XL-PD70-01C-TR **技术数据表 Technical Data Sheet**

红外接收二极管



特点（characteristic）：

＊ 外观尺寸（L/W/H）:6.4*3.9*1.2 mm

Outline Dimensions (L / w / h): 6.4x 3.9 x 1.2mm

＊ 发光颜色及胶体:红外接收/透明胶体

Luminous color and colloid: infrared receiver tube /transparent colloid

＊ 环保工艺符合ROHS要求

Environmental protection products Complied With ROHS Directive

＊ 湿气敏感性等级（MSL）:3级

Moisture sensitivity level（MSL）: 3 levels

＊ EIA规范标准包装

EIA standard packaging

＊ 高能效、启动快

High energy efficiency, fast startup

应用领域（product application）：

＊ 医用设备

Medical equipment

＊ 红外遥控器

Infrared remote controller

＊ 摄像监控头

Camera monitoring head

＊ 工业控制：计数器、热成像、智能电表

Industrial control: counters, thermal imaging, smart meter

＊ 红外光电开关

Infrared photoelectric switch

＊ 无线通信与信号传输

Wireless communication and signal transmission

＊ 智能小车, 机器人

Intelligent car, robot









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电性参数

Electrical Characteristics

参数名称 Parameter	符号 Symbol	最大额定值 Maximum rating	单位 Unit
功率 Power consumption	Pd	150	mW
反向电压 Reverse Voltage	VR	32	V
工作环境温度 Operating ambient temperature	Topr	-20°C ~ +85°C	
储存环境温度 Storage ambient temperature	Tstg	-40°C ~ +85°C	
焊接条件 Welding conditions	Tsol	260℃≤6S	

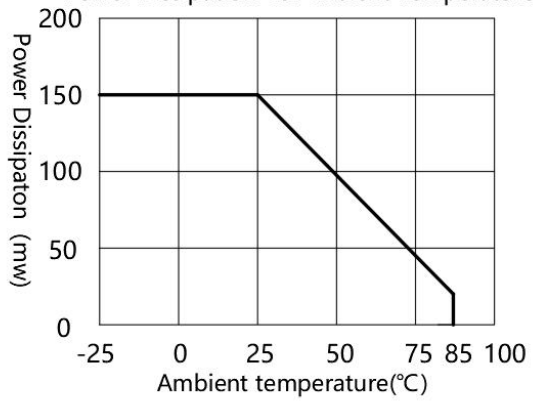
光电参数（Initial Electrical Optical Characteristics）（Ta=25℃）

项目参数 Parameter	符号 Symbol	最小值 Min	代表值 Representative	最大值 Max	单位 Unit	测试条件 Condition
开路电压 Open-Circuit Voltage	VOC	/	0.35	/	V	λ_P=940nm Ee=5mW/cm2
短路电流 Short-Circuit Current	Isc	/	35	/	μA	λ_P=940nm Ee=1mW/cm2
反向光电流 Reverse Light Currente	IL	17	25	/	μA	λ_P=940nm V_R=5V Ee=1mW/cm2
反向暗电流 Reverse Dark Current	ID	/	5	30	nA	V_R=10V Ee=0mW/cm2
上升时间Rise time	Tr	/	50	/	uS	V_R=10V RL=1000Ω
下降时间Fall time	Tf	/	50	/		
反向击穿电压 Reverse Breakdown Voltage	BVR	32	170	/	V	Ee=0mW/cm2 IR=100μA
总电容 Total Capacitance	Ct	/	25	/	pF	Ee=0mW/cm2 V_R=5V f=1MHz
感应波长范围 Rang of Spectral Bandwidth	λ0.5	400	/	1100	nm	/
峰值感应波长 Wavelength of Peak Sensitivity	λP	/	940	/	nm	/

