Chip LED
2H0805PT1HJA0001
Datasheet

Features 产品特性

- Package(L/W/H):2.0*1.25*0.85mm/外观尺寸: 2.0*1.25*0.85 毫米
- Color ：Infrared light/颜色：红外光
- Lens: Black flat colloid /胶体：黑色平面胶体
- EIA STD Package/ EIA 规范标准包装
- Meet ROHS, Green Product/环保产品，符合 ROHS 要求
- Compatible With SMT Automatic Equipment/适用于自动贴片机
- Compatible WithInfrared Reflow Solder Process/适用于红外线回流焊制程

Product Application 产品应用

- PCB mounted infrared sensor PCB 安装的红外线感应器
- Infrared remote control units with high power requirement 大功率红外线遥控装置
- Smoke detector 感烟探测器
- Infrared applied system 红外线应用系统

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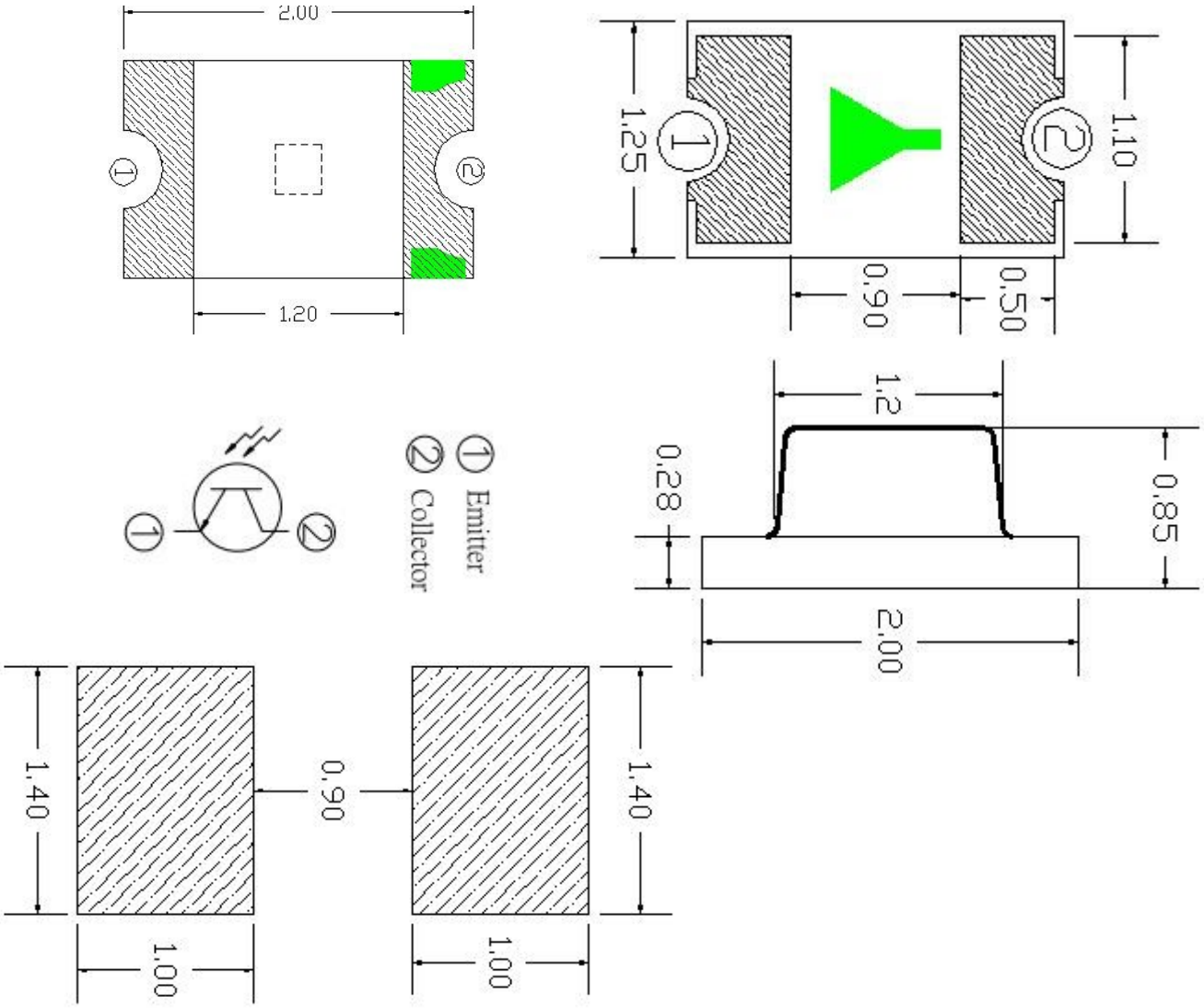
Package Dimensions 外形尺寸

