



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-TPTUS1JBLRJYQQ25D-R2

RART \_\_\_\_\_

审核:

CHeck \_\_\_\_\_

制作:

Design \_\_\_\_\_

日期:

2025.03.26

Date \_\_\_\_\_

WEB : [www.taixingled.com](http://www.taixingled.com)

E-MAIL : [gd@taixingled.com](mailto:gd@taixingled.com)

TEL : 0769-21683819

**Characteristics 特点：**

3.50mm 3.50mm SMTLED, 2.52mm thickness.

长3.50毫米 宽3.50毫米, 厚2.52毫米.

Luminous color and colloid : 850NM/ colloid transparent.

发光颜色和胶体: 850NM/胶体透明.

Package: 800pcs/reel

包装: 800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.

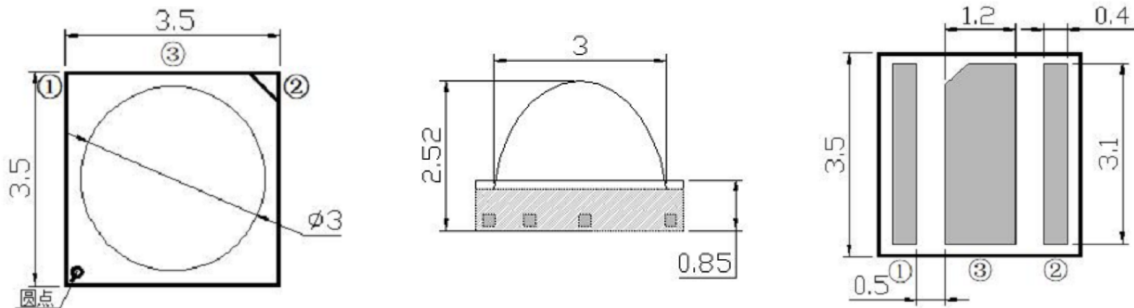
Suitable for SMT assembly and welding processes.

适用于SMT组装和焊接工艺.

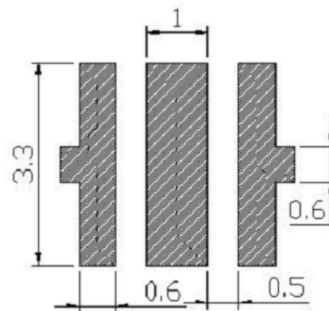
Environmental protection process meets ROHS environmental requirements.

环保工艺符合ROHS环保要求.

**Package Dimension 外观尺寸：**



**Recommend Soldering Pad 推荐焊盘**



**Notes 备注：**

1. All dimensions are in millimeters (inches);  
所有尺寸均以毫米(英寸)为单位; [www.taixingled.com](http://www.taixingled.com)
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 )**

参数 Parameter	符号 Symbol	数值 Value	单位 Unit
正向电流 Forward current	If	400	mA
反向耐压 Reverse voltage	Vr	5	V
工作环境温度 Operating temperature range	Top	-40~+95	°C
贮藏温度 Storage temperature range	Tstg	-40~+100	°C
最大峰值脉冲电流 Maximum peak pulse current	Ifp	1500	mA
结温 Junction Temperature	Tj	115	°C
静电 Electrostatic Discharge(HBM)	ESD	2000	V

**Electro-optical characteristics (TA=25°C) 光电特性(TA = 25 )** [www.taixingled.com](http://www.taixingled.com)

参数 Parameter	测试条件 Test Condition	符号 Symbo l	颜色	数值 Value			单位 Unit
				Min	Typ	Max	
正向电压 Forward voltage	If=400mA	Vf	IR	1.4	--	2.2	V
辐射光功率 Radiation power	If=400mA	φ	IR	--	300	--	MW
辐射强度 Radiation intensity	If=400mA	Ie	IR	120	200	--	mW/Sr
	If=700mA		IR	300	--	--	
视角 Viewing angle at 50% IV	If=400mA	2θ1/2	IR	--	60	--	Deg
峰值波长 Peak wavelength	If=400mA	λp	IR	--	850	--	nm
反向电流 Reverse current	Vr=5V	Ir	IR	--	--	--	μA
显色性指数 Color Rendering Index	If=400mA	CRI	--	--	--	--	Ra