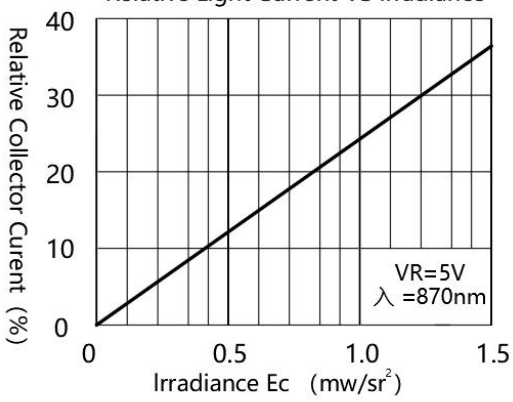
典型特性曲线

Typical Characteristics Curves

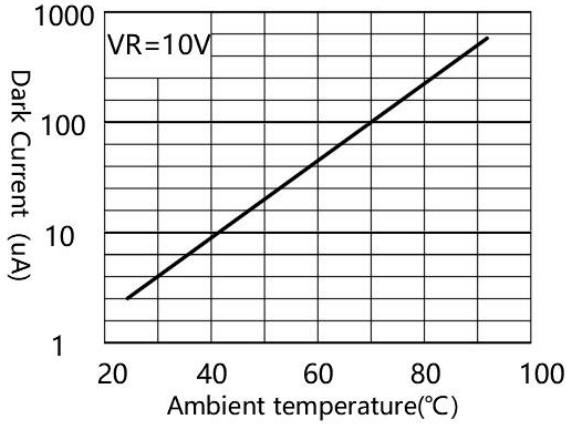
功率与环境温度的关系
Power Dissipation VS Ambient Temperature



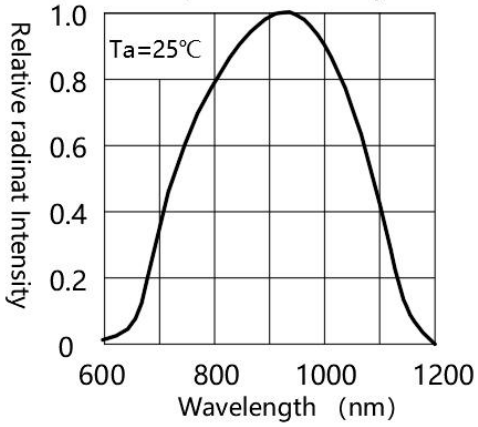
反向光电流与辐射强度的关系
Relative Light Current VS Irradiance



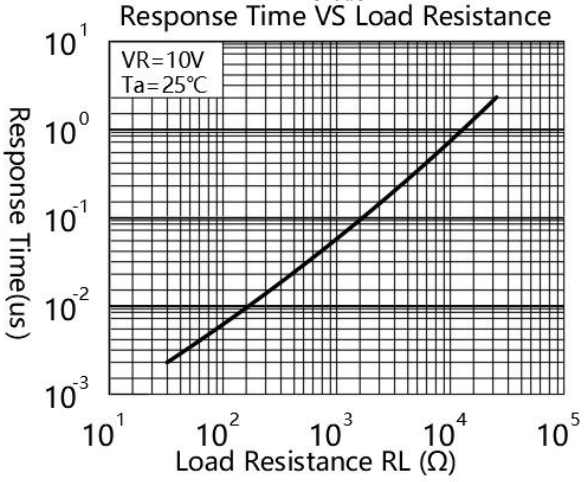
暗电流与环境温度的关系
Dark Current VS Ambient Temperature



