



Specification

规格书

Customer Name: _____

Customer P/N: 2835 单晶 0.2W

Factory P/N: T-2835BXX-XXXD6-XXXX

Sending Date: 2019.

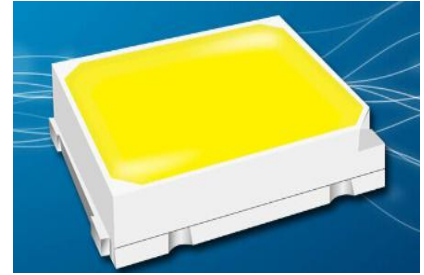
| Client approval 客户审核 | | | Jingrui approval 晶锐光电审核 | | |
|--|-------------|--------------------|----------------------------|-------------|--------------------|
| Approval 核准 | Audit 确认 | Confirmation 制作 | Approval 核准 | Audit 确认 | Confirmation 制作 |
| | | | 罗建浪 | | 唐龙 |
| <input type="checkbox"/> Qualified 接受 | | | DATE: 日期: 2019. | | |
| <input type="checkbox"/> Disqualified 不接受 | | | | | |

1. 此规格书的最终解释权归深圳市晶锐光电有限公司;
2. 此规格书如有更改会另行通知, 但应采用书面形式双方签字盖章方才有效。



Features:

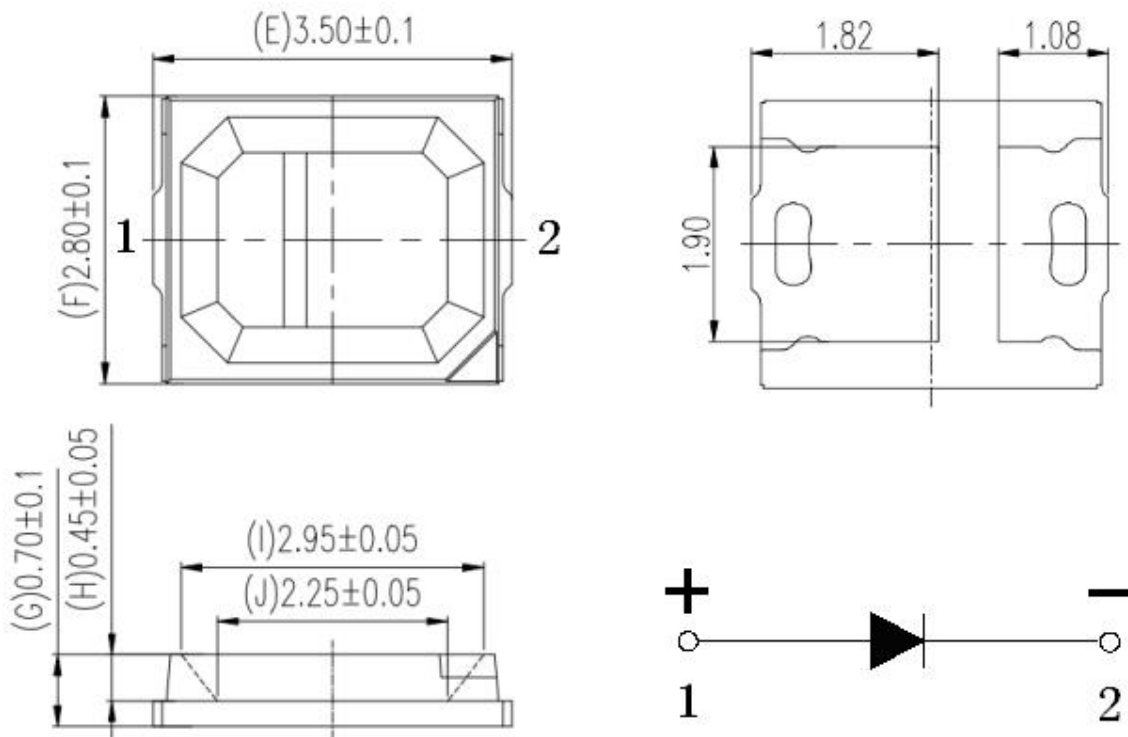
- Package Size: 2.8*3.5*0.7mm
- Emitted Color: White.
- Light-emitting Type
- Soldering Method: SMT Reflow Soldering
- RoHS standard complied.



Applications:

- Flash lamp
- LED Light Tube
- General lighting.

Package Dimension:



ATTENTION



OBSERVE PRECAUTIONS
ELECTROSTATIC
SENSITIVE DEVICES

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.10mm unless otherwise specified.



