

SPECIFICATION

产品规格书

Customer(客户): _____

Part No.(型号): 9.CPE2-850nm

Description(描述): 3535 红外 (850nm)

Date(日期): _____

Customer Approved (客户审核)		Approved (确认)	
Xuyu Approved (旭宇审核)		Approved (确认)	Issued (制定)
☐ Sample (样品) ☐ Mass Product (量产供货)			

XUYU OPTOELECTRONICS (SHENZHEN)

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网址: <http://www.xuyuled.com>

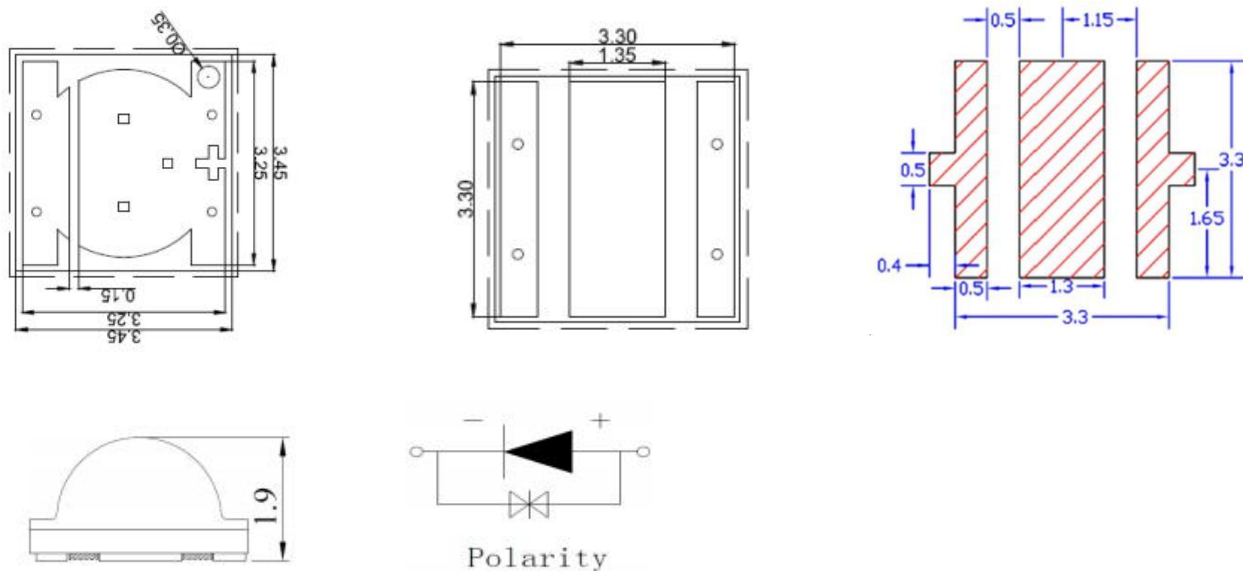
◆ Features 特性:

- *Size(mm): 3.45*3.45*1.9 尺寸 (mm) : 3.45*3.45*1.9
- *Ceramic and silicone molding package 陶瓷基板 molding 封装
- *Viewing Angle: 120° 发光角度: 120°
- * High reliability 高可靠性
- * RoHS compliant 通过 RoHS 认证
- *Suitable for all SMT assembly and solder process 适用所有 SMT 焊接工艺
- *Pb-free reflow soldering application 无铅回流焊

◆ Applications 产品应用:

- *Safety monitoring 安全监控
- *Special lighting 特殊照明
- *Industrial detection 工业检测

◆ 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 ± 0.2 mm unless otherwise noted. 非特殊标注, 公差为 ± 0.2 毫米。