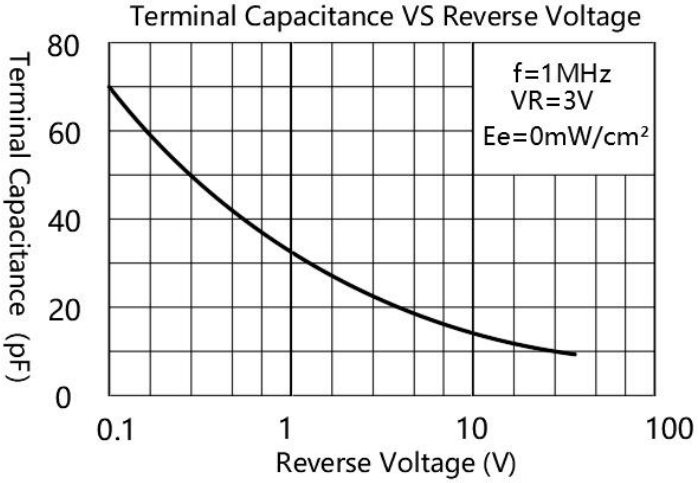
感应波长曲线图
Spectral Sensitivity



响应时间与负载电阻的关系
Response Time VS Load Resistance

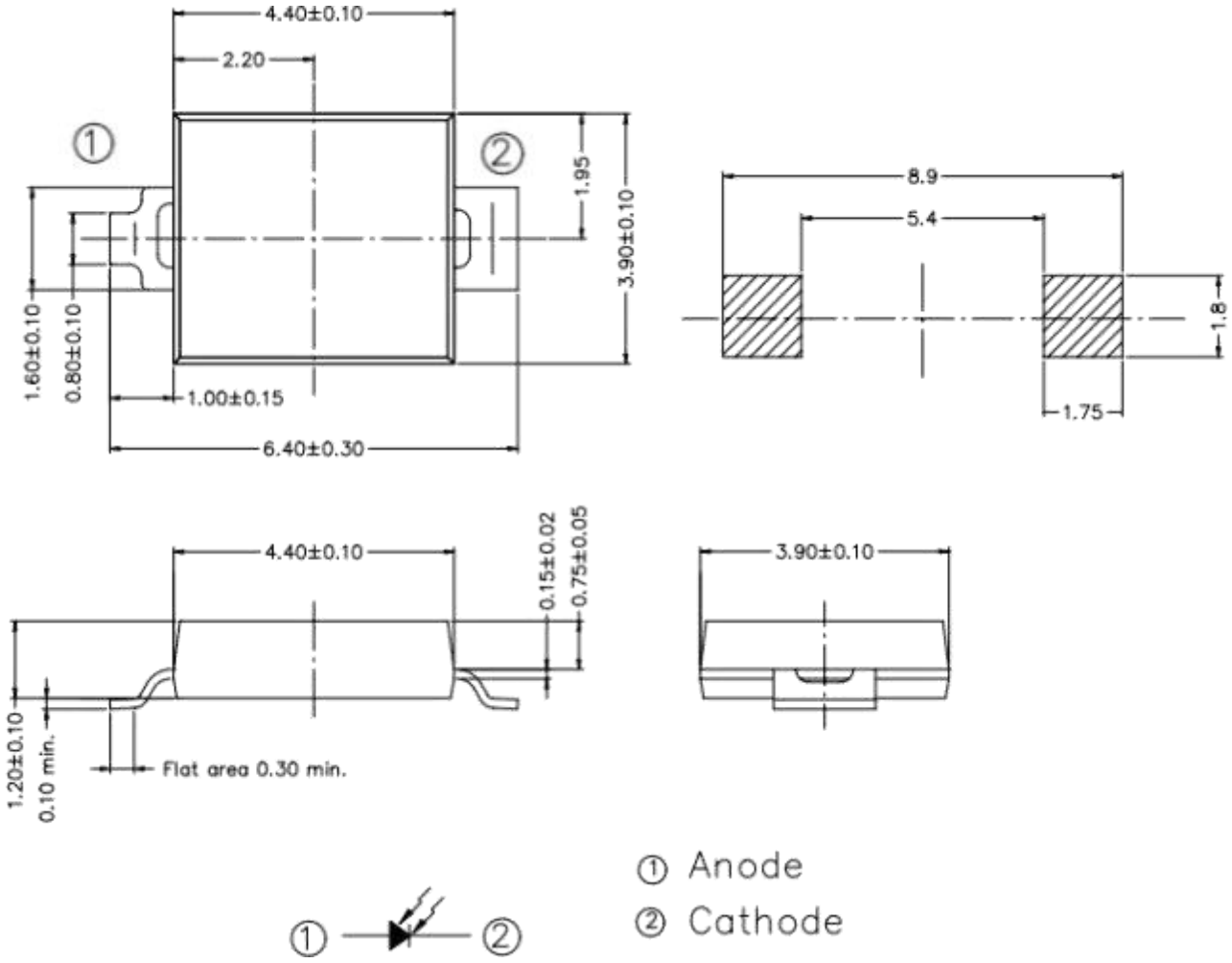


电容与反向电压的关系
Terminal Capacitance VS Reverse Voltage



外形尺寸

Outline Dimension



