样品承认书

Sample Approval Sheet

产品类别(Product type): DIP LED		
产品名称(Product name): 5mm 940nm Photodiode LED		
产品编号(Part No.): WEJ56APD-K60-DZ		
样品编号(Sample No.):		版次(version):A1
承认书编号(Acknowledgement Numbers):		
签核（Signatures）		
核准(Approved)	**审核(Checked)**	**制定(Drawn)**
王娟	周宏	孙飞

客户（Customer）		
公司名称(Corporation):		
物料编码(Material No.):		
物料名称(Part No.):		
客户确认（Customer Signatures）		

地址:深圳市光明新区公明街道玉律社区第六工业区 21 栋
Factory Add: 21st Bld., 6th Industrial Park, Yulv Community, Genyu Rd., Guangming New District, Shenzhen, China
电话(Tel):0755-29785600 29785800 传真(Fax):0755-29785100 联系人(Contact Person):
网址(Web Site):www.wej.cn 邮箱(E-mail):sale@yongerjia.com

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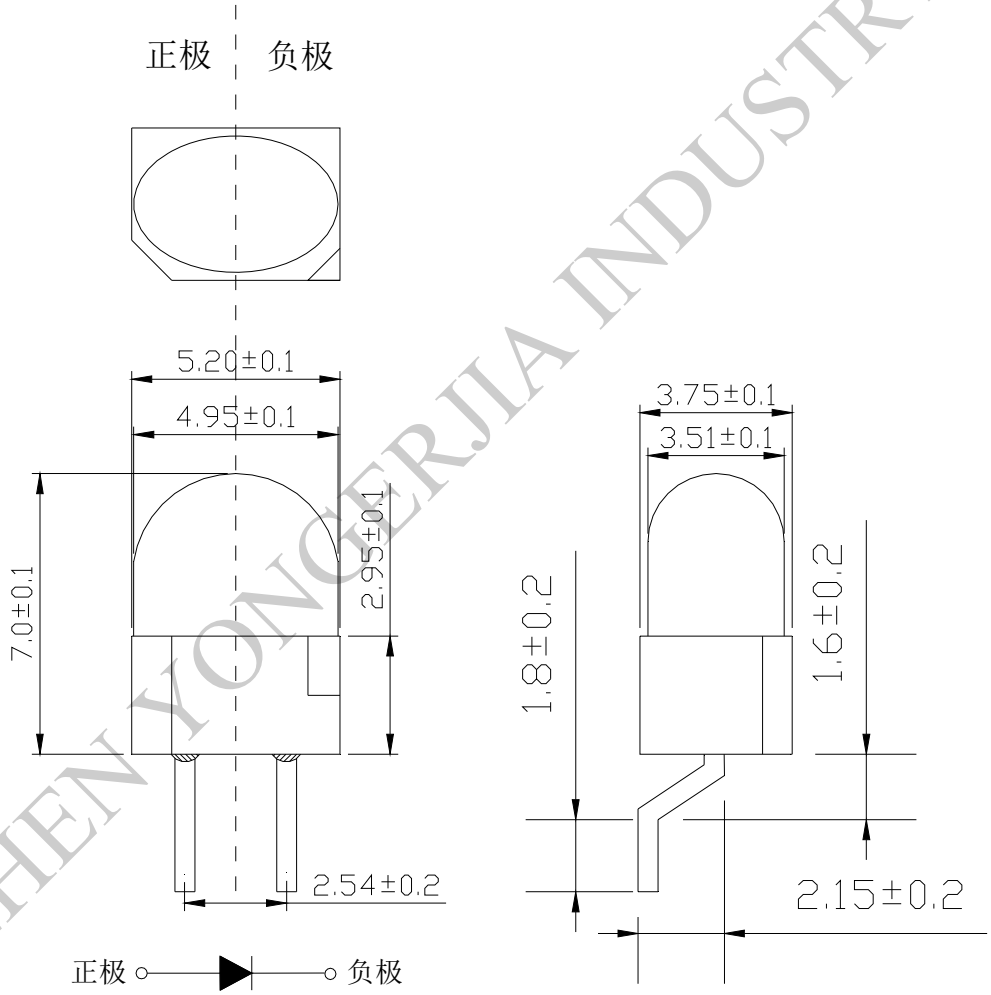
Feature
*Low power consumption
*Long life-solid state reliability
*Available on tape and reel
*RoHS compliant

特征
*低能耗
*寿命长
*易于装贴
*符合 RoHS 要求

Package outline dimensions（产品外型尺寸）



Note:
1. All dimensions are in millimeters;
2. Tolerance is ±0.25 unless otherwise noted;
3. Lead spacing is measured where the leads emerge from the package;
4. Specifications are subject to change without notice.

