



Guangdong Taixing photoelectric technology Co., LTD

规格书 Product specification

客户名称:

Customer _____

客户商品代码:

Customer Type _____

品名:

Product _____

产品型号: TX-TCRYBMRHQZS-08

RART _____

审核:

CHeck _____

制作:

Design _____

日期:

2024.07.12

Date _____

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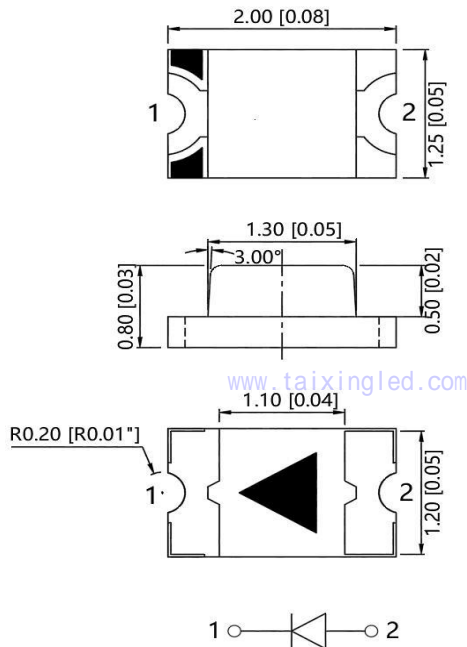
Characteristics 特点 :

2.0mm 1.25mm SMTLED, 0.8mm thickness.
 长2.0毫米 宽1.25毫米, 厚0.8毫米.
 Luminous color and colloid: Red/colloid transparent.
 发光颜色和胶体: 红色/胶体透明.
 Package: 3000pcs/reel
 包装: 3000个/卷

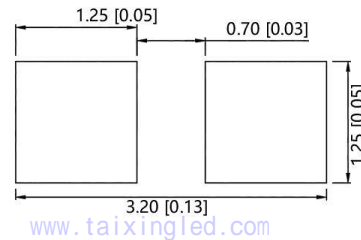
Features 产品特征 :

Small size, small heat, high light efficiency, low light decay.
 体积小, 发热量小, 光效高, 光衰小.
 Fast reaction speed, long life, a variety of colors to choose.
 反应速度快, 寿命长, 有多种颜色可供选择.
 Suitable for SMT assembly and welding processes.
 适用于SMT组装和焊接工艺.
 Environmental protection process meets ROHS environmental requirements.
 环保工艺符合ROHS环保要求.

Package Dimension 外观尺寸:



Recommend Soldering Pad 推荐焊盘



Tips: This product is only suitable for indoor, consumer category indicator light, if there are other uses, please consult our business recommendation.
 温馨提示: 此款产品仅适用于室内, 消费品类指示灯, 如有其他用途需要具体请咨询我们业务推荐。

Notes 备注 :

1. All dimensions are in millimeters (inches);
所有尺寸均以毫米(英寸)为单位;
2. Tolerances are 0.1mm 0.004inch unless otherwise noted.
除非另有说明, 公差0.1mm0.004英寸。

Absolute maximum ratings (TA=25°C) 绝对最大额定值(TA=25)

| Parameter 参数 | Symbol 符号 | Value 数值 | Unit 单位 |
|---|-----------|----------|---------|
| Forward current 正向电流 | If | 10 | mA |
| Reverse voltage 反向电压 | Vr | 5 | V |
| Power dissipation 功耗 | Pd | 15 | mW |
| Operating temperature 工作温度 | Top | -40 ~+85 | °C |
| ESD(Human-body mode 静电 | -- | 2 | KV |
| Storage temperature 储存温度 | Tstg | -40 ~+85 | °C |
| Peak pulsing current (1/8 duty f=1kHz) 峰值脉冲电流 | Ifp | 30 | mA |