◆ Electrical-Optical Characteristics (Ta=25℃) 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	$I_F=700\text{mA}$	V_F	1.5	---	1.8	V
Reverse Current 反向电流	$V_R=-5\text{V}$	I_R	---	---	5	μA
View Angle 发光角度	$I_F=700\text{mA}$	2θ 1/2	---	120	---	deg.
Wavelength 波长	$I_F=700\text{mA}$	λ_p	840	---	850	nm
Radiant flux 辐射通量	$I_F=700\text{mA}$	Φ_e	500	---	600	mW
Spectrum radiation bandwidth 辐射带宽	$I_F=700\text{mA}$	$\Delta\lambda$	---	30	---	nm
Thermal resistance 有效热阻	$I_F=700\text{mA}$	R_{J-A}	---	15	---	$^{\circ}\text{C}/\text{W}$

Note: the test tolerance 测试公差

$V_F : \pm 1\%$

$\Delta\lambda : \pm 5\%$

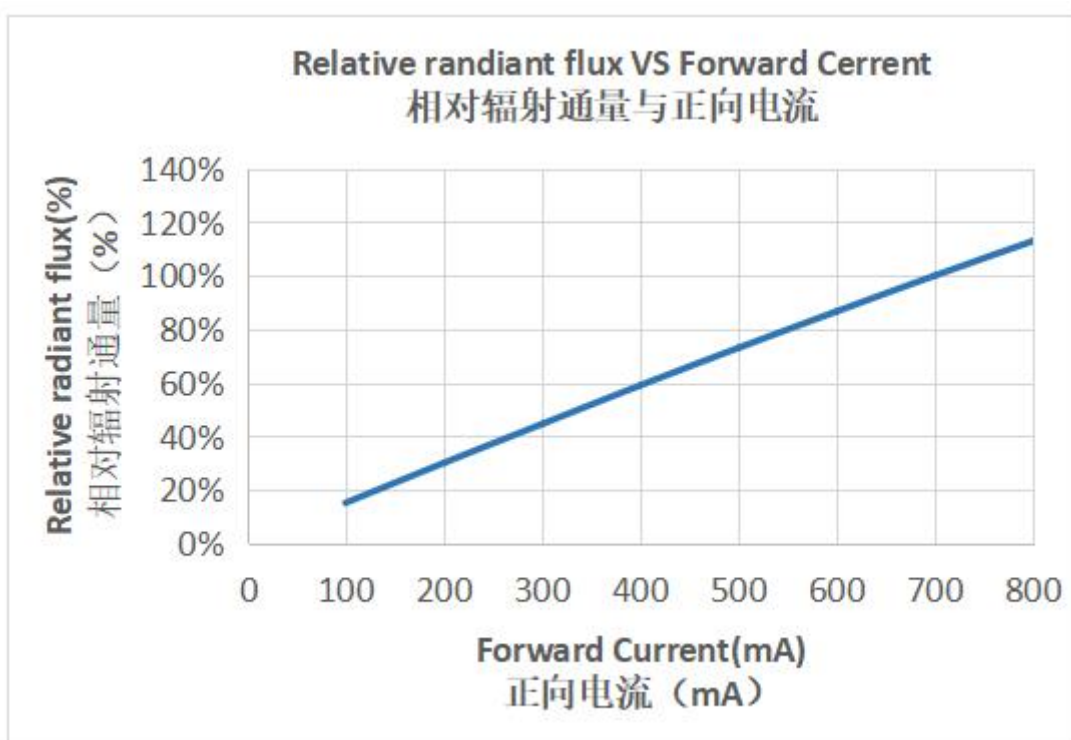
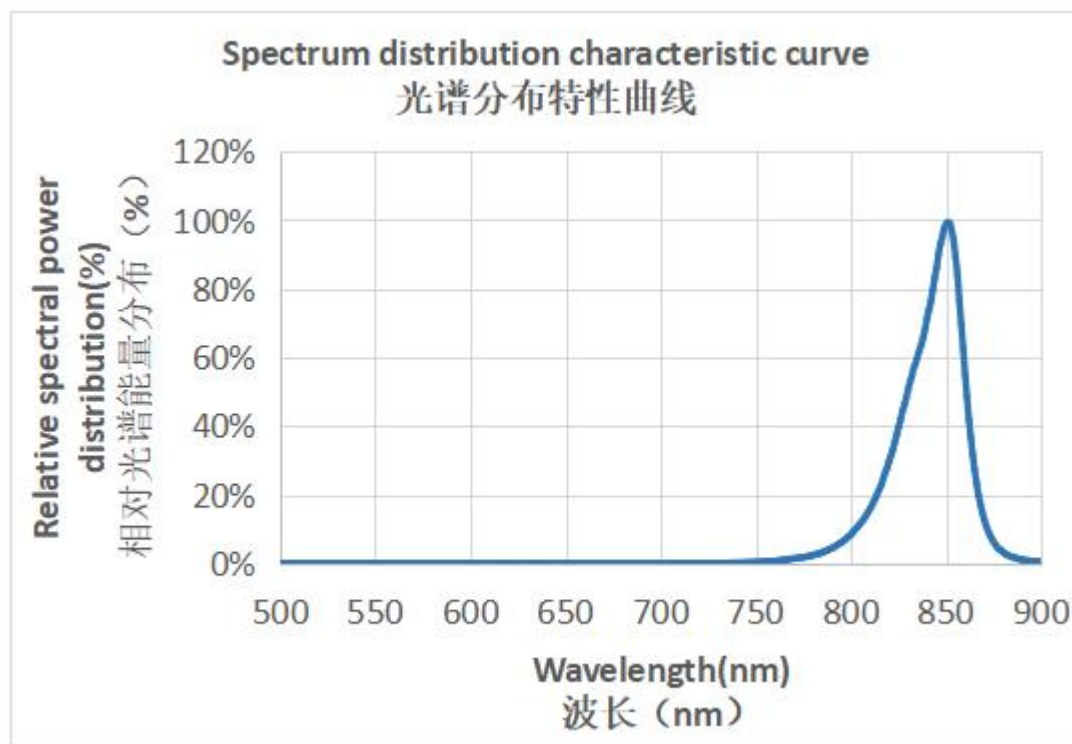
$\Phi_e : \pm 10\%$