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Electrical characteristics data sheet

Selection Guide（选用指示）

Part No.	Chip Material	Lens Color
WEJ56APD-K60-DZ	Silicon	Black

Absolute Maximum Ratings at Ta=25℃（极限参数）

Parameter（项目）	Symbol（符号）	Value（数值）	Unit（单位）
Reverse Voltage	Vr	5	V
Power Dissipation（功率消耗）	Pd	150	mW
Operating Temperature	Topr	-25to+85	℃
Storage Temperature	Tstg	-40to+100	℃

Electrical-Optical Characteristics Ta=25℃

Parameter	Symbol	Condition		Value			Unit
				Min.	Typ.	Max.	
Range Of Spectral Bandwidth	$\lambda_{0.9}$	---		860	---	1000	nm
Wavelength Of Peak Sensitivity	λp	---		---	940	---	nm
Open-Circuit Voltage	V_{OC}	Ee=5m W/cm^2 λp=940nm		---	0.39	---	V
Short-Circuit Current	I_{SC}	Ee=1m W/cm^2 λp=940nm		10	15	---	uA
Reverse Light Current	I_L	Ee=1m W/cm^2 λp=940nm V_R=5V		10	---	20	uA
Reverse Dark Current	I_D	Ee=0m W/cm^2 V_R=10V		---	5	30	nA
Reverse Breakdown Voltage	V_{BR}	Ee=0m W/cm^2 I_R=100μA		33	170	---	V
Total Capacitance	C_t	Ee=0m W/cm^2 V_R=5V F=1MHZ		---	18	---	pF
Rise Time/Fall Time	t_r/ t_f	V_R=10V R_L=1KΩ		---	45/45	50/50	nS
Viewing Angle θ（发光角度）	2θ1/2	Ee=1m W/cm2 λ p=940nm	x	70	75	90	°
			y	35	40	45	°

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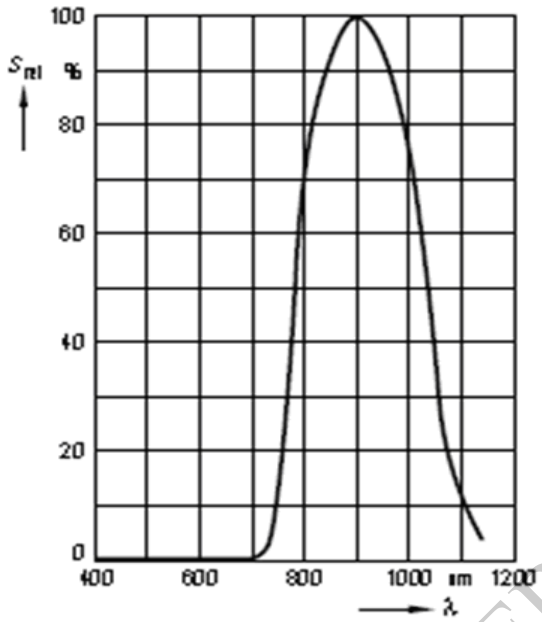
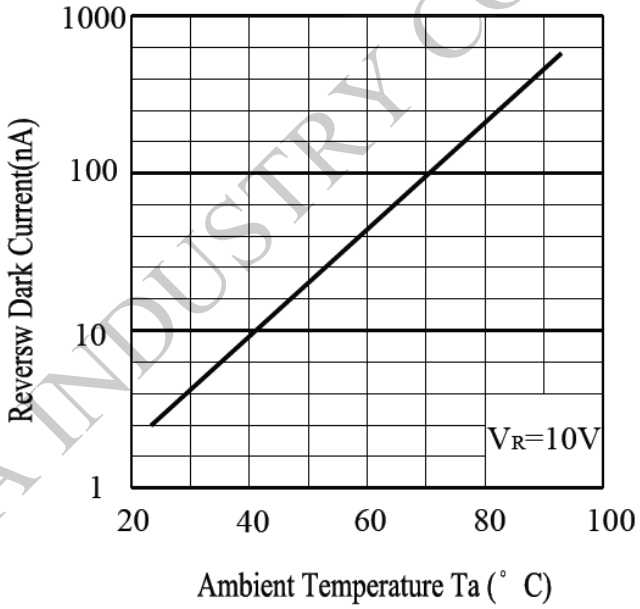
Typical Electro-Optical Characteristics Curves