Electro-optical characteristics (TA=25°C) 光电特性(TA = 25) www.taixingled.com

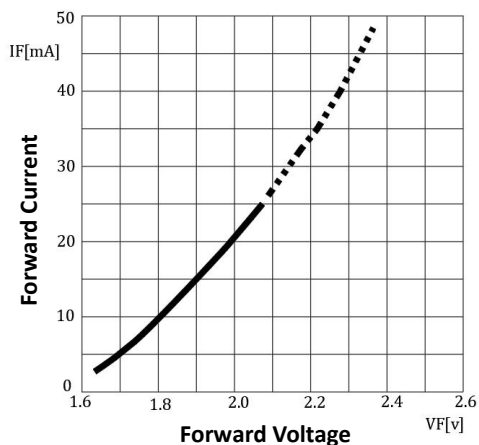
| Parameter 参数 | Test Condition 测试条件 | Symbol 符号 | Value 数值 | | | Unit 单位 |
|------------------------------------|---------------------|------------------|----------|--------|--------|---------|
| | | | Min 最小 | Typ 中间 | Max 最大 | |
| Wavelength at peak emission 峰值发射波长 | If=5mA | λ_p | -- | 630 | -- | nm |
| Spectral half bandwidth 半波宽 | If=5mA | $\Delta\lambda$ | -- | 20 | -- | nm |
| Dominant wavelength 主波长 | If=5mA | λ_d | 618 | -- | 630 | nm |
| Forward voltage 正向电压 | If=5mA | Vf | 1.8 | -- | 2.3 | V |
| Luminous intensity 光强度 | If=5mA | Iv | 30 | -- | 60 | mcd |
| Viewing angle at 50% Iv 50%视距下的视角 | If=10mA | 2 $\theta_{1/2}$ | -- | 120 | -- | Deg |
| Reverse current 反向漏电流 | Vr=5V | Ir | -- | -- | 10 | μ A |

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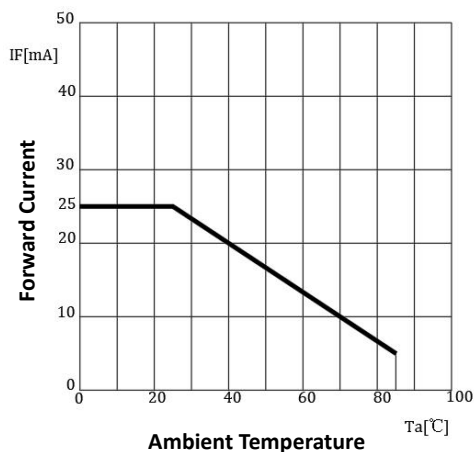
Typical Optical Characteristics Curves 典型光学特性曲线

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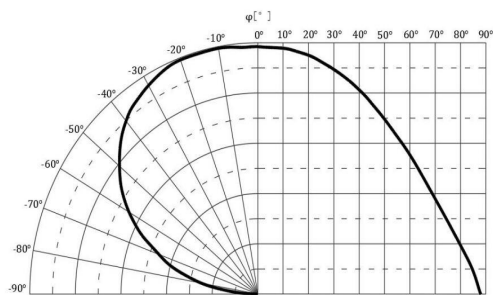
Forward Current vs Forward Voltage
Ta=25°C 正向电流VS电压



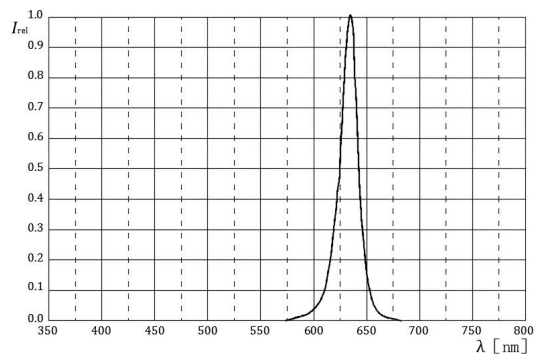
Forward Current Derating Curve
正向电流降额曲线



Radiation Characteristics 辐射特性
IF=10mA Ta=25°C



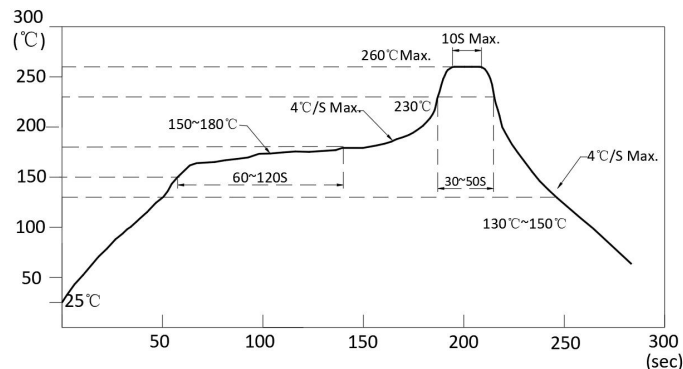
Relative Spectral Emission 相对光谱发射
IF=5 mA, Ta=25°C



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Reflow Profile 炉温

■ Reflow Temp/Time 回流焊温度/时间 www.taixingled.com



Notes: 备注：

1. We recommend the reflow temperature 245°C (±5°C). The maximum soldering temperature should be limited to 260°C www.taixingled.com
我们推荐回流温度为245 (±5)。最高焊接温度应限制在260。
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
环氧树脂暴露在高温下时不要对其造成应力。
3. Number of reflow process shall be 2 times or less.
回流焊次数不超过2次。

