XL-4543PD **4543接收管** **技术数据表 Technical Data Sheet**

特点（characteristic）：



模型图仅供参考

* 外观尺寸:4.8*4.4*8.7*1.5mm

Appearance dimension:4.8*4.4*8.7*1.5mm

* 发光颜色及胶体:红外接收/黑色胶体

Luminous color and colloid: infrared receiver tube /black 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

* 使用寿命长

Long operating life

* 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
集电极-发射极电压 Collector Emitter Voltage	V_{CEO}	30	V
发射极-集电极电压 Emitter collector voltage	V_{ECO}	5	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	回流焊（reflow soldering）：260℃，6s 手动焊（manual welding ）：300℃，3s	

＊注： 脉冲宽度≤0. 1ms ， 占空比≤1/10
＊Note: Pulse width≤0. 1ms, Duty≤1/10

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

Parameter(参数)	Symbol (符号)	Min. (最小值)	Typ. (规格值)	Max. (最大值)	Units (单位)	TestConditions (测试条件)
反向电压Reverse Voltage	Vr	30	--	--	V	Ir=100uA
正向电压Forward Voltage	Vf	0.7	--	5	V	Ir=10mA
光电流Light Current	IL	25	35	45	uA	VR=5V,E= 1.0 mW/cm² 入=940nm
暗电流Dark Current	ID	--	--	30	nA	VR=10V E=0 mW/cm²
短路电流 Short Circuit Current	Isc	25	35	45	uA	Vr=0V,E= 10mW/cm² 入=940
光谱带宽 Rang Of Spectral Bandwidth	λ0.5	700	--	1100	nm	---
响应波长Peak Wavelength	λp	--	940	--	nm	---
上升时间Rise Time	Tr	--	30	--	nS	VCE=5V Ic=1mA RL=1K Ω
下降时间Fall Time	Tf	--	30	--	nS	VCE=5V Ic=1mA RL=1K Ω
结电容 Collector-base Capacitance	CCB	--	30	--	PF	f=1MHz CCB=3V
角度View Angle	2θ1/2	--	±60	--		Vr=5v,E=1.0mw/cm² 入=940

备注:

1. 此发光亮度为根据人眼对发光亮度之感应曲线之模拟发光强度符合CIE（国际光委会组织）
2. 此发光角度之测量为其发光亮度一半时所测试之数据
3. 发光亮度保证误差正负15%

1. The luminous intensity is the simulated luminous intensity according to the response curve of human eyes to luminous intensity, which conforms to CIE (International Commission on light)The aging experiment has proved that the service life of the LED,
2. The measurement of the luminous angle is the data measured when the luminous brightness is half
3. Guaranteed error of luminous brightness is plus or minus 15%

