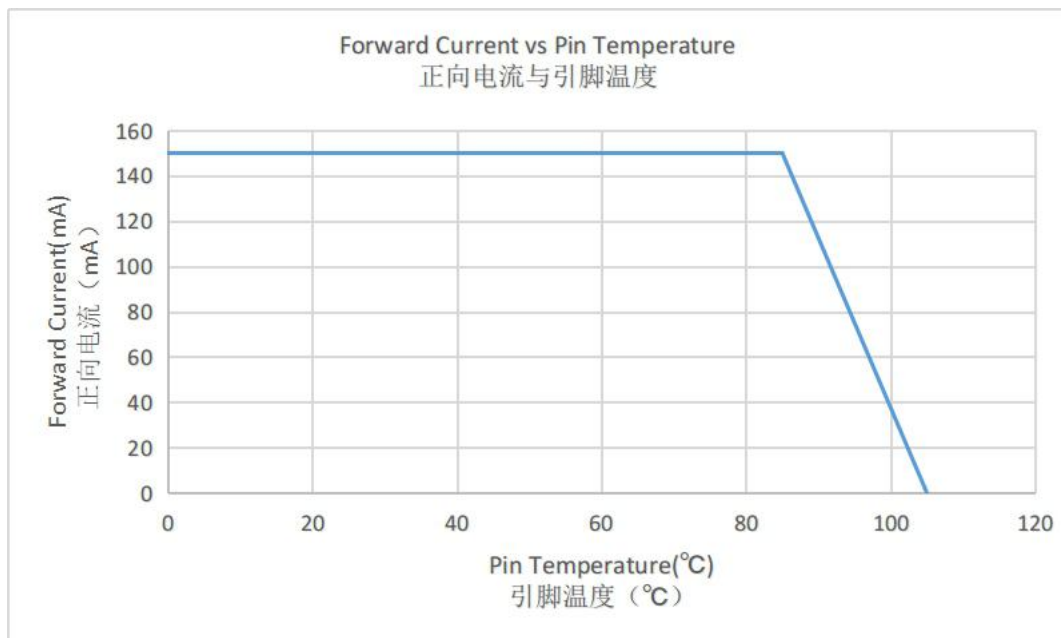




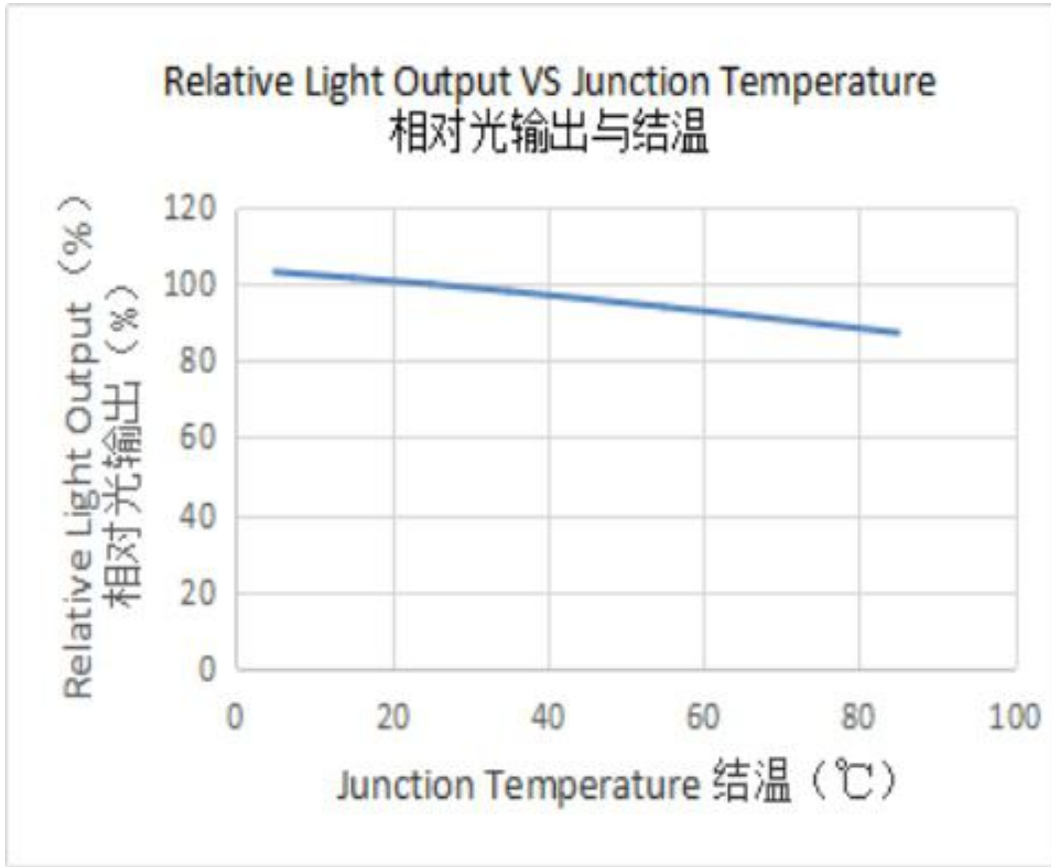
## Relative Radiant Flux vs Forward Current 相对辐射通量与正向电流