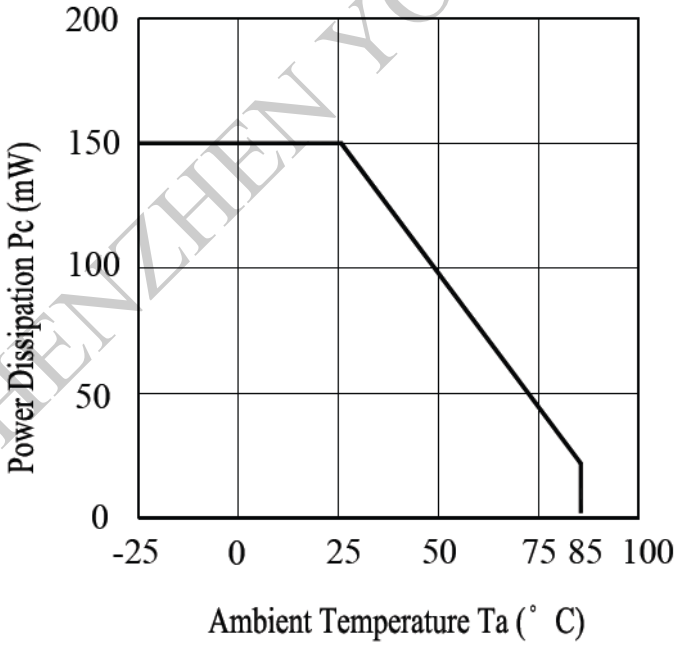
Relative Spectral Sensitivity VS. Wavelength



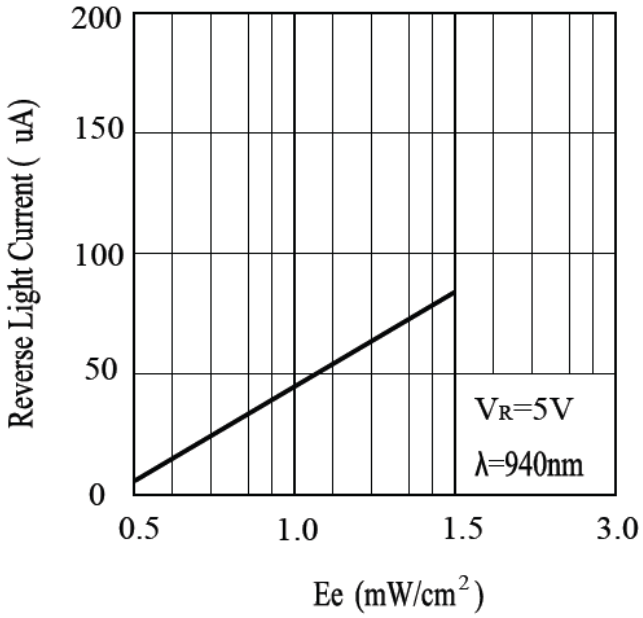
Reverse Dark Current VS. Ambient Temperature