Package Profile & Soldering PAD Suggested 外形尺寸及建议焊盘尺寸



Notes:

1. All dimensions are in millimeters.所有尺寸都以毫米为单位
2. Tolerances: ±0.1mm. 公差:±0.1毫米

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

Parameter	Symbol	Rating	Unit
Power Dissipation at(or below) 25℃ Free Air Temperature	Pd	75	mW
Forward Current	IF	20	mA
Peak Forward Current (*1)	IFP	50	V
Operating Temperature	Topr	-40~+85	℃
Storage Temperature	Tstg	-40~+85	℃
Lead Soldering Temperature (*2)	Tsol	260	℃
Electrostatic Discharge	ESD	2000	V

Notes: (＊1) Pulse width tw=100 μsec. ,Period T=10 msec. (＊2) 2t≦5 Sec

Electro-Optical Characteristics (Ta=25℃) 光电特性(Ta = 25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Dark Current	I_{CEO}	---	---	0.1	μA	V_{CE} = 20V
Saturation Voltage	V_{CE}(Sat)	---	0.1	0.2	V	I_B=100uA I_C=2mA
Collector-Emitter Breakdown Voltage	BV_{CEO}	60	---	---	V	I_{CEO}=100uA
Emitter-Collector Breakdown Voltage	BV_{ECO}	5	---	---	V	I_{ECO}=100uA
Collector-Base Breakdown Voltage	BV_{CBO}	100	---	---	V	I_{CBO}=100uA
DC Current Amplification Factor	HFE	200	---	3000		V_{CE}=5V I_B=3uA
Peak sensing Wavelength	λp	---	940	---	nm	
Photo current	I_{CON}	700		2000		IF=2ua/20mA