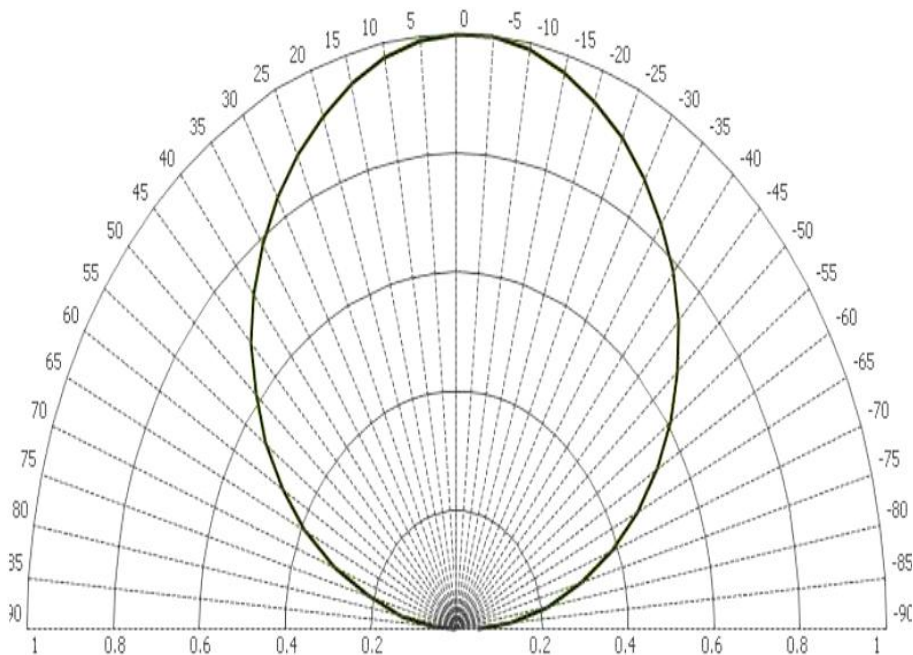
## Ambient Temperature vs Forward Current 引脚温度与正向电流