备注(Note)：

1. 标注尺寸单位为毫米

Dimensions are in millimeters

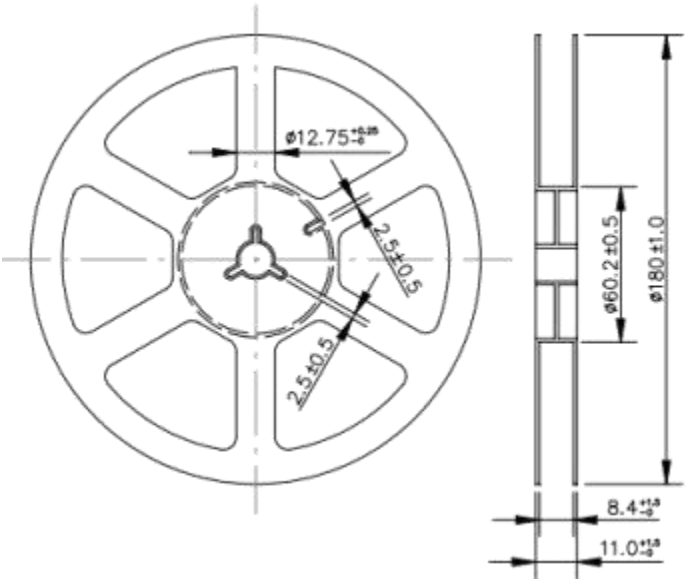
2. 除特别标注外，所有尺寸允许公差± 0.30mm

Tolerances unless mentioned are ± 0.30mm

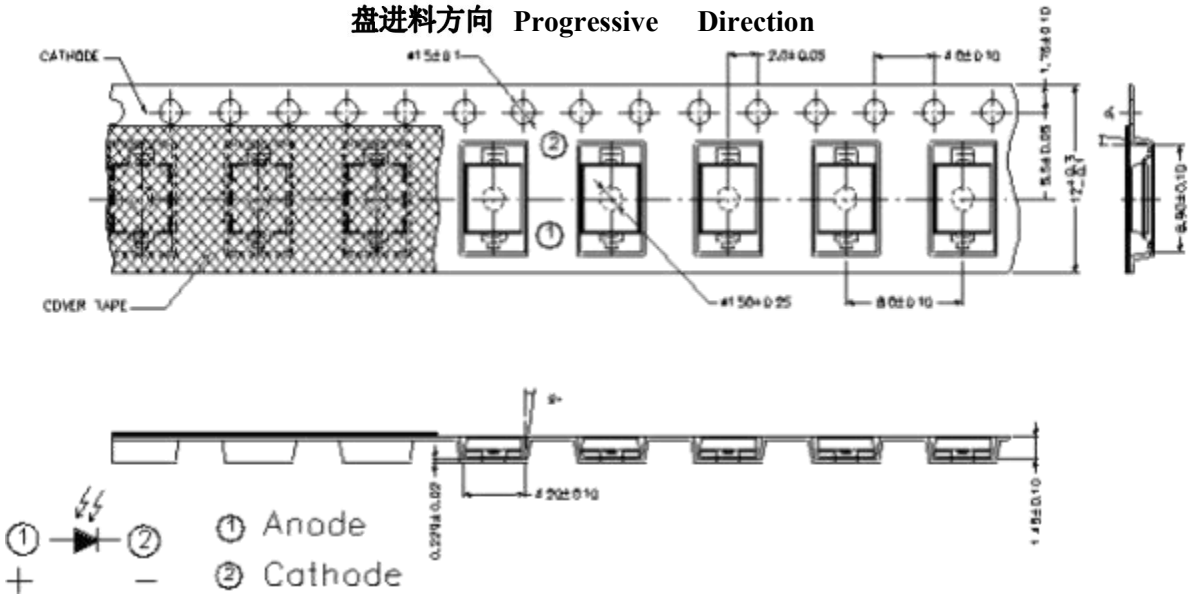
包装（1）

Packaging (1)