## Typical Optical Characteristics Curves 典型光学特性曲线

Fig.1 – Relative luminous Intensity vs. Forward Current

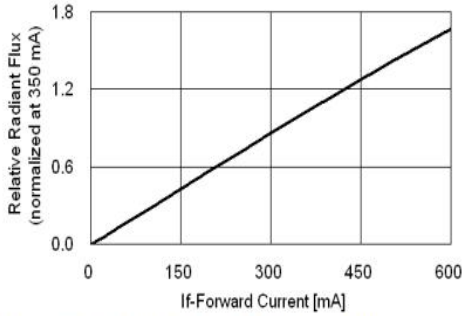


Fig.2 – Forward Current vs. Forward Voltage

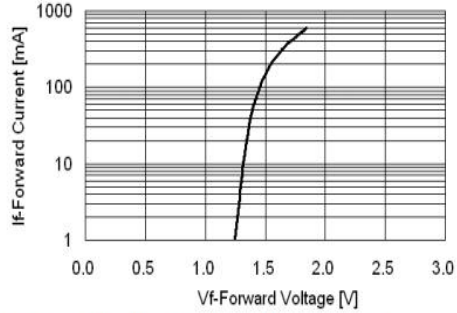


Fig.3 – Relative Radiant Flux (@350mA) vs. Ambient Temperature

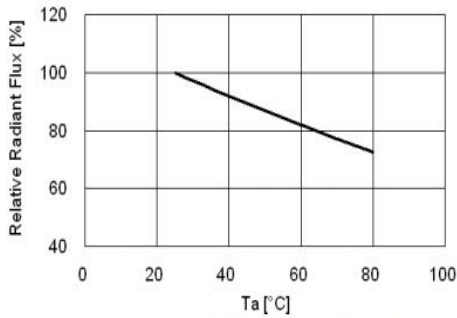


Fig.4 – Forward Voltage (@350mA) vs. Ambient Temperature

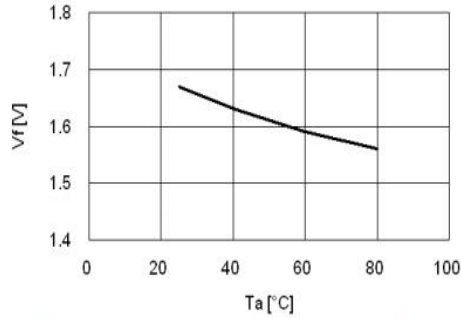


Fig.5 – Peak Wavelength (@350mA) vs. Ambient Temperature

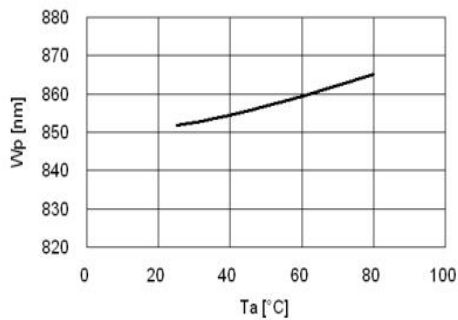
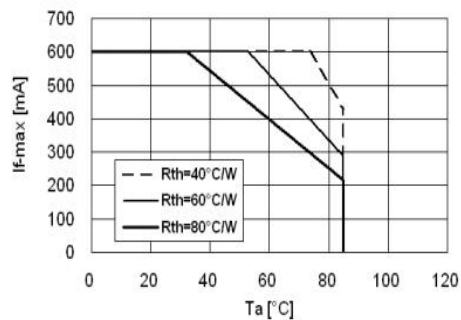
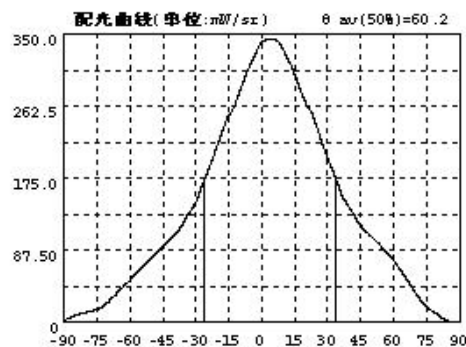
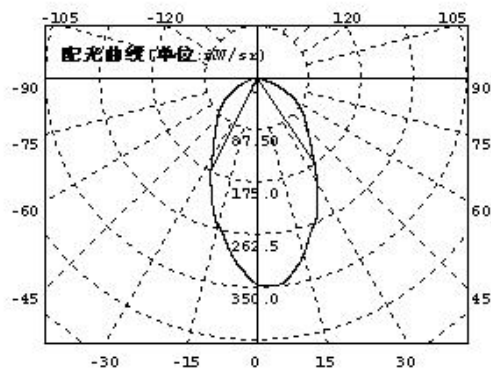