## Relative Flux vs Junction Temperature 相对光通量与结温特性曲线



## View Angle Distribution 空间角度分布



## Reliability 可靠性

### 1. Test Items And Results 测试项目及结果

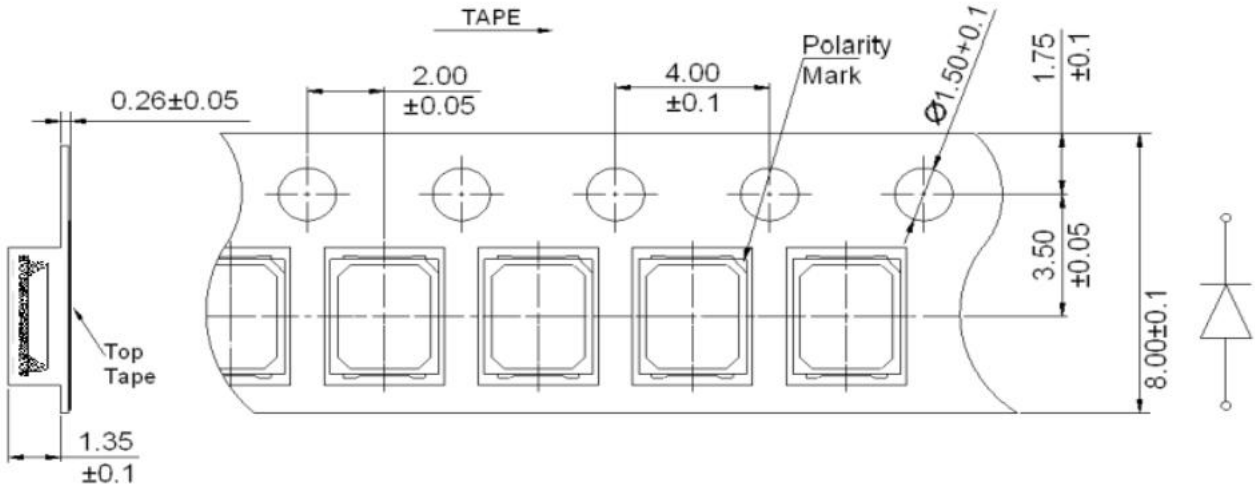
Item 项目	Test conditions 测试条件	Note 测试频率	Number of Damaged 损坏数量
Reflow 回流焊	Temp:260°C max T=10 sec	2 time	0/22
Thermal Shock 冷热冲击	-40~100°C 30min, 10s, 30min	100cycles	0/22
High Temperature High Humidity Storage 高温高湿储存	Ta=60°C, RH=90%	300hrs	0/22
Steady State Operating life 常温通电	Ta=25°C, IF=150mA	1000hrs	0/22
Steady State Operating life of High Humidity Heat 高温高湿通电	Ta=60°C RH=90%, IF=150mA	1000hrs	0/22
High Temperature Storage 高温储存	Ta=85°C	1000hrs	0/22

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

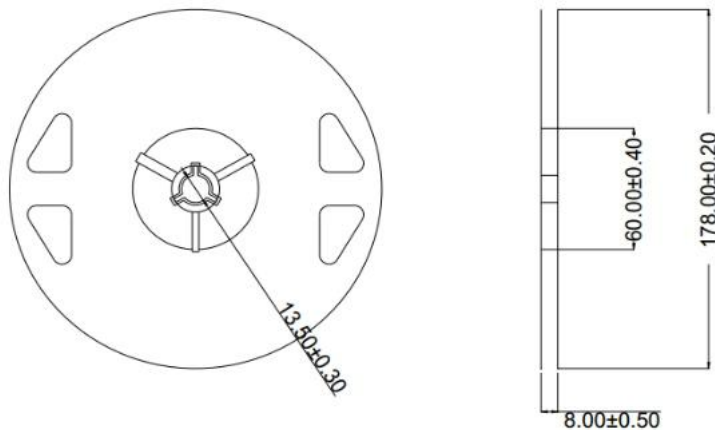
Item 项目	Symbol 符号	Test Conditions 测试条件	Criteria for Judgment 判定标准	
			Min.最小	Max.最大
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 150 mA	---	Initial Data × 1.1
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 150 mA	Initial Data × 0.7	---
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	> 10uA

