

承認書

Specification For Approval

Customer: _____

Description: SMD2835蓝光0.5W

Part number: TJ-S2835B05YK18-A3

Date: _____

Approved By:

Customer			
Check	Inspection	Approval	Date

Prepared By:

TONGJIA			
Drawn	Check	Approval	Date



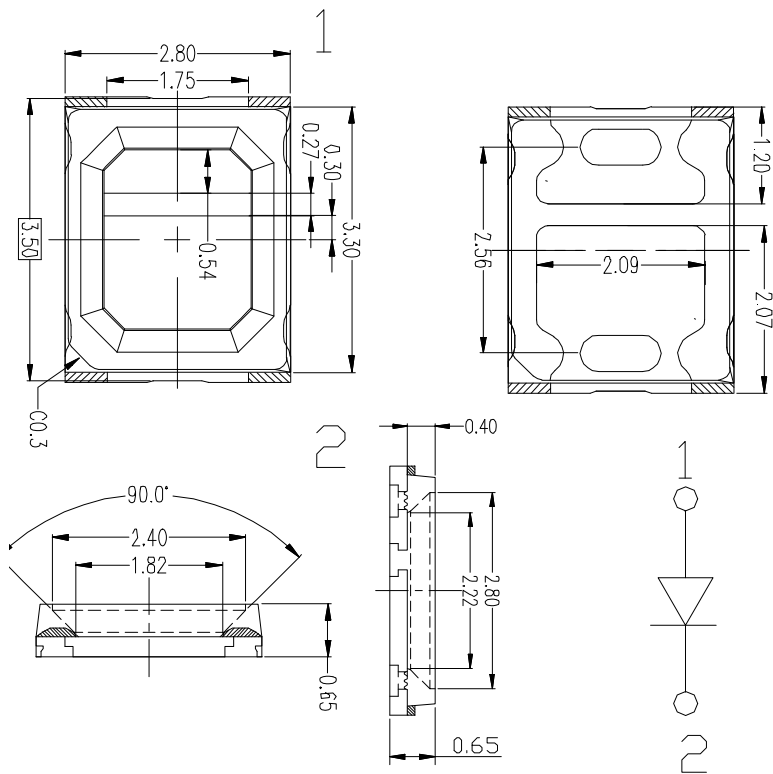
Features

- 2.8mm×3.5mm SMT LED,0.65mm thickness
- Low power consumption
- Wide view angle
- Package: 4000pcs/reel
- RoHS Compliant

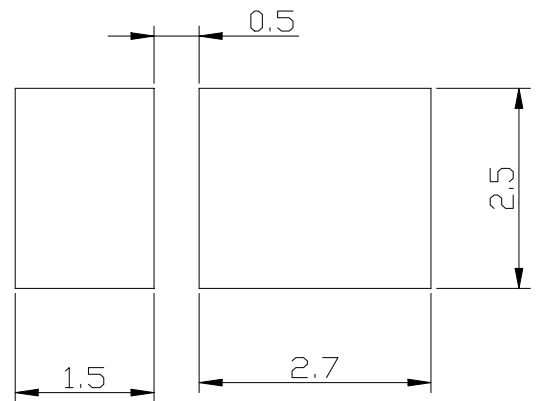
Applications

- Ideal for back light and indicator
- Various colors and lens types available

Package outlines



Recommend Pad Layout



Notes:

- All dimensions are in millimeters (inches);
- Tolerances are $\pm 0.1\text{mm}$ (0.004inch) unless otherwise noted.

极限参数 Absolute maximum ratings

(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Value	单位 Unit
正向电流 Forward current	If	150	mA
反向耐压 Reverse voltage	Vr	5	V
耗散功率 Power dissipation	Pd	480	mW
工作环境温度 Operating temperature range	Top	-25~+80	°C
贮藏温度 Storage temperature range	Tstg	-30~+85	°C
峰值脉冲电流 Peak pulsing current (1/8 duty f=1KHz)	Ifp	200	mA
结温 Junction Temperature	Tj	115	°C/W
静电 Electrostatic Discharge(HBM)	ESD	2000	V

光电特性 Electro-Optical characteristics

(TA=25°C)