Note 备注：VR=5V For test conditions ，VR=5V 为测试分选条件

Typical Electro-Optical Characteristics Curves 典型光电特性曲线

Fig.1 Collector Power Dissipation vs. Ambient Temperature

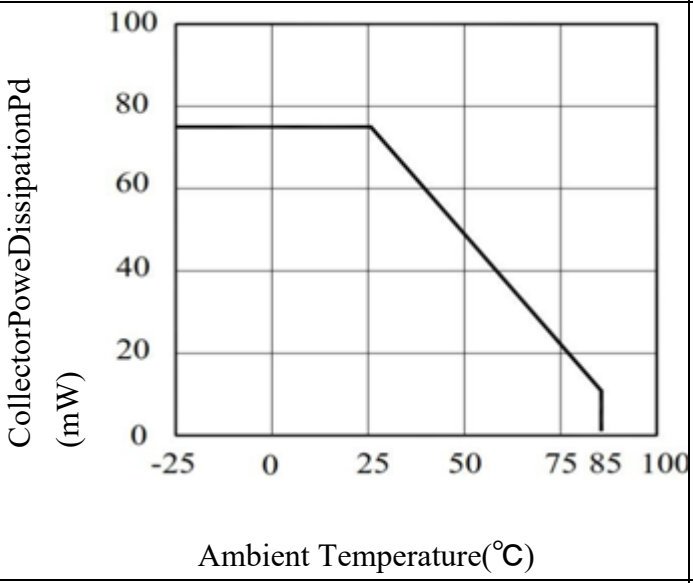


Fig.2 Spectral Distribution

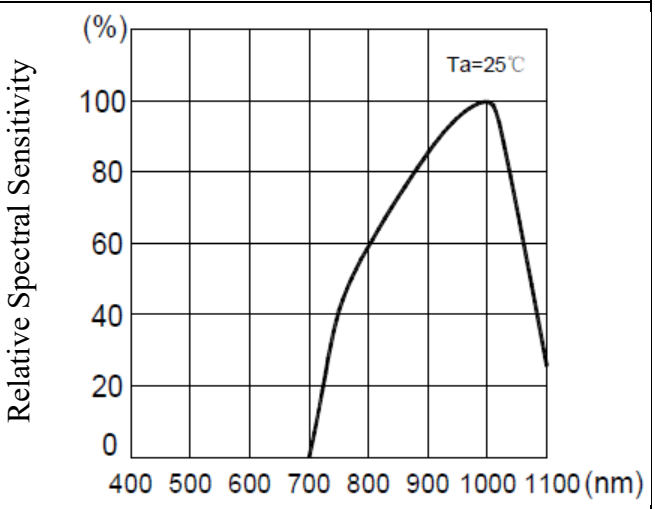