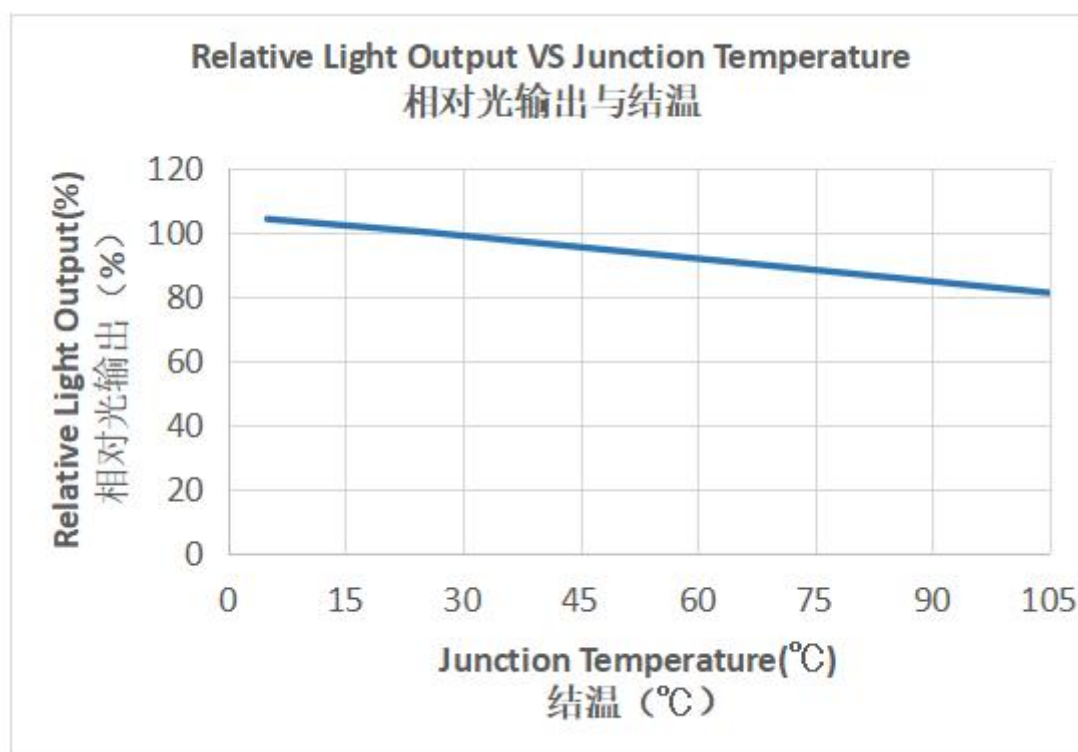
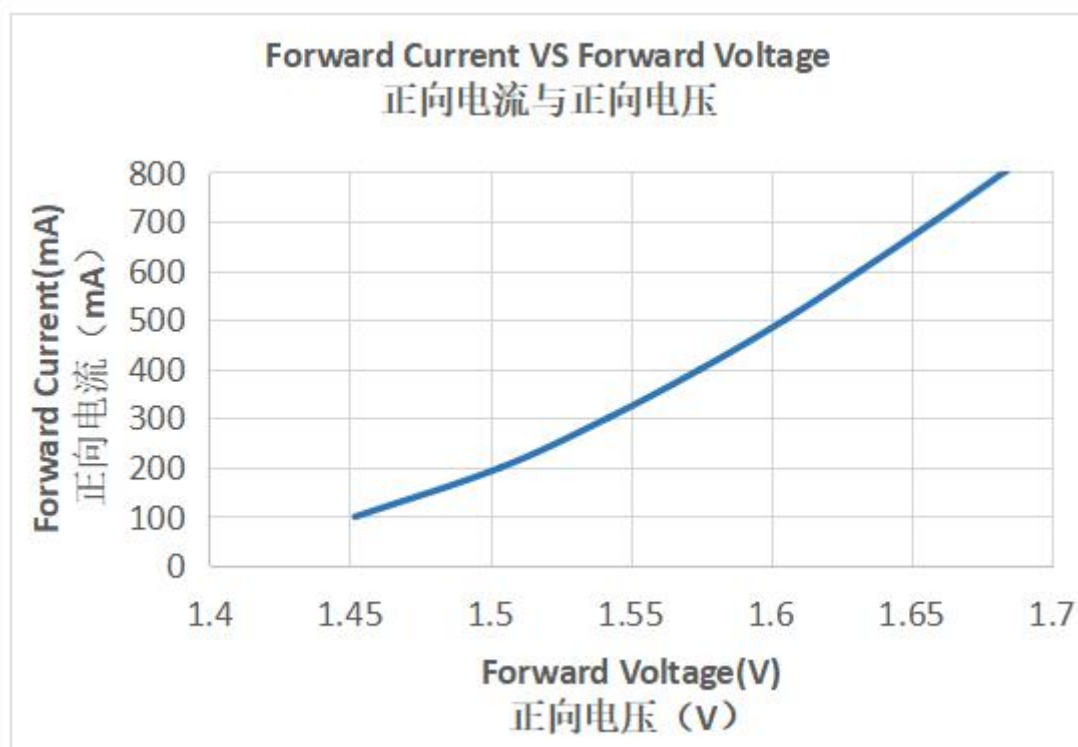
◆ Absolute Maximum Ratings (Ta=25℃) 最大额定值