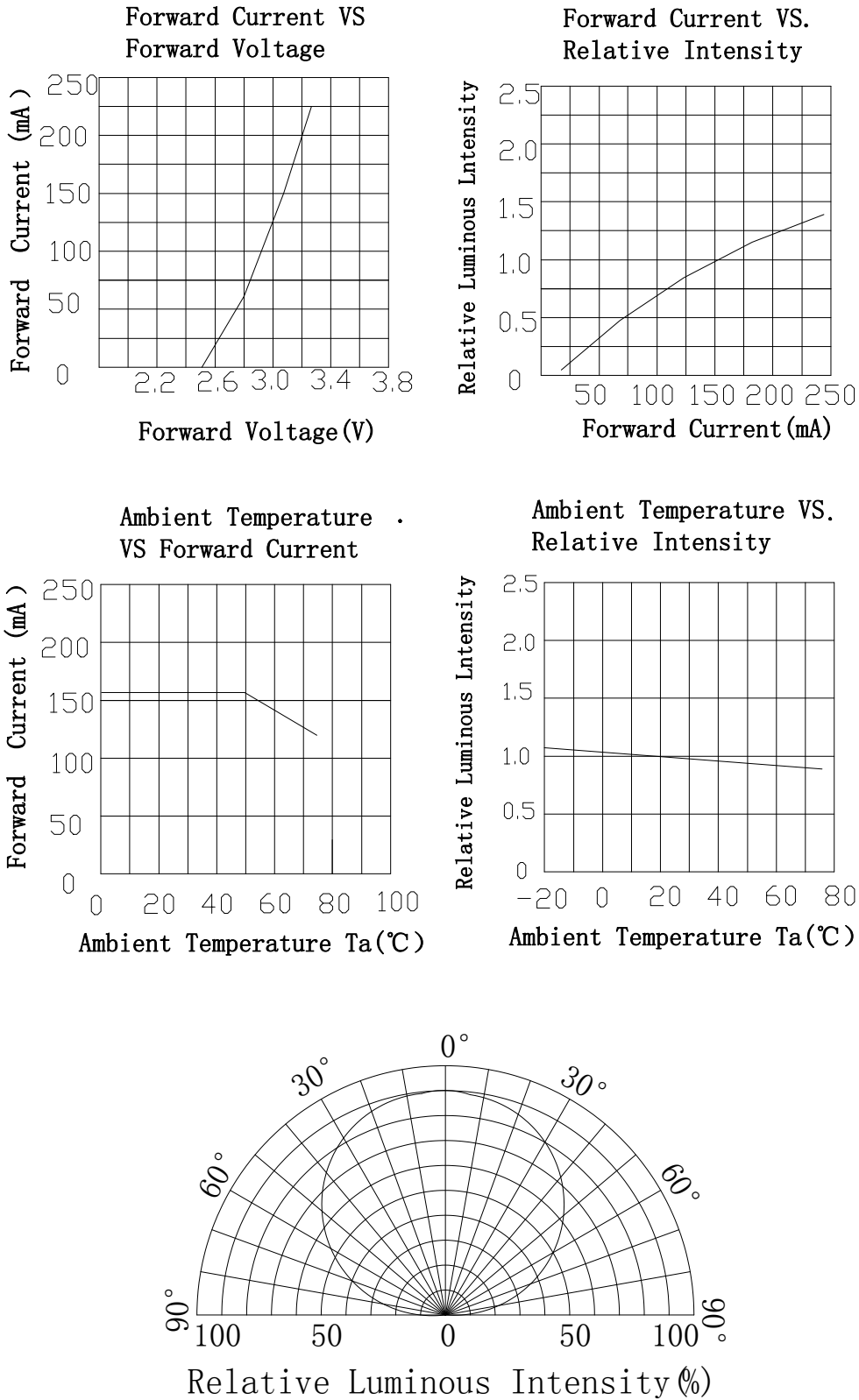
参数 Parameter	测试条件 Test Condition	符号 Symbol	颜色	数值 Value			单位 Unit
				Min	Typ	Max	
色温 Color Temperature	If=150mA	CCT	--	--	--	--	K
正向电压 Forward voltage	If=150mA	Vf	B	2.8	--	3.4	V
光通量 luminous flux	If=150mA	φ	B	8	--	12	LM
视角 Viewing angle at 50% IV	If=150mA	2θ1/2	B	--	120	--	Deg
主波长 Dominant wavelength	If=150mA	λd	B	460	--	470	nm
反向电流 Reverse current	Vr=5V	Ir	B	--	5	--	μA
显色性指数 Color Rendering Index	If=150mA	CRI	--	--	--	--	Ra