Fig.3 Relative Collector Current vs. Ambient Temperature

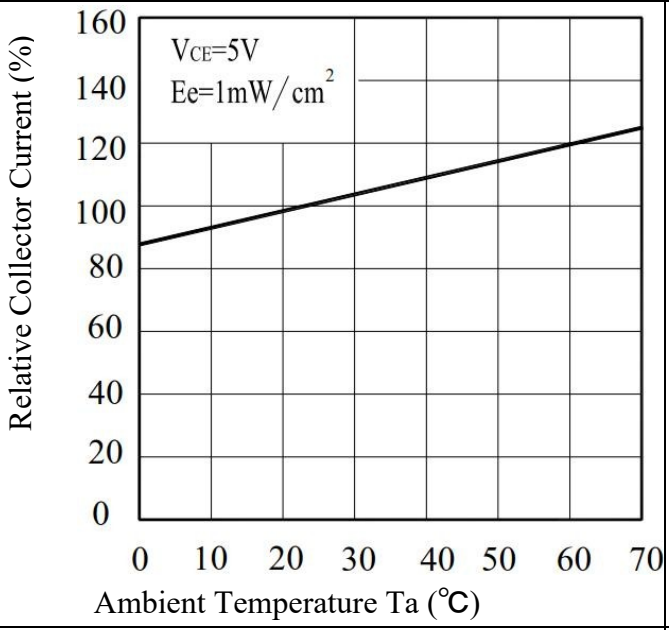


Fig.4 Collector Current vs. Irradiance

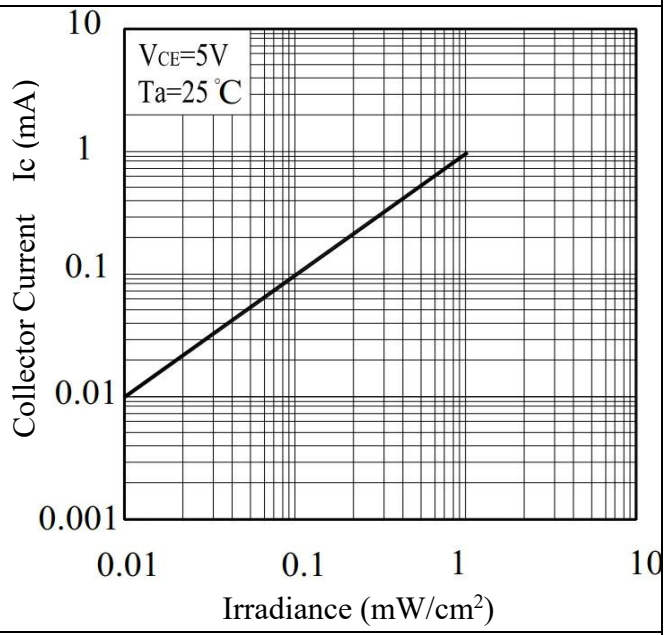
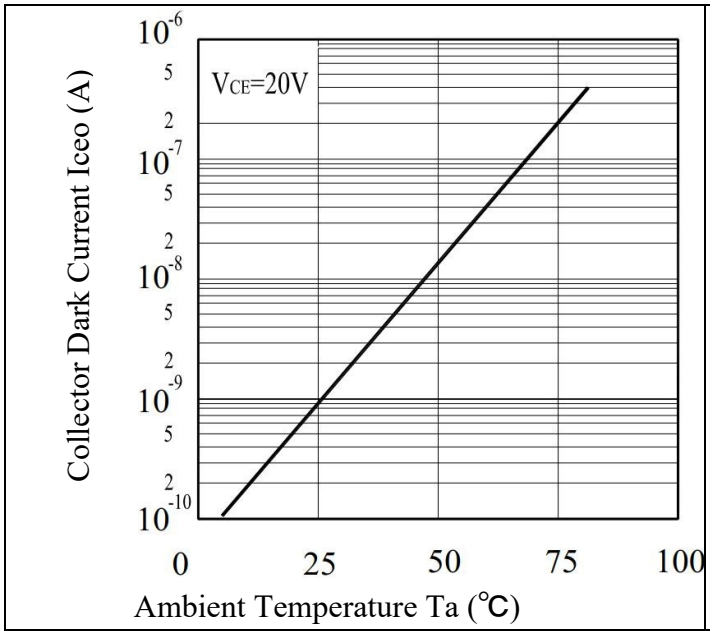
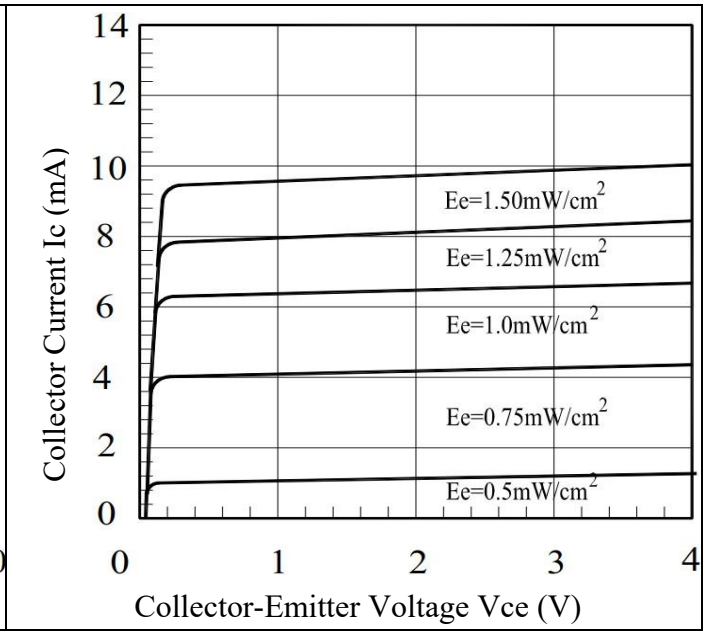