载带与圆盘尺寸 Belt and disk dimensions



盘进料方向 Progressive Direction



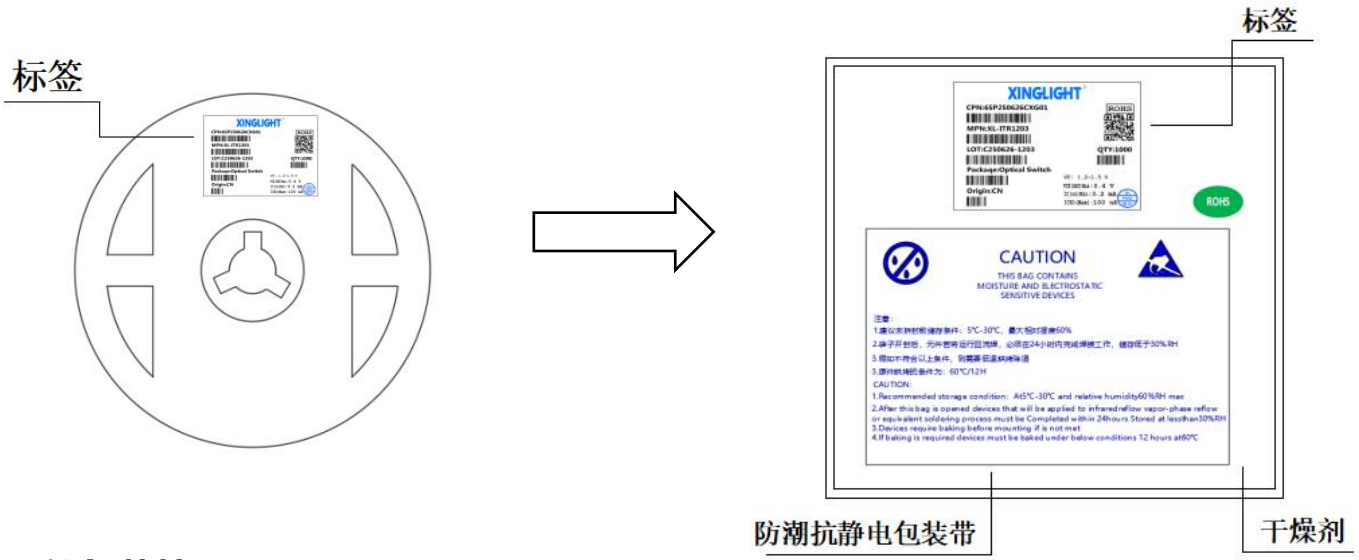
注:

1. 尺寸单位为毫米(mm)。
1. Size unit is mm (mm).
2. 尺寸公差是±0.1mm。
2. The dimensional tolerance is ± 0.1mm.

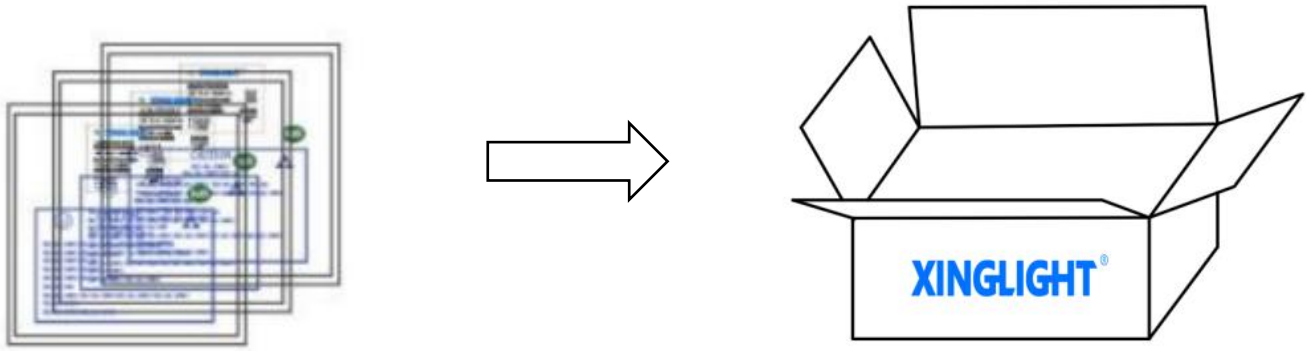
包装（2）

Packaging (2)