1. Tolerance of radiant intensity:±15%
2. Tolerance of dominant wavelength:±1.0nm
3. Tolerance of forward voltage:0.05V

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Optical characteristic curves



可靠性实验项目 Test items and results of reliability

类别 Type	测试项目 Test item	参照标准 Standard	测试条件 Test Conditions	备注 Note	数量 Quantity	不良数量 Number of Damaged
Environmental Sequence	高低温循环 Temperature Cycle	JIS C 7021 (1977)A-4	-25°C 30min ↑↓5min 80°C 30min	100 cycle	22	0
	热冲击 Thermal Shock	MIL-SLD-107D	-25°C 15min ↑↓5min 80°C 15min	50 cycle	22	0
	高湿度热循环 High Humidity Heat Cycle	JIS C 7021 (1977)A-5	30°C (<=>) 65°C 90%RH 24hrs/1cycle	10 cycle	22	0
	高温存储 High Temperature Storage	JIS C 7021 (1977)B-10	T _a =80°C	1000hrs	22	0
	高温高湿存储 Humidity Heat Storage	JIS C 7021 (1977)B-11	T _a =60°C RH=90%	1000hrs	22	0
	低温存储 Low Temperature Storage	JIS C 7021 (1977)B-12	T _a =-30°C	1000hrs	22	0
Operation Sequence	常温寿命测试 Life Test	JIS C 7035 (1985)	T _a =25°C I _F =150mA	1000hrs	22	0
	高温高湿寿命测试 High Humidity Heat Life Test	①	60°C RH=90% I _F =150mA	500hrs	22	0
	低温寿命测试 Low Temperature Life Test	①	T _a =-25°C I _F =150mA	1000hrs	22	0

①请参考可靠性测试标准规范。Refer to reliability test standard specification for in this line.

失效判定标准 Criteria For Judging Damage

测试项目	符号	测试条件	判定标准
正向电压 Forward Voltage	V _F	I _F =I _{FT}	初始值±10% Initial Data±10%
反向电流 Reverse Current	I _R	V _R =5V	I _R ≤ 10μA
光强 Luminous Intensity	I _V	I _F =I _{FT}	平均 I _V 衰减 ≤ 30%，单个平均 I _V 衰减 ≤ 50% Average I _V degradation ≤ 30% Single LED I _V degradation ≤ 50%
耐焊接热 Resistance to Soldering Heat	--	--	材料无内部裂痕、无材料间爆裂、剥离、无死灯 Material without internal cracks, no material between stripped, no deaded light.

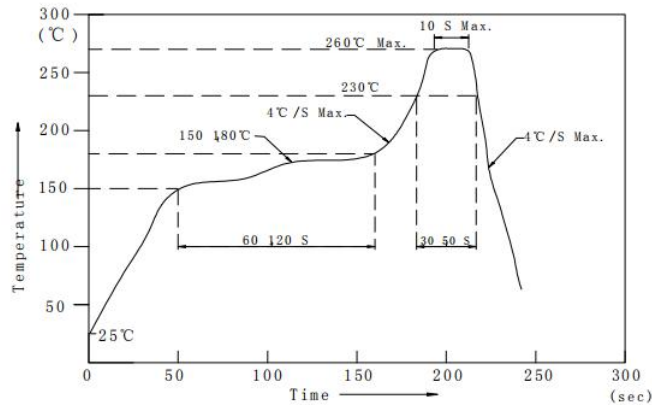
*数据工作表中所示的技术信息仅限于典型特征和电路实例引用的产品。它既不构成工业特性的保证，也不构成任何许可的授权

The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.



Reflow Profile

■ Reflow Temp/Time



Notes:

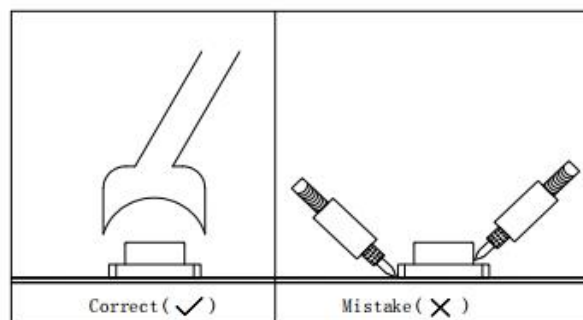
1. We recommend the reflow temperature $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

■ Soldering iron

Basic spec is $\leq 5\text{sec}$ when 260°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 230°C .