Fig.5CollectorDarkCurrentvs.AmbientTemperature

Fig.6 Collector Current vs. Collector-Emitter Voltage

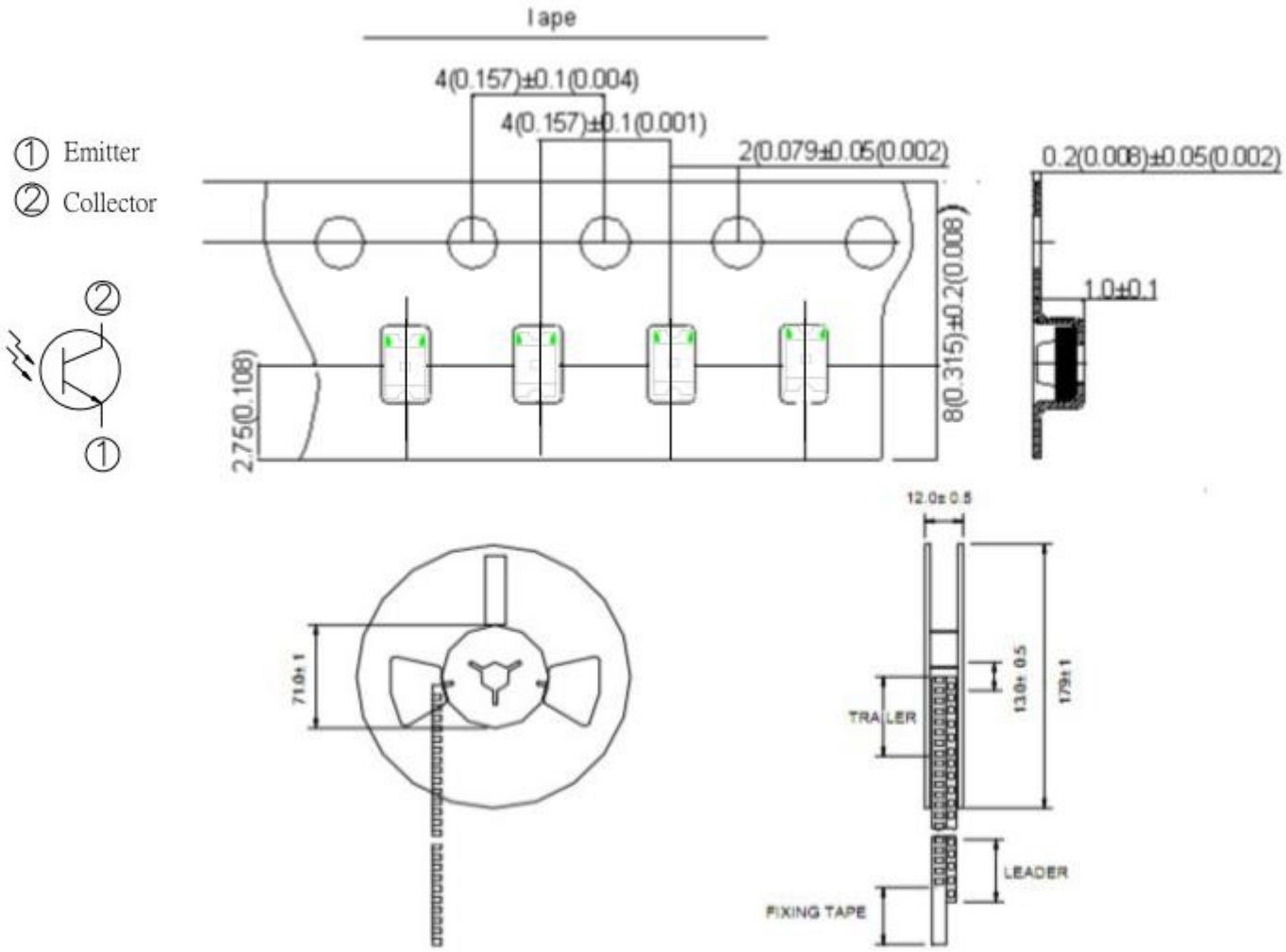




Tray structure and packaging 料盘结构与包装

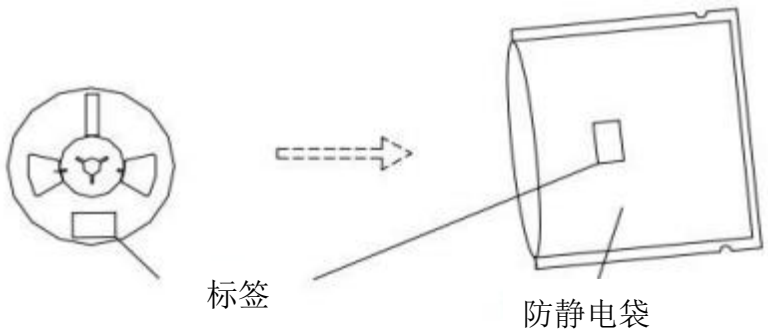
Reel And Tape Dimensions 包装载带与圆盘尺寸

Packing quantity: 3000 PCS/rolls 包装数量：**3000 pcs/卷**



注/Notes: 1. 尺寸单位为毫米(mm)/ All dimensions are in millimeters.
2. 尺寸公差是±0.1mm/ Tolerance is ± 0.1 mm unless otherwise noted.

Label Explanation/标签及标识：



标签 防静电袋

Reliability TestItemsAndConditions/信赖性测试项目及条件

测试项目 Test Item	Ref.Standard 参考标准	Test Condition 测试条件	Time 时间	Quantity 数量	Accepted/Rejected 接收/拒收
Reflow 回流焊	JESD22-B106	Temp:255℃max T=10 sec	1times	22	0/1
Thermal Shock 冷热冲击	JESD22-A106	-40℃ 15min ↑↓ 100℃ 15min	100 cycles	22	0/1
High Temperature Storage 高温保存	JESD22-A103	Temp:100℃	168Hrs.	22	0/1
Low Temperature Storage 低温保存	JESD22-A119	Temp:-40℃	168Hrs.	22	0/1
Life Test 常温通电	JESD22-A108	Ta=25℃ IF=20mA	168Hrs.	22	0/1
High Temperature / High Humidity 高温高湿	Qiangsq831	85℃/85% RH	168Hrs.	22	0/1