典型特性曲线

Typical Characteristics Curves

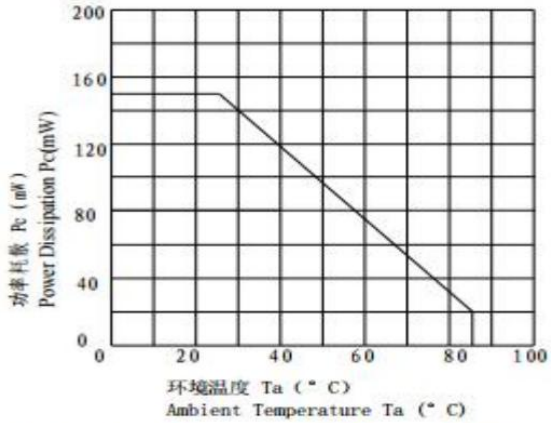


Fig.1 Power Dissipation vs. Ambient Temperature

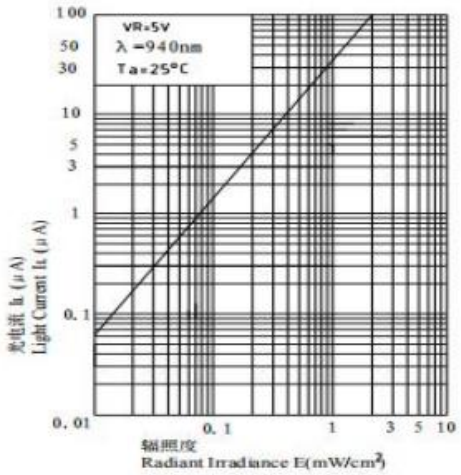


Fig.2 Light Current vs. Irradiance

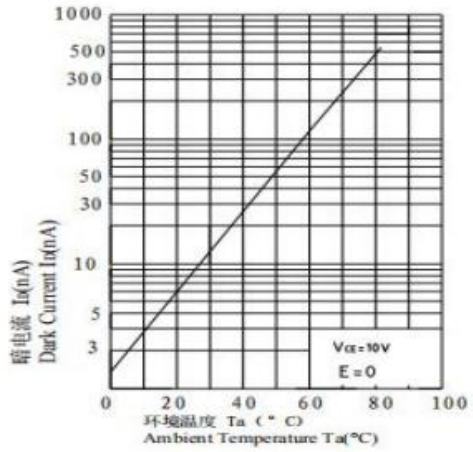


Fig.3 Dark Current vs. Ambient Temperature

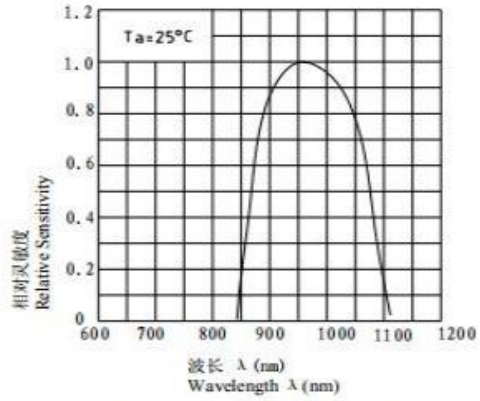


Fig.4 Relative Sensitivity vs. Wavelength

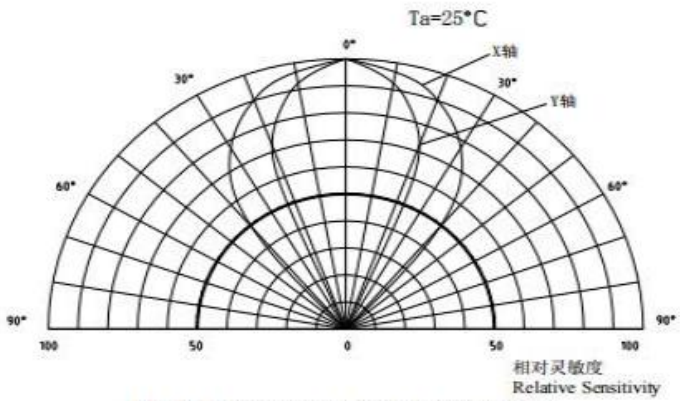
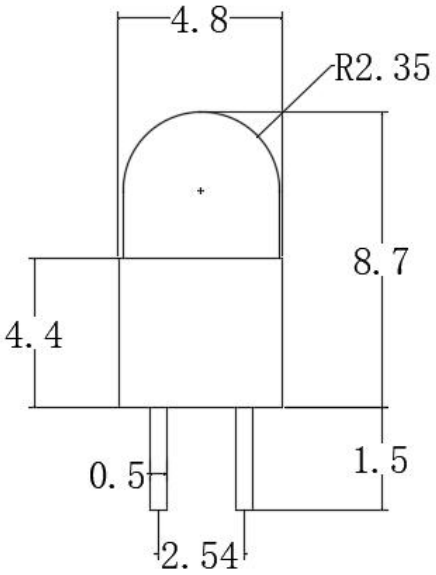
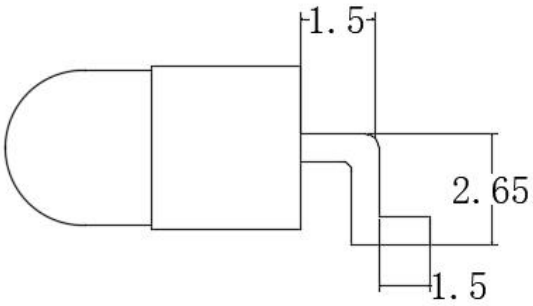