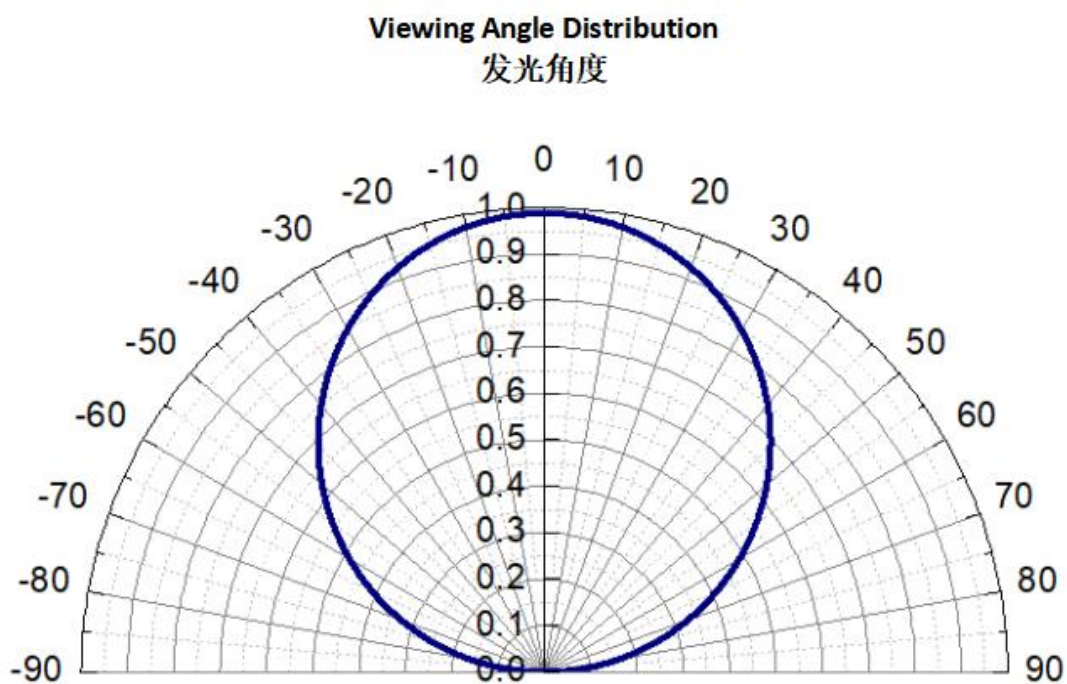
Parameter 参数	Symbol 符号	Rating 等级	Unit 单位
Forward Current 正向电流	I_F	750	mA
Pulse Forward Current 正向脉冲电流	I_{FP}	1125	mA
Power Dissipation 额定功率	P_O	1-3	W
Operation temperature range 工作温度	T_{opr}	-40 to +100	$^{\circ}\text{C}$
Storage Temperature Range 储存温度范围	T_{stg}	-40 to +85	$^{\circ}\text{C}$
Junction Temperature 结温	T_j	115	$^{\circ}\text{C}$
ESD sensitivity(HBM) 抗静电级别	---	2000	V
Soldering Temperature 回流温度	T_{sld}	260 $^{\circ}\text{C}$ for 10sec	