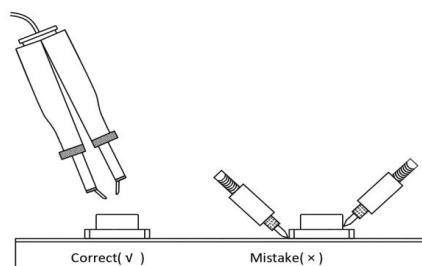
■ Soldering iron 烙铁使用

Basic spec is ≤ 5sec when 320°C (±20°C). If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under 350°C

基本规格为320 (±20)时5秒。温度越高，时间越短(+10 -1秒)。烙铁的功耗应小于20W，温度应可控设备温度应在350 以下。

■ Rework 返工

1. Customer must finish rework within 5 sec under 340°C. 客户必须在340 下5秒内完成返工。
2. The head of iron cannot touch copper foil. 铁头不能碰到铜箔。
3. Twin-head type is preferred. 首选双头型。 www.taixingled.com



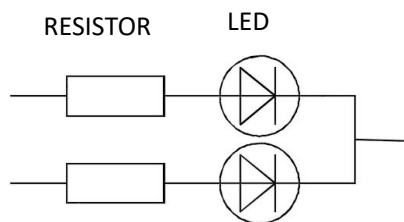
- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow solder etc.
避免任何物体摩擦或刮擦树脂，在高温下，如回流焊等。

Handling precautions 使用处理措施 www.taixingled.com

1. Drive Method. 驱动方法

A LED is a current-operated device. In order to ensure intensity uniformity on multiple LEDs connected in parallel in an application, it is recommended that a current limiting resistor be incorporated in the drive circuit, in series with each LED as shown in Circuit below. LED是电流操作的器件。为了确保应用中并联的多个LED的强度均匀性，建议在驱动电路中加入一个限流电阻，与每个LED串联，如下图所示：

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2. Storage 储存

2.1 Do not open moisture proof bag before the products are ready to use.

在产品准备使用之前，请勿打开防潮袋。

2.2 Before opening the package: The LEDs should be kept at 30°C or less and 60% RH or less.

打开包装前：LED应保持在30°C以下，60%RH以下。

2.3 After the package is opened, the products should be used within a week or they should be keeping to store at ≤ 20 R.H. with zip-lock sealed.

打开包装后，产品应在一周内用完或以 ≤ 20 R.H. 的温度保存，并以拉链密封。

3. Baking 烘烤处理

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings: 当包装在72小时后打开密封时，建议在焊接前进行烘烤。条件如下：

3.1 60 \pm 3°C x (12~24hrs) and <5%RH, taped reel type

3.2 100 \pm 3°C x (45min~1hr), bulk type

3.3 130 \pm 3°C x (15~30min), bulk type

Test items and results of reliability 可靠性测试专案及结果

| Test Item 测试项目 | Test Conditions 测试条件 | Standard Test Method 标准试验方法 | Note 注意 | Number of Test 测试次数 |
|---|---|--------------------------------|------------|------------------------|
| Reflow Soldering 静态回流焊 | Ta=260±5℃,Time=10±2S | JB/T 10845-2008 | 3times | 0/22 |
| Temperature Cycling 静态温度迴圈 | -40±5℃ 30±1min ↑→(25℃/5±1min)↓ 100±5℃ 30±1min | GB/T 2423.22-2012 | 100cycles | 0/22 |
| High Humidity High Temp. Storage Life 静态高温高湿 | Ta=85±5℃,ψ(%)=85±5%RH | GB/T 2423.3-2006 | 1000hrs | 0/22 |
| High Temperature Storage Life 静态高温储存 | Ta=100±5℃,non-operating | GB/T 2423.2-2008 | 1000hrs | 0/22 |
| Low Temperature Storage Life 静态低温储存 | Ta=-40±5℃,non-operating | GB/T 2423.1-2008 | 1000hrs | 0/22 |
| Life Test 动态室温通电 | Ta=26±5℃,@5mA, ψ(%)=25%RH~55%RH | -- | 1000hrs | 0/22 |
| Low Temperature Operating Life 动态低温通电 | a=-20±5℃,@5 mA | GB/T 2423.1-2008 | 1000hrs | 0/22 |

Notes 备注：

1. The tolerance of luminous intensity (Iv) is ±15% . 发光强度(Iv)公差为±15%。
2. The tolerance of dominant wavelength is ±2nm. 主导波长公差为±2nm。
3. The tolerance of Voltage is ±0.1V. 电压公差为±0.1V www.taixingled.com
4. This specification is a standard specification of our factory, can make in accordance with customer's special requirement. 本规格为我厂标准规格，可根据客户的特殊要求定做。

Series Chip LED Lamps Packaging Specifications 系列贴片led灯封装规范

● **Transportation Packing** 运输包装

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