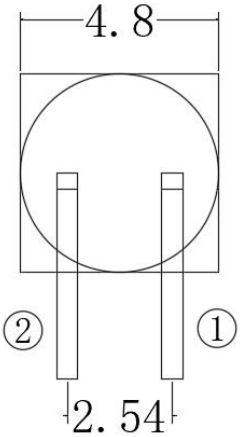
Fig.5 Relative Directional Sensitivity

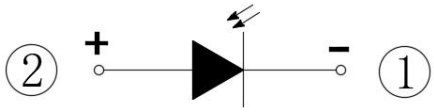
外形尺寸

Outline Dimension









极性
Polarity

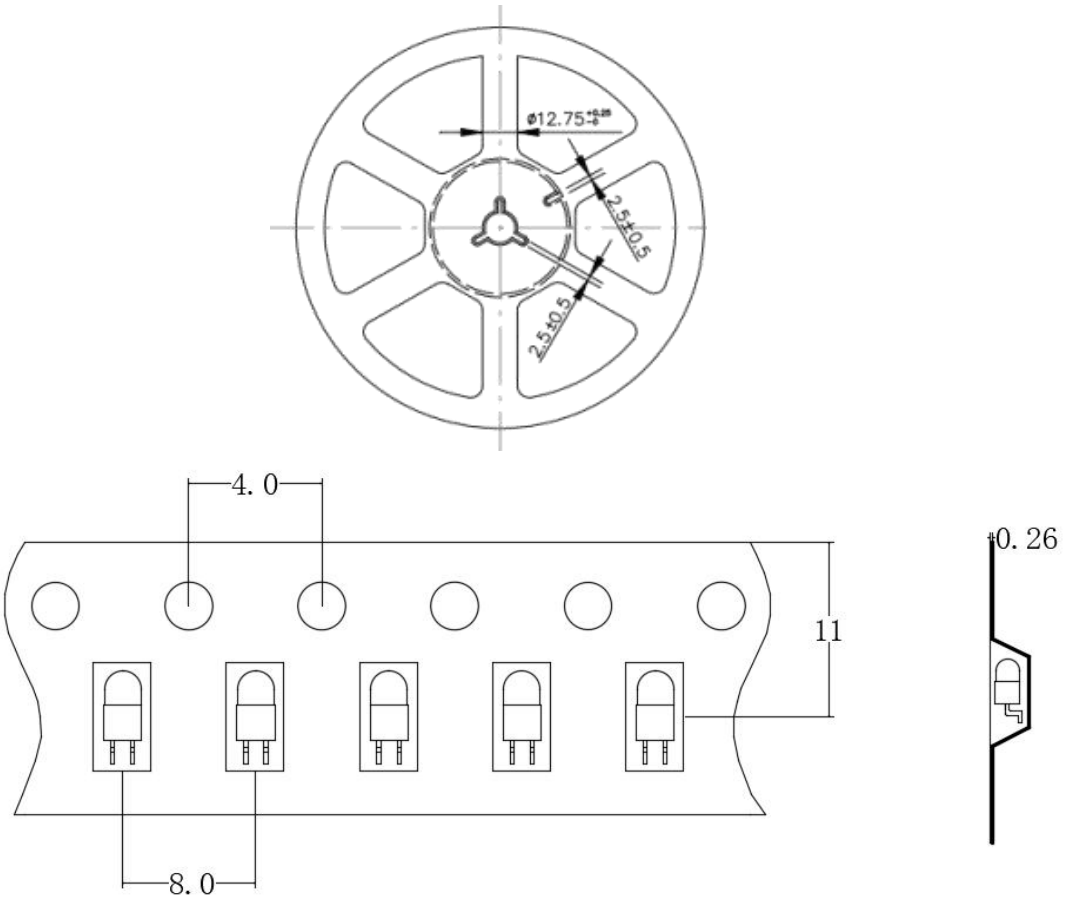
备注(Note)：

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± 0.25mm
Tolerances unless mentioned are ± 0.25mm

包装（1）

Packaging (1)

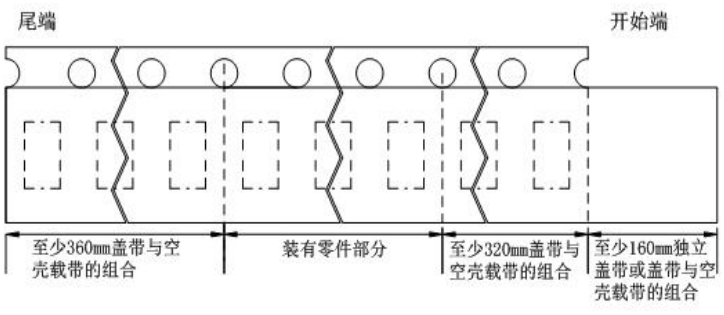
载带与圆盘尺寸 Belt and disk dimensions

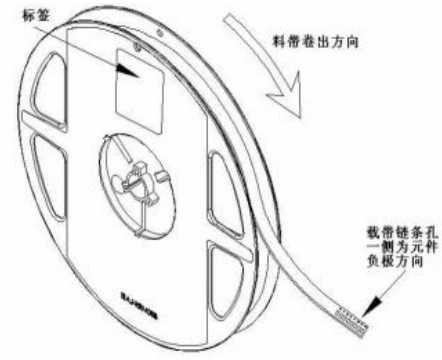


注:

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.