Power Dissipation VS. Ambient Temperature



Reverse Light Current VS. Ee



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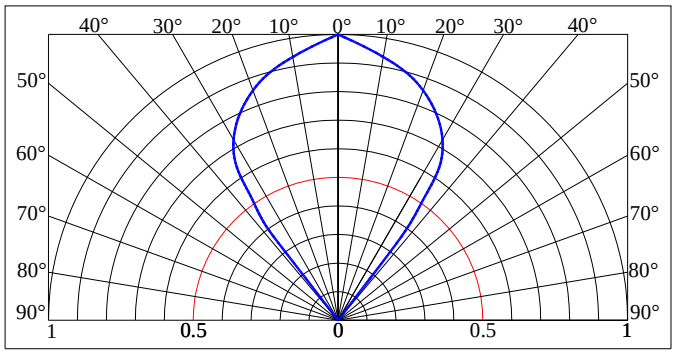
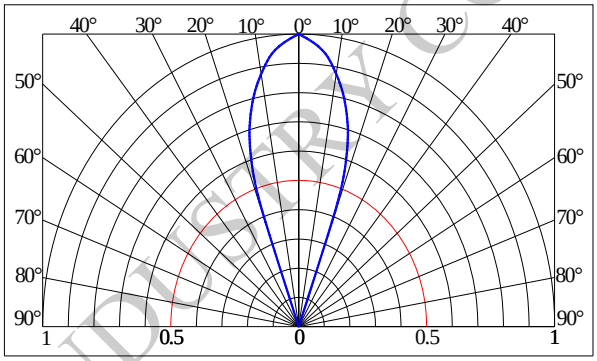
Typical Electro-Optical Characteristics Curves

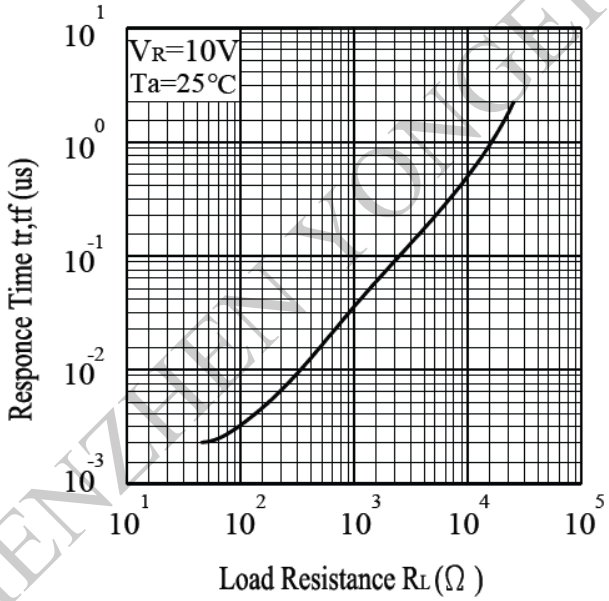
RADIATION DIAGRAM-X



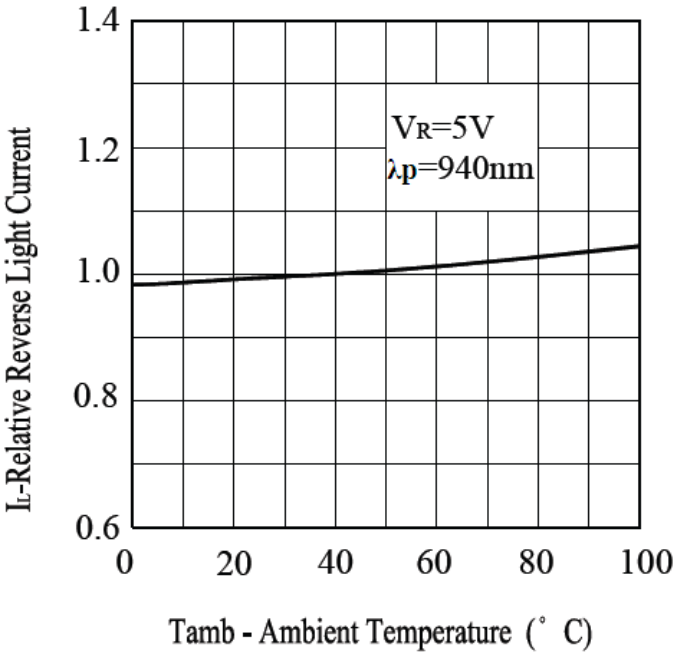
RADIATION DIAGRAM-Y



Response Time tr,tf VS. Load Resistance R_L



R_L-Relative Reverse Current VS. Tamb-Ambient Temperature



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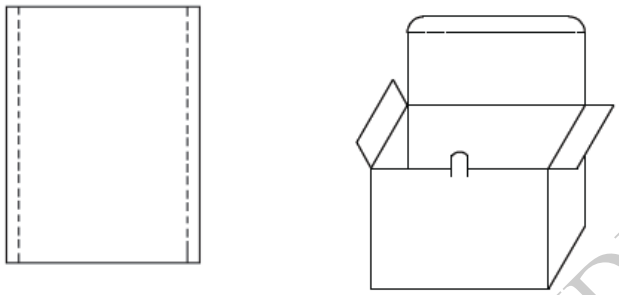
Bin Range of Technical Data Sheet