Note1: Frequency 10KHz, duty ratio $\leq 10\%$ 频率 10KHz , 占空比 $\leq 10\%$

◆ **Typical Electrical/Optical Characteristic Curves** 典型光电特性曲线







Notes:

1. Related to the temperature test based on the right current. 与温度相关测试基于额定电流。
2. All measurements were made under the standardized environment of XUYU. 所有测试都是基于旭宇光电（深圳）股份有限公司现有的标准测试平台。

◆ 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

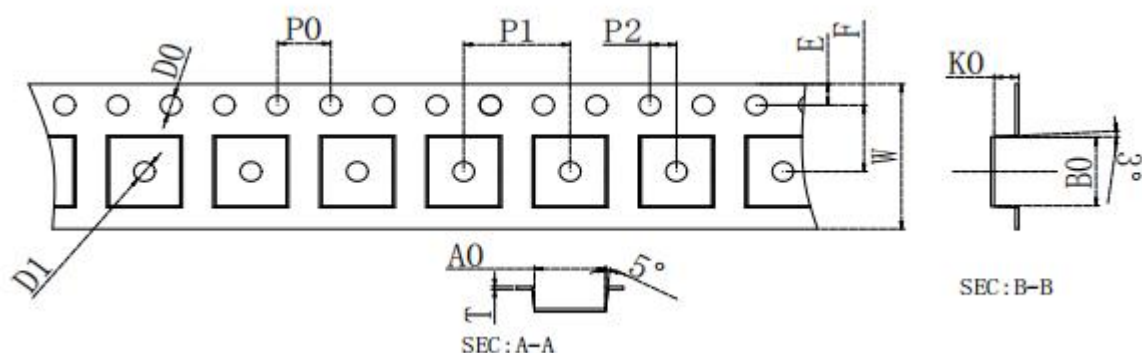
Item 项目	Test conditions 测试条件	Note 测试频率	Number of Damaged 损坏数量
Reflow 回流焊	Temp:260℃ max T=10 sec	2 times	0/22
Thermal Shock 冷热冲击	-40~100℃ 30min, 10s, 30min The 300 round	100cycles	0/22
High Temperature High Humidity Storage 高温高湿储存	Ta=85℃, RH=85%	300hrs	0/22
Steady State Operating life 常温通电	Ta=25℃, I _F =700mA	1000hrs	0/22
Steady State Operating life of High Humidity Heat 高温高湿通电	Ta=85℃ RH=85%, I _F =700mA	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	Criteria for Judgment 判定标准
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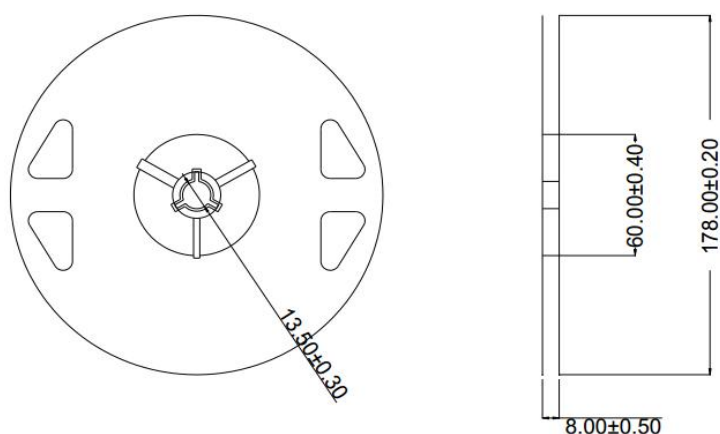
		测试条件	Min. 最小	Max. 最大
Forward Voltage 正向电压	V_F	$I_F=700\text{mA}$	---	Initial Data 初始数据 $\times 1.1$
Luminous Intensity 发光强度	I_V	$I_F=700\text{mA}$	Initial Data 初始数据 $\times 0.7$	---
Reverse Current 反向电流	I_R	$V_R=5\text{V}$	---	$>10\mu\text{A}$

◆ Packaging Specifications 包装规格



W	12.00±0.10	T	0.20±0.02	D1	1.60±0.10	单位
E	1.75±0.10	F	5.50±0.10	D0	1.60±0.10	mm
P0	4.00±0.10	P1	8.00±0.10	P2	2.00±0.10	
A0	3.75±0.10	B0	3.70±0.10	K0	2.20±0.10	

Dimensions of Reel 卷盘规格



Packaging specifications 包装规格



Label(标签):