✧ **圆盘及载带卷出方向及空穴规格 Disk and carrier belt direction of roll and hole dimensions**

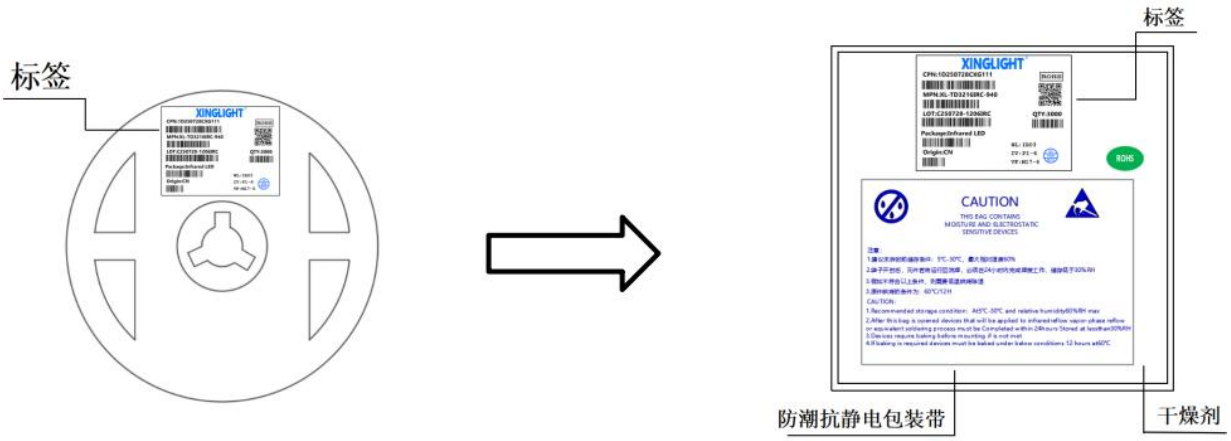




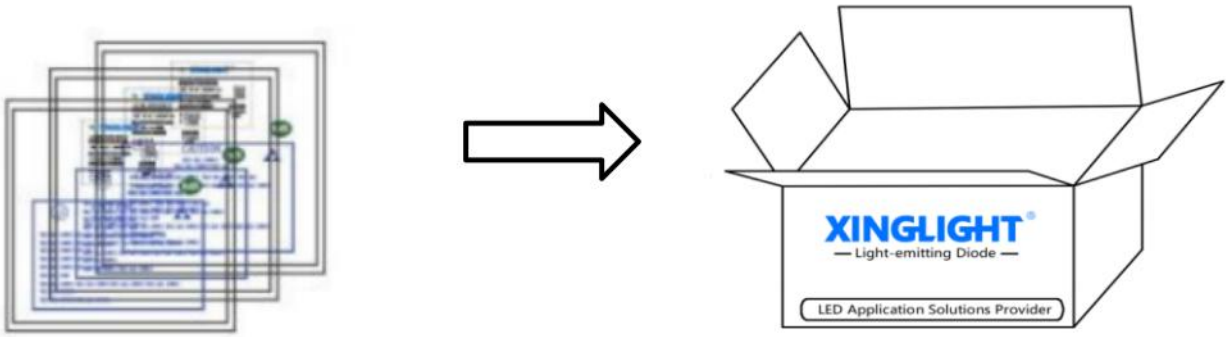
包装（2）

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（1）

Guideline for Soldering (1)

1. 使用烙铁人手焊接

Hand Soldering

只建议在修理和重工的情况下使用手工焊接；推荐使用功率低于 30W 的烙铁，焊接时烙铁的温度必须保 持在 300℃以下，且每个电极只能进行一次焊接，每次焊接的持续时间不得超过 3 秒。