Light Current （光电流等级）（Ee=1m W/cm² λp=940nm V_R=5V）		
BIN CODE	**Min（uA）**	**Max（ uA ）**
A	**10**	**20**

Packaging Dimensions Specification(包装规格)



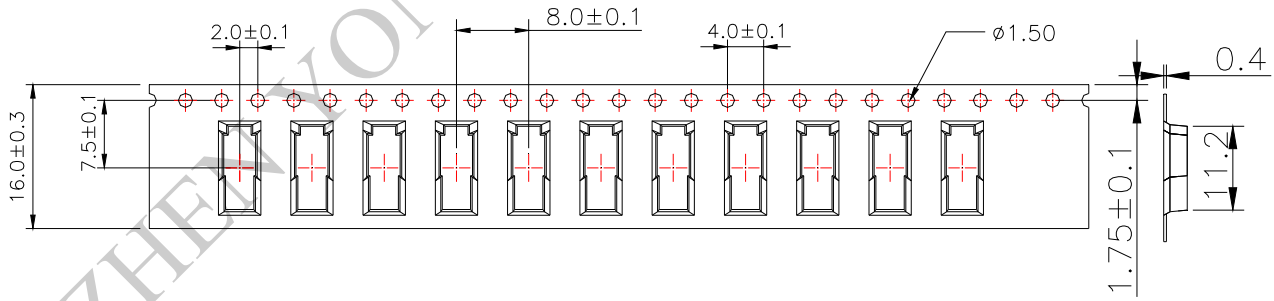
Notes:

1）2000 PCS/盘

2) 15 盘/箱

Packaging Dimensions Specification(包装规格)

1、Carrier tape dimensions(载带包装)



Notes:

1) All dimensions are in millimeters

2) Tolerance is ±0.25 unless otherwise noted

2、Reel dimensions(带盘尺寸)

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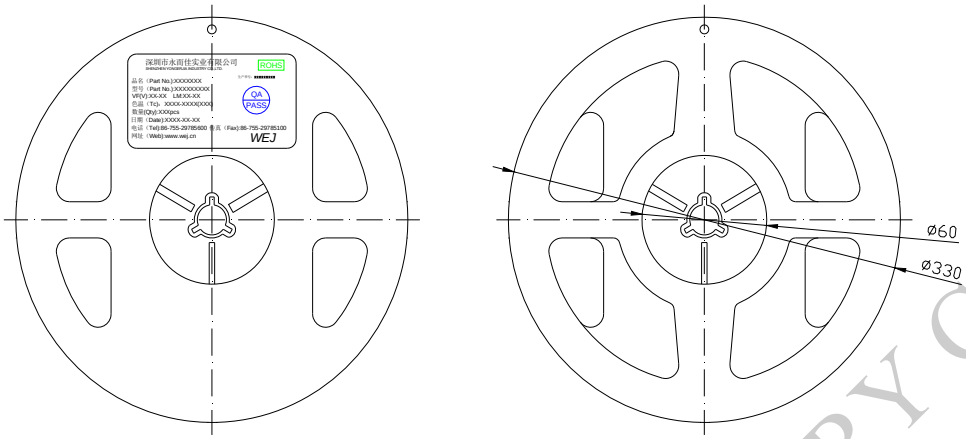
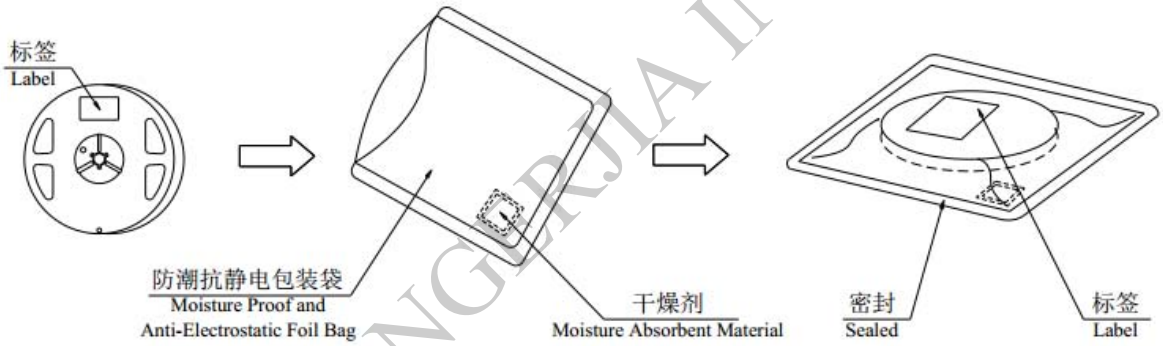