■ Rework

1. Customer must finish rework within 5 sec under 260°C .
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.

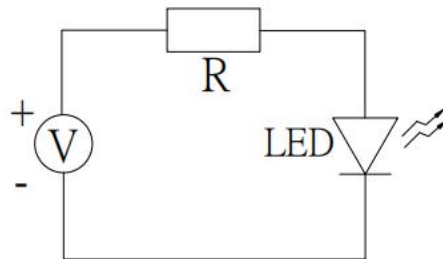


- Avoid rubbing or scraping the resin by any object, during high temperature, for example reflow solder etc.



Test circuit and handling precautions

■ Test circuit



■ Handling precautions

1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60% R.H. Max.

Temperature : 5°C~30°C (41°F~86°F)

2.2 Shelf life in sealed bag: 12 month at <5°C~30°C and <30% R.H. after the package is Opened, the products should be used within a week or they should be keeping to stored at ≤ 20 R.H. with zip-lock sealed.

3. Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs. The Conditions are as followings:

3.1 $60 \pm 3^\circ\text{C}$ x(12~24hrs) and <5%RH, taped reel type

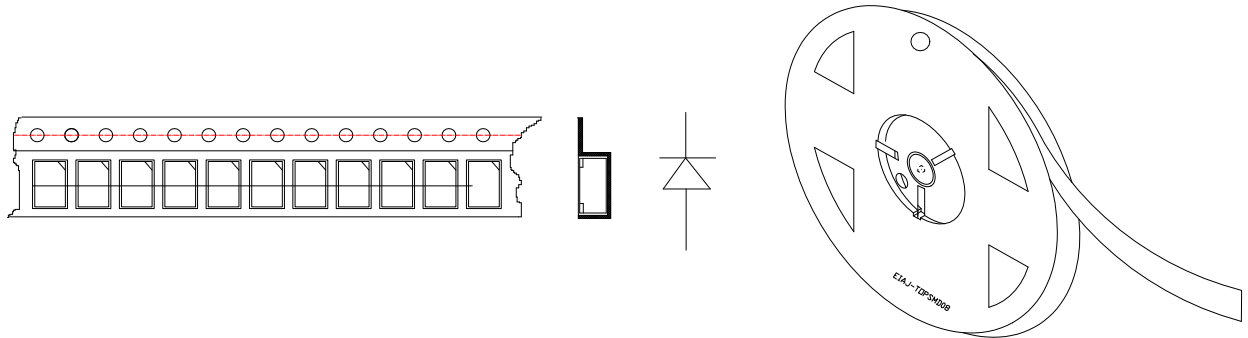
3.2 $100 \pm 3^\circ\text{C}$ x(45min~1hr), bulk type

3.3 $130 \pm 3^\circ\text{C}$ x(15~30min), bulk type

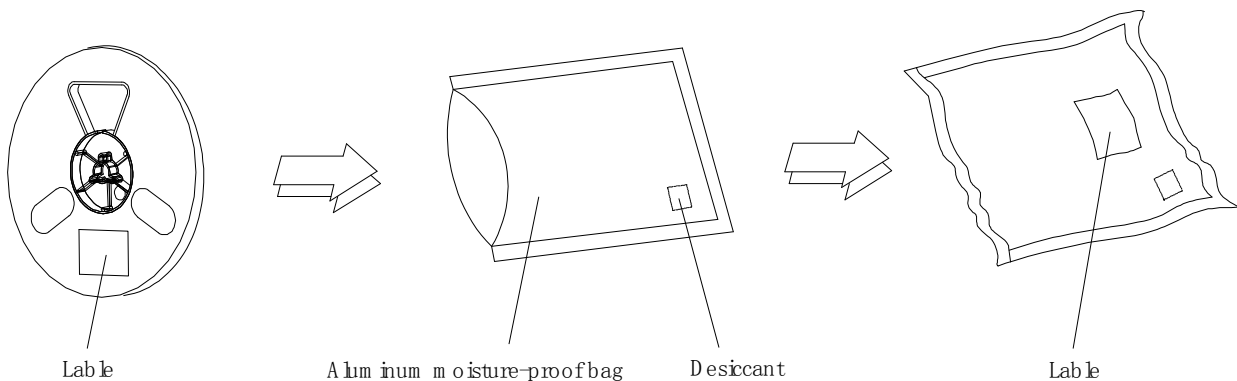


Product packaging specifications and specifications

1、带盘 Tape leader and reel



2、防潮袋包装 Moisture Resistant Packaging



Notes:

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.
4. 4,000 pcs/Reel.