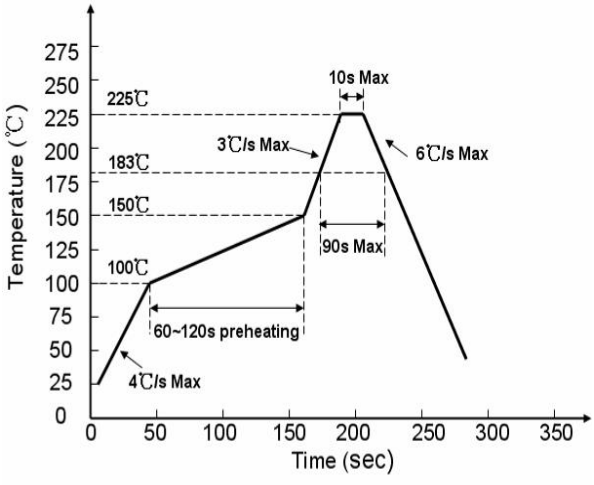
人手焊接过程中的不慎操作易引起 LED 产品的损坏，应当小心谨慎。

Manual welding is recommended only for repair and heavy industry situations. A soldering iron of less than 30W is recommended to be used in Hand Soldering. Please keep the temperature of the soldering iron under 300℃ while soldering. Each terminal of the LED is to go for less than 3 second and for one time only.

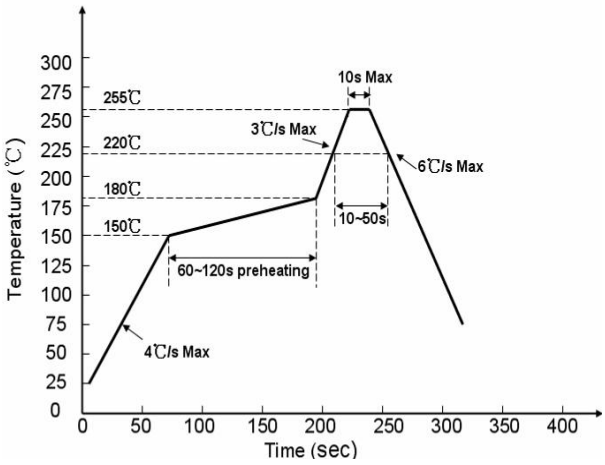
Be careful because the damage of the product is often started at the time of the hand soldering.

2. 回流焊接： 推荐使用以下无铅回流焊接温度图进行。

Reflow Soldering: Use the conditions shown in the under Figure of Pb -Free Reflow Soldering.



有铅制程Lead process



无铅制程lead free

回流焊接最多只能进行两次。

Reflow soldering should not be done more than two times.

在回流焊接升温过程中，请不要对 LED 施加任何压力。

Stress on the LEDs should be avoided during heating in soldering process.

在焊接完成后，待产品温度下降到室温之后，再进行其他处理。

After soldering, do not deal with the product before its temperature drop down to room temperature.

产品最佳的最高焊接温度建议控制在240±5℃/6S

The recommended maximum welding temperature for the product is 240±5 ℃/6s

使用注意事项

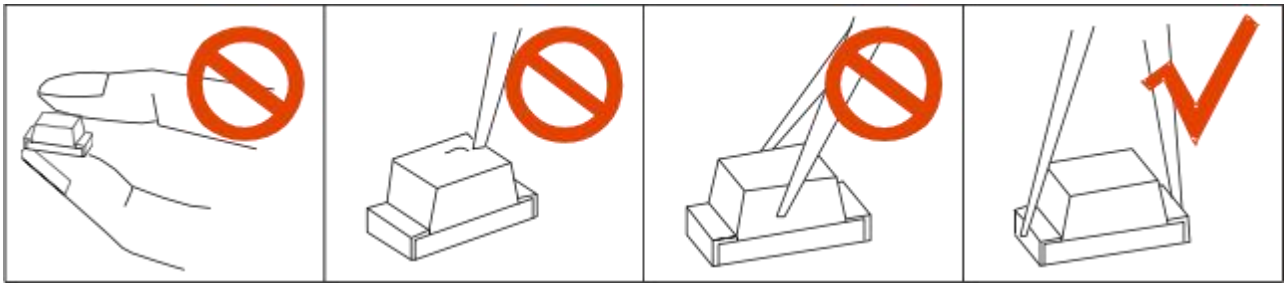
Precautions

1、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.

2、眼睛保护忠告：

Safety Advice For Human Eyes

*LED　发光时，请勿直视发光光源，特别是对于一些光强较高的 LED，强光可能伤害你的眼睛。

*Viewing direct to the light emitting center of the LEDs, especially those of great Luminous Intensity, will cause great hazard to human eyes. Please be careful.