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)



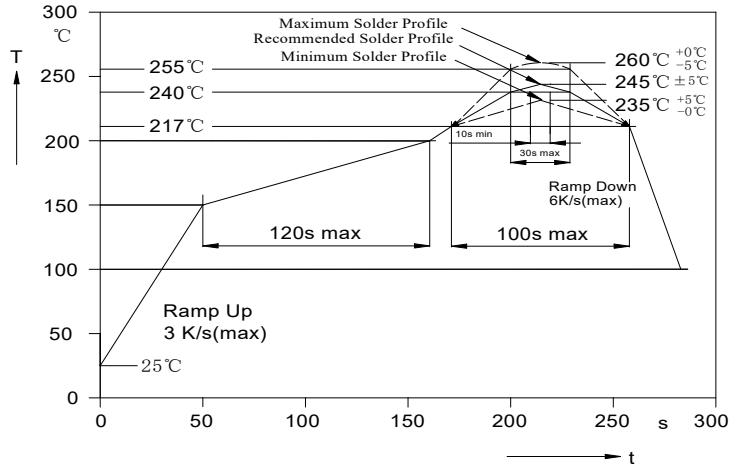
### Intensity distribution curve (400mA test):



**Reflow Profile 炉温**

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

SMD-Reflow Soldering Profile for lead free soldering( Acc.to J-STD-020B)



**Remark:** If not lead free soldering, the recommended solder profile is 230°C and max solder profile is 245°C.

1. 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。
2. Number of reflow process shall be 2 times or less.  
回流焊次数不超过2次。

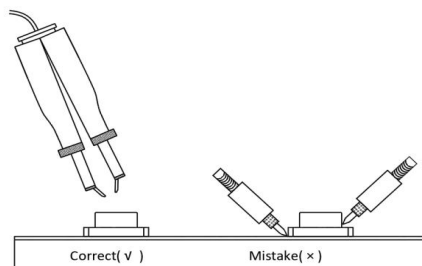
■Soldering iron 烙铁使用

Basic spec is  $\leq 5\text{sec}$  when  $320^\circ\text{C} (\pm 20^\circ\text{C})$ . If temperature is higher, time should be shorter ( $+10^\circ\text{C} \rightarrow -1\text{sec}$ ). Power dissipation of iron should be smaller than 20W, and temperatures should be controllable. Surface temperature of the device should be under  $350^\circ\text{C}$

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  $340^\circ\text{C}$ . 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](http://www.taixingled.com)



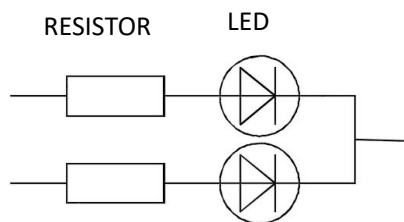
- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow solder etc.  
避免任何物体摩擦或刮擦树脂，在高温下，如回流焊等。

**Handling precautions 使用处理措施** [www.taixingled.com](http://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：

[www.taixingled.com](http://www.taixingled.com)



### 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  $\leq 20$  R.H. with zip-lock sealed.

打开包装后，产品应在一周内用完或以  $\leq 20$  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