◇ 防潮抗静电包装Moisture Proof and Antti-Electrostic Foil Bag



◇ 外包装箱 Cardboard Box



◇ 标签说明 Label Expantion

CPN：批号/档位　　MPN：型号

LOT：日期　　QTY：数量

ORIGIN：产地　　IC：光电流

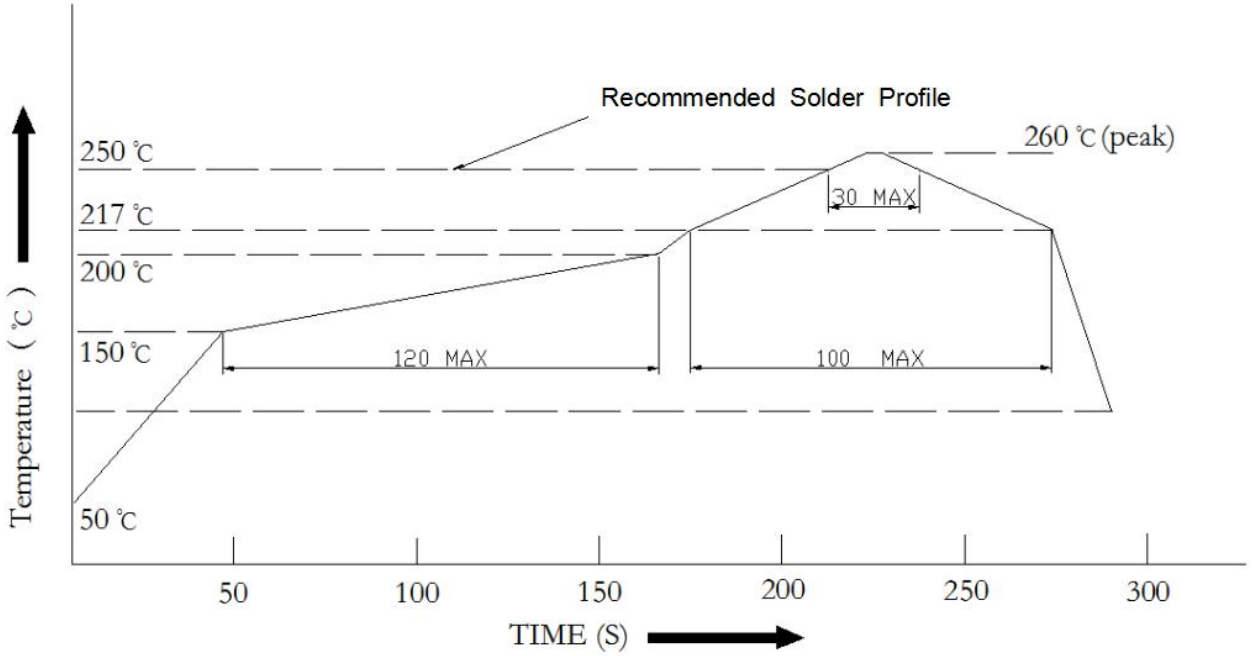
PACKAQE：封装



焊接指导

Guideline for Soldering

推荐焊接温度曲线 The wave peak welding curve is recommended :



注意：Note

1 、铅焊料温度剖面

Lead solder temperature profile

2 、回流焊焊接次数建议一遍

It is recommended to perform reflow soldering once

3 、焊接时，不要在加热过程中对 LED 施加压力

When soldering, do not put stress on the LED during heating

4 、焊接后，不要使电路板翘曲

After soldering, do not warp the circuit board

5 、产品最佳的最高焊接温度建议控制在240℃/10S

The recommended maximum welding temperature for the product is 240 ℃/10s

使用注意事项（1）
Precautions （1）

烙铁条件 Soldering Iron

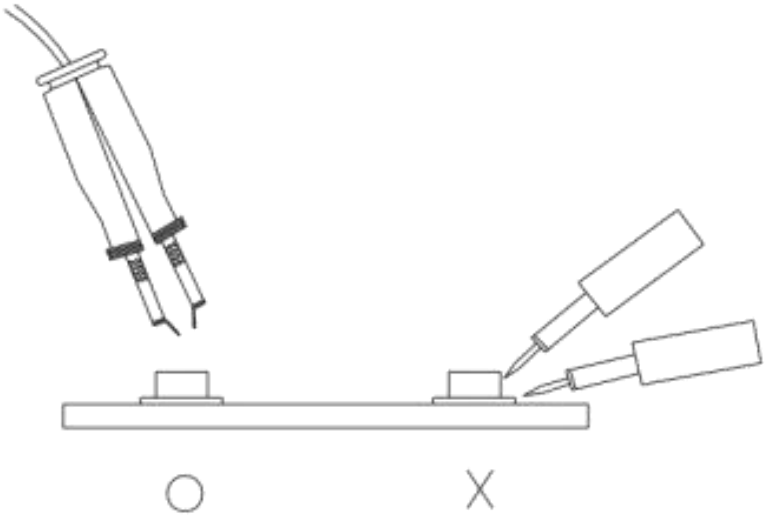
每个端子都要去烙铁尖端温度低于 300℃为 3 秒内一次少于烙铁容量 25W 。 离开两秒钟然后更多的间隔，并做焊接每个终端。手工焊料通常在开始的时候容易损坏产品。

Each terminal is to go to the tip of soldering iron temperature less than 300℃ for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

*手工补数 Repairing

修理不应在 LED 焊接后进行。当修理是不可避免的是，应该使用双头烙铁 (如下图所示) 。应该是事先确 认 LED 的特性是否会或不会损坏通过修理。

Repair should not be done after the LED 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 LED will or will not be damaged by repairing.