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

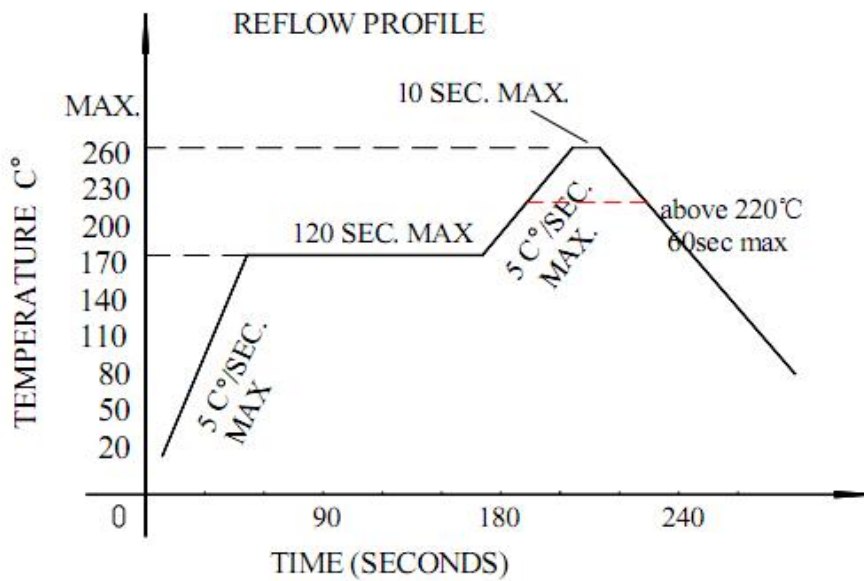
VF (V) : Forward voltage 正向电压

Φ (mW) : Radiant flux 辐射通量

λ_p (nm) : Peak Wavelength 峰值波长

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. :	IF (mA) :	Qty.:	
	Min	Max	
Vf(V)			
Φ_e (mW)			
λ_p (nm)			

◆ 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

◆ CARTIONS 注意事项

1. keep out of reach of children.

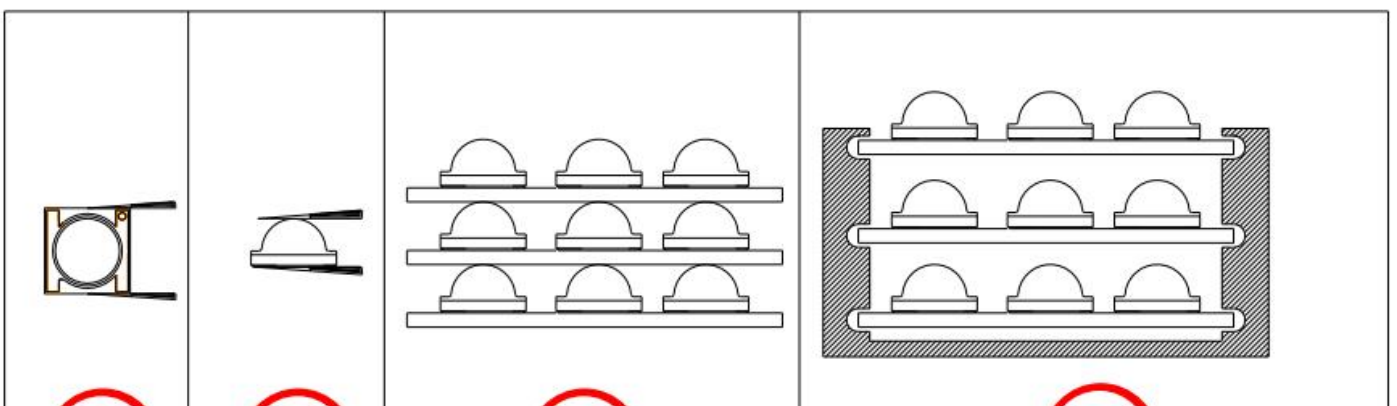
1、远离儿童

2. The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

2、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。应避免使用较大压力按压胶体表面，在使用吸嘴时，作用于胶体表面的力应适宜。

3. Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.

3、采用合适的工具从侧面夹取材料，不要用手或尖锐金属按压胶体表面，否则可能导致内部电路损坏。



3. Packaging and storage 。

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。