## Packaging Specifications 包装规格

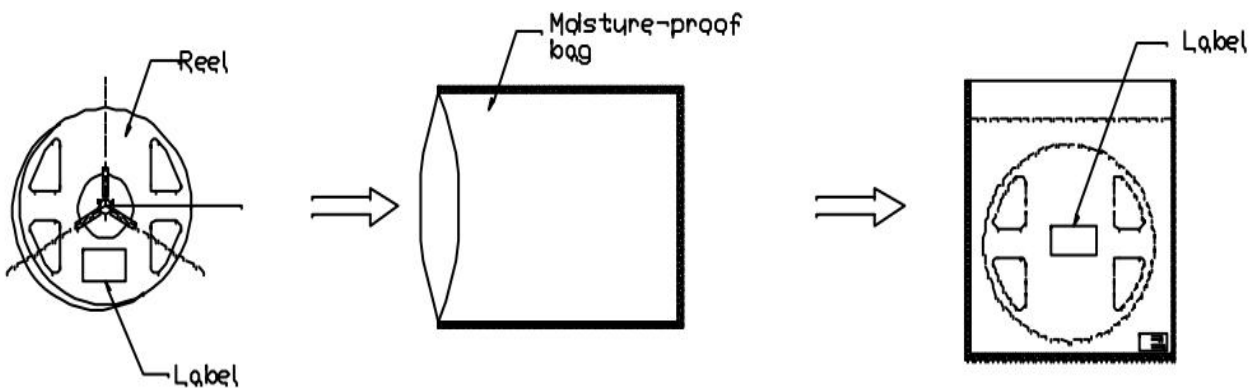
### Dimensions of Tape 载带规格



### Dimensions of Reel 卷盘规格



### Packaging specifications 包装规格



## Label (标签)

旭宇光电 (深圳) 股份有限公司 XUYU OPTOELECTRONICS(SHENZHEN)CO.,LTD.	
Part No. :	Lot No. :
Spec No. :	Date. :
Bin No. :	Qty. :
IF(mA) :	
	Min                      Max
V <sub>f</sub> (V)	
Φ <sub>e</sub> (mW)	
λ <sub>p</sub> (nm)	



Part NO: Product model 产品型号

LOT NO: Instruction number 指令单号

Spec NO: product 产品规格

Date: Date 日期

Bin No.: Class-Bin No.-Wavelength code 班别-Bin 号-波段代码

Q' ty: Quantity 数量

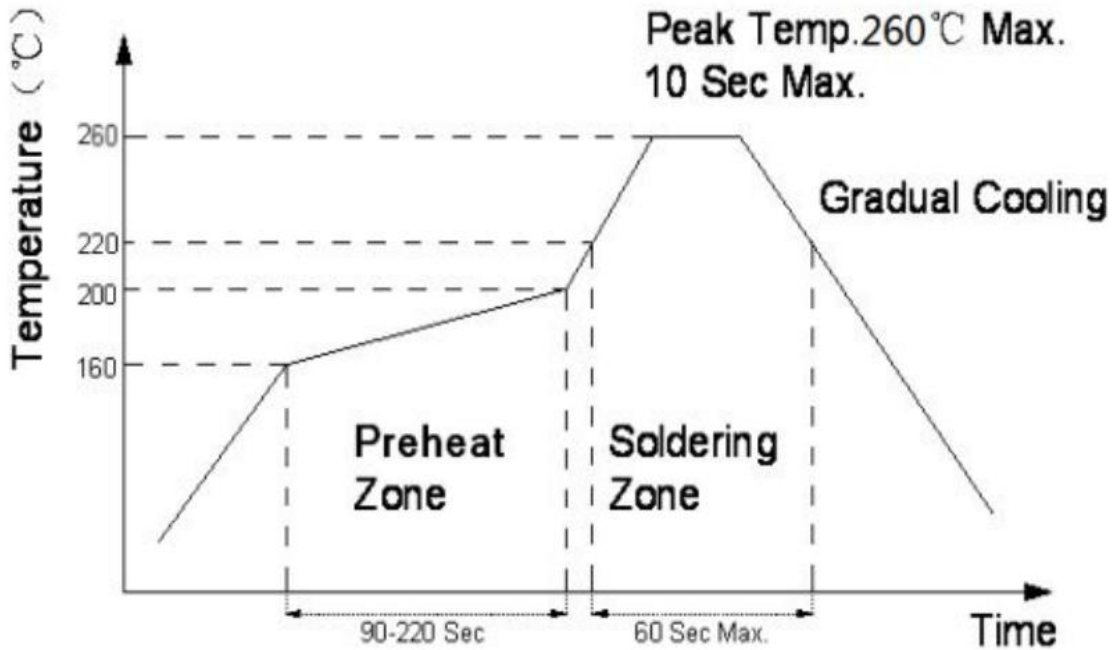
IF (mA) : Forward current 正向电流

VF (V) : Forward voltage 正向电压

Φ<sub>e</sub> (mW) : Radiant flux 辐射通量

λ<sub>p</sub>(nm): Peak Wavelength 峰值波长

## SMT Reflow Soldering Instructions SMT 回流焊说明



### Note:

1. Reflow soldering should not be done more than two times.  
回流焊不可以做两次以上。
2. When welding, the material is heated and can not press the surface of the colloid.  
当焊接时，材料受热，不可以按压胶体表面。

## CAUTIONS 注意事项

1, The encapsulated material of the LEDs is silicone ,so the surface of LED colloid is softer, forcing the colloid surface hard will affect the reliability of LED.