使用注意事项（2）

Precautions （2）

1. **贮存：**

Storage

- 本产品使用密封防潮抗静电袋包装，并附有干燥剂，未开封的产品有一年的保存时间。

Moisture proof and anti-electrostatic package with moisture absorbent material is used, to keep moisture to a minimum.

- 开封前，产品须存放在温度不高于 30℃，湿度不高于 60%RH 的环境中。

Before opening the package, the product should be kept at 30℃ or less and humidity less than 60% RH, and be used within a year.

- 开封后，产品须存放在温度不高于 30℃，湿度不高于 10%RH 的环境中，且应该在 168小时（7天） 内使 用完;且贴片后应尽快做焊接。建议工作环境为温度不高于 30℃，湿度不高于 40%RH。

After opening the package, the product should be stored at 30℃ or less and humidity less than 40%RH, and be soldered within 168 hours (7day). And it should be welded as soon as possible after the patch.It is recommended that the product be operated at the workshop condition of 30℃ or less and humidity less than 40%RH.

- 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：60±5）℃，持续24 小时。

If the moisture absorbent material has fade away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (60±5)℃ for 24 hours.

2. 静电：

Static Electricity

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接地，同时必须采取其他防止静电和电涌的措施。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；严禁使用普通塑料制品。建议在作业过程中，使用离子风扇来压制静电的产生。距离LED元件1英尺距离的环境范围内静电场电压小于100V。

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristic such as the forward voltage becomes lower, or the LEDs 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 gloves, anti-electrostatic containers be used when dealing with the LEDs.Using ordinary plastic products are strictly prohibited.It is recommended to use ion fans to suppress the static electricity generation during the operation.The static field voltage is less than 100V within the ambient range of 1 foot distance from the LED element.

使用注意事项（3）

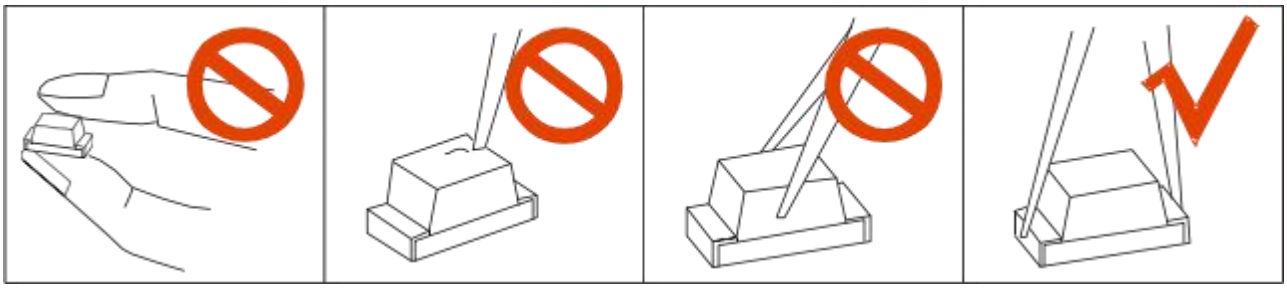
Precautions （3）

其他事项：

Others：

*直接用手拿取产品不但会污染封装树脂表面，也可能由于静电等因素导致产品性能的改变。过度的压力也可能直接影响封装内部的管芯和金线，因此请勿对产品施加过度压力，特别当产品处于高温状态下，例如在回　　流焊接过程中。

*When handling the product, touching the encapsulant with bare hands will not only contaminate its surface, but also affect on its optical characteristics. Excessive force to the encapsulant might result in catastrophic failure of the LEDs due to die breakage or wire deformation. For this reason, please do not put excessive stress on LEDs, especially when the LEDs are heated such as during Reflow Soldering.



*LED　的环氧树脂封装部分相当脆弱，请勿用坚硬、尖锐的物体刮、擦封装树脂部分。在用镊子夹取的时候也应当小心注意。

*The　epoxy resin of encapsulant is fragile, so please avoid scratch or friction over the epoxy resin surface. While handling the product with tweezers, do not hold by the epoxy resin, be careful.

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