3、Moisture-Proof and anti-static electricity(防潮抗静电包装)



1）2000 PCS/盘

2) 15 盘/箱

4、Label(标签)

深圳市永而佳实业有限公司
SHENZHEN YONGERJIA INDUSTRY CO.,LTD.
RoHS

Part No.:WEJ56APD-K60-DZ
Lot No: **********
VF: **********
Ie: **********
Wp: **********
QTY: 2000PCS
PC: **********
Sort: *********

WEJ

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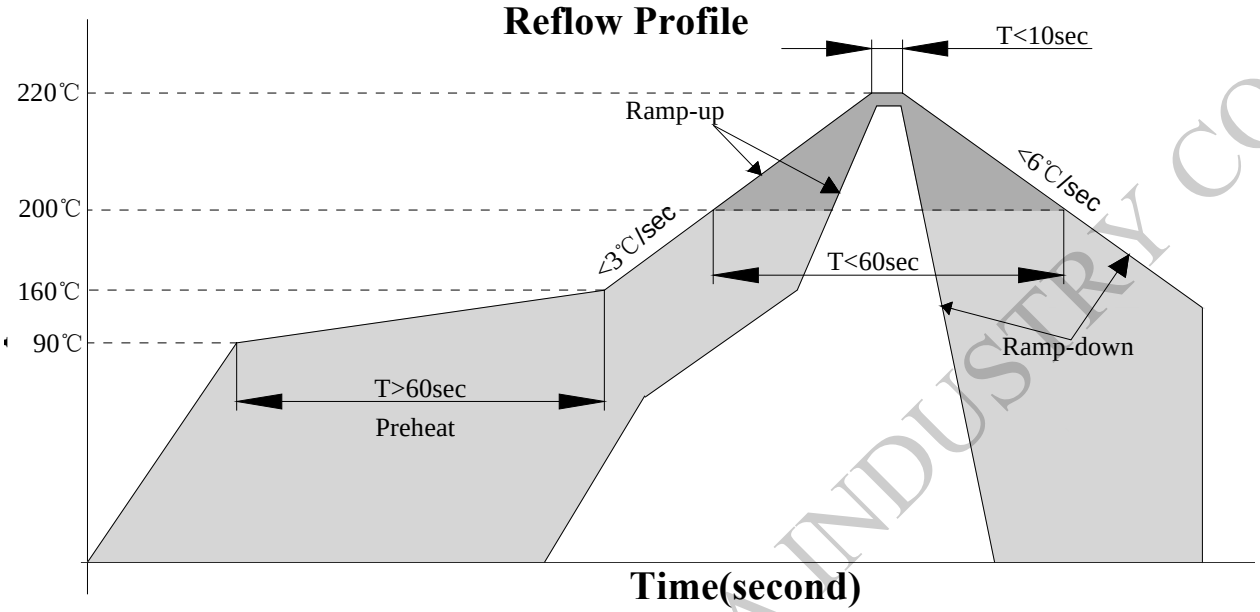
Precautions(使用注意事项)

1、Requirements for application and reflow soldering 应用及回流焊要求：

Use the recommended curve in the under figure of Pb-free reflow soldering.



☆Notes for reflow soldering: 回流焊注意事项

1）No more than twice for reflow soldering.
注意回流焊不可超过两次

2）To ensure the quality of our LEDs, please do not put pressure on the LEDs.
为保证产 LED 质量及可靠性，不可施加压力在 LED 表面。

3）Please choose the right nozzle to avoid the damage to products due to the pressure.
在吸嘴的选取上要选择吸嘴的大小和压力合适的吸嘴，以避免造成压力过大伤害产品。

4）Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish. The equipments must be contacted with ground
LED 为静电敏感产品，使用时请佩带防静电手环，工作台做好防静电处理，机台设备等保证接地.