Criteria For JudgingDamage/失效判定标准

Test Items 项目	Symbol 符号	Test Condition 测试条件	Judging For Damage 判定标准	
			Min. 最小	Max. 最大
Forward Voltage 正向电压	VF	IF=20mA	-	U.S.L*)x1.1
Reverse Current 漏电流	IR	VR = 5V	-	U.S.L*)x2.0
光强 Luminous Intensity	Mcd	IF=20mA	L.S.L*)x0.7	

U.S.L: Upper standard level 规格上限
L.S.L: Lower standard level 规格下限

Precautions For Use 预防措施

1. Storage存储

Do not open moisture proof bag before the products are ready to use. 在产品准备使用之前，不要打开防潮袋。

Before opening the package, the device should be kept at 30℃ or less and 90% RH or less. 打开包装前，设备应保持在30℃及90%RH以下。

The device should be used within a year. 该设备应在一年内使用。

After opening the package, the device should be kept at 30℃ or less and 70% RH or less. 打开包装后，设备应保存在30℃及70%RH以下。

The device should be used within 168 hours (7 days) after opening the package. 设备应在打开包装后的168小时(7天)内使用。

If the moisture absorbent material (silica gel) has faded away or the device have exceeded the storage time, baking treatment should be performed using the following conditions. 如果吸湿材料(硅胶)已经褪色或设备已经超过储存时间，应在以下条件下进行烘烤处理。

Baking treatment : 60±5℃ for 24 hours. 烘烤处理:60±5℃烘烤 24 小时。

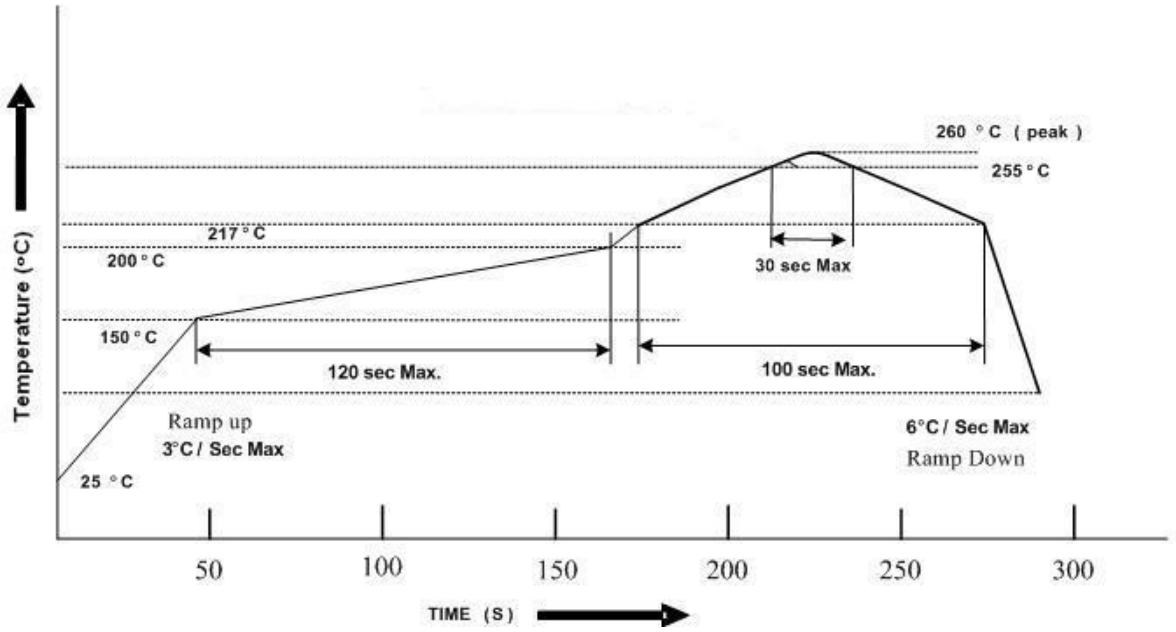
2.Soldering Condition 焊接条件

Pb-free solder temperature profile无铅焊锡温度剖面

Reflow soldering should not be done more than two times. 回流焊不应进行超过两次。

When soldering, do not put stress on the device during heating. 焊接时，加热时不要对设备施加压力。