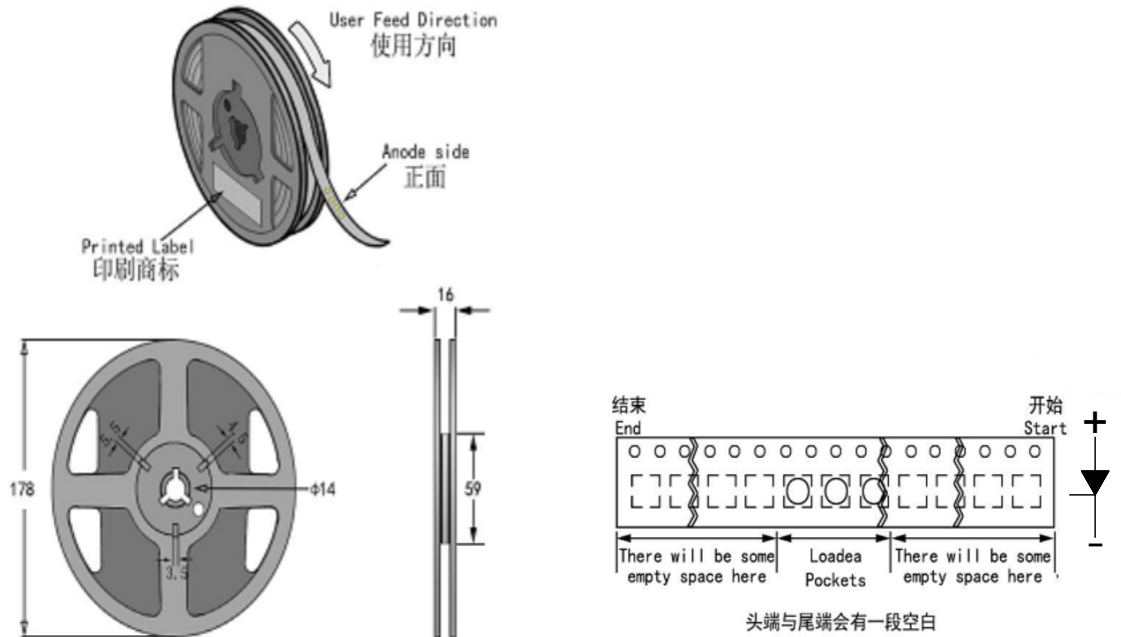
Test Item 测试项目	Test Conditions 测试条件	Standard Test Method 标准试验方法	Note 注意	Number of Test 测试次数
Reflow Soldering 静态回流焊	Ta=260±5℃,Time=10±2S	JB/T 10845-2008	3times	0/22
Temperature Cycling 静态温度迴圈	-40±5℃ 30±1min ↑→(25℃/5±1min)↓ 100±5℃ 30±1min	GB/T 2423.22-2012	100cycles	0/22
High Humidity High Temp. Storage 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℃,@400mA, ψ(%)=25%RH~55%RH	--	1000hrs	0/22
Low Temperature Operating Life 动态低温通电	a=-20±5℃,@400mA,	GB/T 2423.1-2008	1000hrs	0/22

Notes 备注：

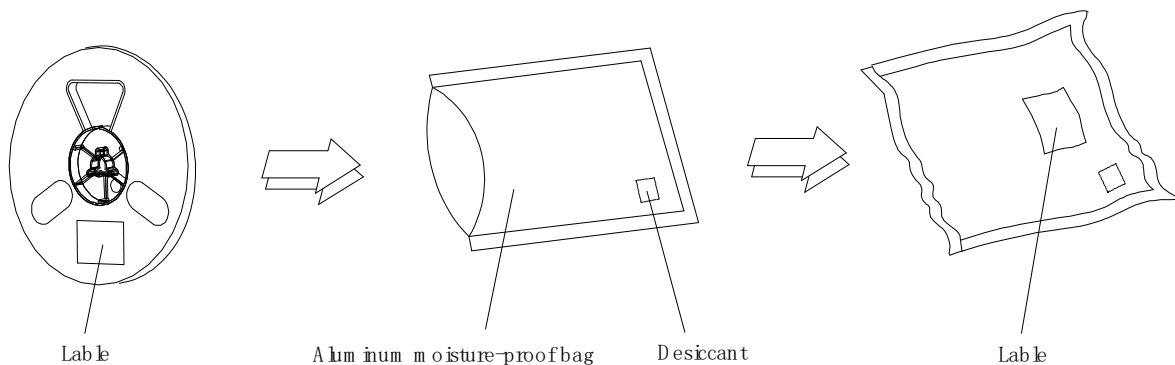
1. The tolerance of luminous intensity (Iv) is ±15% . 发光强度(Iv)公差为±15%。
2. The tolerance of dominant wavelength is ±2nm. 主导波长公差为±2nm。
3. The tolerance of Voltage is ±0.1V. 电压公差为±0.1V [www.taixingled.com](http://www.taixingled.com)
4. This specification is a standard specification of our factory, can make 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 SMD Chip LED Lamps Packaging Specifications 系列贴片LED灯封装规范

● Feeding Direction 编带方向



● Moisture Resistant Packaging 防潮袋包装 [www.taixingled.com](http://www.taixingled.com)



Notes 备注：

1. Empty component pockets are sealed with top cover tape; 用顶盖胶带密封空部件口袋；
2. The maximum number of missing lamps is two; 最多漏灯为2个
3. 8,00pcs/Reel. 800个/盘.

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

● **Transportation Packing 运输包装**

[www.taixingled.com](http://www.taixingled.com)