☆Handwork soldering 手工焊接:

1）During the soldering, the electronic soldering iron must be kept under the temperature of 350℃ and the soldering time must not be beyond 3 seconds. No touch between the electronic soldering iron and colloid.
手工焊接时，要保持电烙铁温度在350 摄氏度以下，并且焊接时间小于3 秒，电烙铁不可接触胶体。

2）Handwork soldering is only allowed once. We won't take responsibility for more than that.
手工焊接只可进行一次，重复焊接不保证产品是否完好。

3）Avoid using sharp objects to compress products Colloidal Part directly.
避免使用尖锐的物体直接接触产品胶体部分。

4）Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish. The equipments must be contacted with ground.
LED 为静电敏感产品，使用时请佩带防静电手环，工作台做好防静电处理，机台设备等保证接地。

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2.Storage（储存）

Under the storage conditions of 30℃ or less and humidity less than 60%RH,the LEDs can be storage for 3months. Storage in a sealed container with moisture absorbent material can prolong the storage time to a certain extent bad storage conditions may cause the lead frames to corrode or degradation of LED characteristics. It is recommended that the LEDs be used as soon as possible.

在温度低于 30℃，湿度不高于 60%RH 的条件下，产品保存期限为 3 个月。将产品保存在密封的容器中并附带干燥剂可以在一定程度上延续产品的储存日期。不良的储存条件会导致产品引脚的腐蚀或产品性能的改变。

3. Static electricity（静电）

Static electricity of surge voltage damages the LED .Damaged LED will show some unusual chrematistics such as the forward voltage becomes lower or the LED do not light at the low current even not light. All devices equipment and machinery must be properly grounded. At the same time, it is recommended that wrist Bands or anti-electrostatic glovesanti-electrostatic containers be used when dealing with the LED.

静电和电涌会导致产品特性发生改变，例如正向电压降低等，如果情况严重甚至会损毁产品，所以在使用时必须采取有效的防静电措施。所有相关的设备和机器都应该正确的接地，同时必须采取其他防静电和电涌的措施。使用防静电手环，防静电垫子，防静电工作服，工作鞋，手套，防静电容器，都是有效的防止静电和电涌的措施。

4. Design Consideration（设计建议）

When designing a circuit, the current through each LED must not exceed the absolute maximum rating specified for each LED .In the meanwhile , resistors for protection should be applied otherwise slight voltage shift will cause big current change, bum out may happen.

Thermal Design is paramount important in because heat generation may result in the Characteristics decline, such as brightness decreased, Color changed and so on. Please consider the heat generation of the LED when making the system design.

设计电路时，通过 LED 的电流不能超过规定的最大值，同时还需要使用保护电阻，否则微小的电压变化将会引起较大的电流变化，可能导致产品损毁。

LED 的特性容易因为自身的发热和环境的温度的改变而发生改变。温度的升高会降低 LED 的发光效率，影响发光颜色等，所以在设计时应充分考虑散热的问题。

5. Lead Forming（支架整形）

Any lead forming must be done before soldering, not during or after soldering. When forming leads ,the leadsshould bent at a point at least 3mm from the base of the expose bulb. Bending at the same point twice or even more should be avoided.

Please use proper tools to hold and bent the leads, do not use the base of the lead frame as a fulcrum during lead forming .Bending s tress to the base of the lead frame may cause character is tics change on LED or even break it.

Just for the same reason, when mounting the LED on to printed circuit board, the holes on the circuit board should be exactly aligned with the leads of the LED.

支架的整形必须在焊接之前进行。整形时，支架的弯曲位置必须至少在封装树脂底部 3mm 处，同时避免对同一位置进行多次的弯曲。整形时，请使用合适的工具固定支架，避免对树脂施加压力。特别是不能管脚与树脂的连接部分作为支点，这样产生的应力会直接对产品内部的发光结构造成损伤，导致产品特性的改变甚至损毁。基于同样的原因，在装配产品的时候，PCB 板上焊孔间的距离必须于产品的管脚间距严格匹配。

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