1、LED 封装为硅胶，故 LED 胶体表面较软，用力按压胶体表面会影响 LED 可靠性。

2, Material confirmation. Whether the LED Bin specifications of the material are consistent , such as whether  $V_F$ , XY, brightness and so on belong to the same specification, the same specification should be used together, if not the same specification LED is applied to the same object, it should be evaluated first, (if different  $V_F$  or XY cast together may produce difference in brightness or color).

2、物料确认。投料的 LED Bin 规格是否一致，如  $V_F$ 、XY、亮度等是否属同一规格，同一规格的应在一起使用，若不是同一规格的 LED 应用在同一物件上，应先评估其适用性，（若不同  $V_F$  或 XY 投在一起可能会发生亮度上或颜色上的差异）。

3, Packaging and storage 。

3.1 Before opening packaging, avoid moisture entry into LED. SMD series LED is suggested to be stored in a drying cabinet with built-in desiccant. The storage environment is 5-30 centigrade, no more than 50% humidity. If storage time is over 3 months, LED needs to be re dehumidifying (65 degrees centigrade for more than /24 hours).

3.2 Open the precautions after packing. LED is a surface mount. When the LED is welded, the internal separation of LED may occur. The luminescence efficiency is affected and the luminance decreases or the color variation. The following are the matters to be paid attention to:

A, Before opening the package, please check the packaging bag for air leakage. If there is any air leakage, please return it to our company to re-bake the dehumidifying package before use.

B, After opening the package, welding should be completed as soon as possible (within 12 hours).

C, The remaining materials are sealed or placed in an environment of 5~40 C and no more than 30% humidity.

D, If the open package is more than 24 hours (< 168 hours) or the humidity card is changed from blue to pink, LED needs to be dehumidifying again (65 degrees centigrade for more than /24 hours). If the package is opened for more than 168 hours, it is necessary to dismantle the tape and remove the moisture at 150°C /2h.



3.3, LED electrode and bracket are made of silver plated copper alloy. The silver layer on the surface is easy to be affected by corrosive gases. Please avoid contacting with corrosive environment to cause LED discoloration, so as to avoid the poor weldability of LED and influence the photoelectric performance. Avoid sudden changes in temperature and humidity of the environment, especially under high humidity environment, easy to produce water vapor condensation.

### 3、包装储存。

3.1 开包装前避免湿气进入 LED 内部，建议 SMD 系列 LED 存放在内置干燥剂的干燥柜中，储存环境为温度 5-30℃，湿度不超过 50%，若存储时间超过 3 个月，LED 需要重新除潮（65℃/24 小时以上）。

3.2 打开包装后的预防措施。LED 是表面贴装件，当 LED 进行焊接时，可能会发生 LED 内部分离，其发光效率受到影响而导致亮度下降或发光颜色变异。以下是需注意的事项：

A、在开包装之前，请先检查包装袋有无漏气，如果有漏气现象，请退回我司重新烘烤除湿包装后再使用。

B、打开包装后应尽快完成焊接（12 小时内）。

C、余料请密封或放置在 5~40℃、湿度不超过 30%的环境中。

D、如果开包装超过 24 小时（<168 小时）或湿度卡由蓝色变为粉红色，LED 需要重新除潮（65℃/24 小时以上），如果开包装超过 168 小时，需要拆开卷带，除潮 150℃/2h。

3.3 LED 电极和支架是由镀银的铜合金组成，外表银层易受到腐蚀性的气体影响，请避免接触腐蚀的环境造成 LED 变色，以免产生 LED 的焊接性变差或者影响光电性能。请避免环境温湿度的骤变，尤其是高湿环境下易产生水汽凝结。

4, Electrostatic protection. LED is a chip sensitive electronic component. Various measures should be taken to avoid static electricity, such as wearing an electrostatic bracelet or anti-static gloves during use. All devices, equipment and instruments should be well grounded.

4、静电防护。LED 是晶片敏感电子元器件，应采取各种措施避免静电，诸如在使用过程中戴静电手环或防静电手套。所有的装置、设备仪器应良好接地。

5、The bracket of this product is made of PCT, which is easy to break when bent. It is not suitable for lamps such as flexible light panels.

5、本产品支架为 PCT 材质，折弯易断裂，不适用于软灯板之类的灯具。