After soldering, do not warp the circuit board. 焊接后，电路板不得翘曲。



3.Soldering Iron 烙铁

Each terminal is to go to the tip of soldering iron temperature less than 350℃ 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. 每个端子去烙铁的尖端温度小于 350℃3 秒内一次在小于烙铁容量 25W。 留出两秒以上的间隔，对每个端子进行焊接。 要小心，因为产品的损坏往往是从手工焊接的时候开始的。

4.Repairing修复

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

设备焊接后不应进行修理。 不可避免的修理时，应使用双头烙铁。 应事先确认设备的特性是否会因修理而受损。

5. test/测试

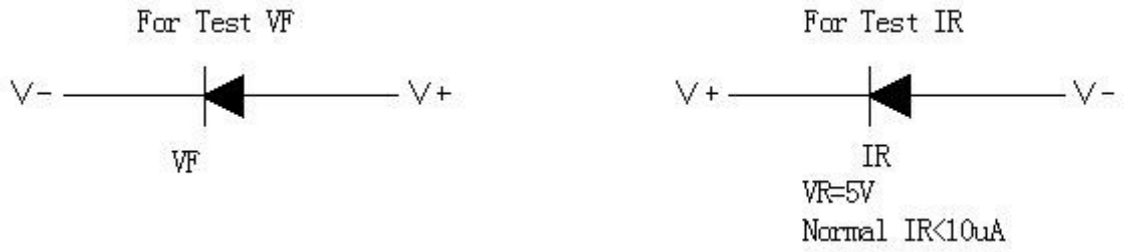
LED shall be driven trated current and shall be protected bycurrent-limiting resistance inthecircuit.Otherwise,slight voltage change swill cause largecurrent changes,which will damage theLED.

LED 要在额定电流下驱动,同时电路中需要加限流电阻保护 ;否则,轻微的电压变化就会引起较大的电流变化,从而破坏 LED。

When the circuitison or off,avoid sudden surge voltage.Otherwise,the LED will be burnt out

在电路导通或关闭情况下,要避免瞬间浪涌电压的产生,否则 LED 将被烧坏。

Please check the LED as shown 请参照下图示检测 LED



If the forward voltage VF is too high or there verse voltage VR is too high,the LED will bedamaged.

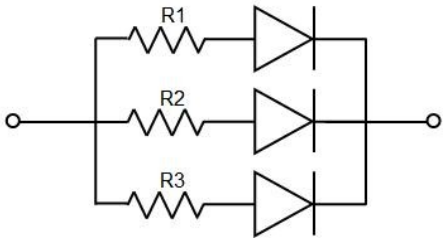
顺向电压 VF 过高或反向电压 VR 过高，均会损坏 LED.

When lighting or testing the LED ,there verse voltage added on both end softhe LED shall not be higher than 5V, otherwise it is easy to damage the LED

点亮或测试 LED 时，加在 LED 两端的反向电压不得高于 5V，否则容易击伤 LED.

LED luminous color will vary slightly with the working current. It is suggested thatresistance and LED should be used in series in the design

LED 发光颜色会随着工作电流不同而有少许变化,建议设计时考虑电阻与 LED 串联使用。



LED is easy to change due to it sown heat and change sin the temperature of the environment. The increase intemperature will reduce the luminous efficiency of LED,which will affect the luminous color. Heat dissipation should be fully considered in the desig

LED 容易因为自身的发热和环境的温度改变而改变，温度升高会降低 LED 发光效率，影响发光颜色在设计时应充分考虑散热问题。

Revision history 修订历史

Versions 版本	Description	Release Date
0.1	Preliminary 初定	2024/09/23

About Edison Opto 关于艾笛森

Edison Opto is a leading manufacturer of high power LED and a solution provider experienced in LDMS. LDMS is an integrated program derived from the four essential technologies in LED lighting applications- Thermal Management, Electrical Scheme, Mechanical Refinement, Optical Optimization, to provide customer with various LED components and modules. More Information about the company and our products can be found at www.edison-opto.com

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