Selection Guide

| | | |
|---------------------|----------------|-----------------|
| Part No | Chip | Lens Color |
| T-2835BXX-XXD6-XXXX | Material | Yellow Diffused |
| | InGaN/Sapphire | |

Mass Production list

| Part NO | CCT (K) Min | CCT (K) Typ | CCT (K) Max | Φ (lm) Min | Φ (lm) Max | Test Condi-tions |
|---------------------|----------------|----------------|----------------|---------------|---------------|---------------------|
| T-2835BXX-P3D6-XE65 | 6200 | 6450 | 6800 | 24 | 34 | IF=60mA |
| T-2835BXX-P7D6-XF57 | 5500 | 5750 | 6000 | 24 | 30 | IF=60mA |
| T-2835BXX-P1D6-XE50 | 4800 | 5000 | 5200 | 24 | 34 | IF=60mA |
| T-2835BXX-N1D6-XE40 | 3800 | 4000 | 4200 | 24 | 34 | IF=60mA |
| T-2835BXX-W5D6-XE35 | 3300 | 3500 | 3700 | 24 | 34 | IF=60mA |
| T-2835BXX-W3D6-XE30 | 2900 | 3000 | 3100 | 20 | 30 | IF=60mA |
| T-2835BXX-W2D6-XE27 | 2600 | 2700 | 2800 | 20 | 30 | IF=60mA |

Electrical/optical characteristics(Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Condition |
|-----------------------|----------------|------|------|------|------|--------------------|
| Forward Voltage | V _f | 2.8 | -- | 3.2 | V | IF=60mA |
| Viewing Angle | 2θ1/2 | -- | 120 | -- | deg | |
| Color Rendition Index | R _a | 80 | -- | -- | | |
| Reverse Current | I _R | -- | --- | 5 | μA | V _r =5V |

Note:

1. Tolerance of luminous intensity is ±10%.
2. Tolerance of forward voltage is ±0.03V.

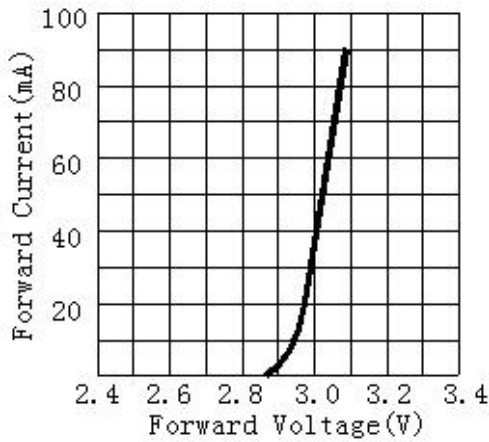


Absolute Maximum Ratings at Ta=25 °C

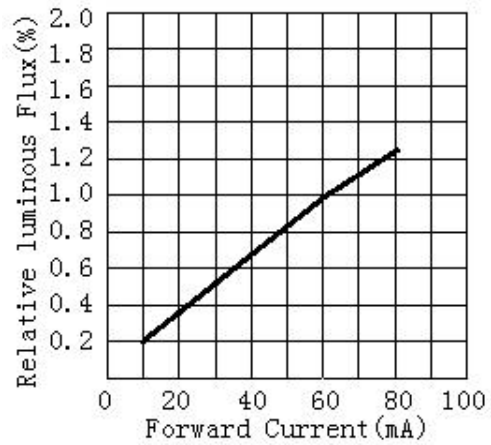
| Parameter | Symbol | Rating | Units |
|---|--------|----------------------|-------|
| Power Dissipation | Pd | 200 | mW |
| Forward Current | IF | 60 | mA |
| Peak Forward Current (1/10Duty Cycle,0.1ms Pulse Width.) | IFP | 90 | mA |
| Reverse Voltage | VR | 5 | V |
| Operating Temperature | Topr | -30°C~85°C | - |
| Storage Temperature | Tstg | -40°C~100°C | - |
| Electrostatic Discharge (HBM) | ESD | 2000 | V |
| Junction Temperature | Tj | 115 | °C |
| Soldering Temperature | Tsol | 240 (for 10 seconds) | °C |



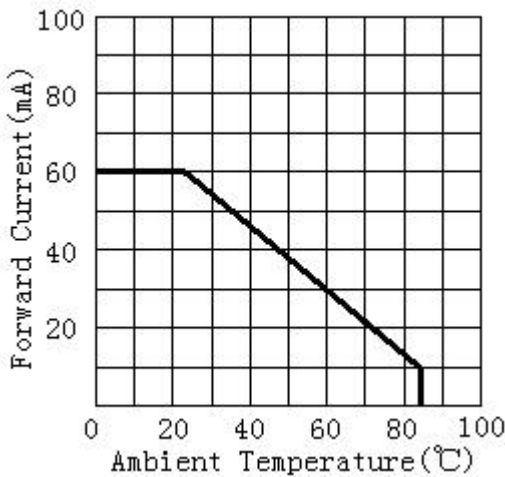
Typical Electrical/Optical Characteristics Curves



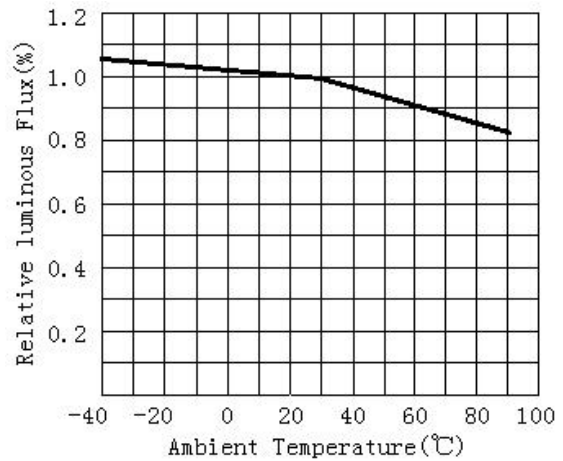
Forward Current VS. Forward Voltage



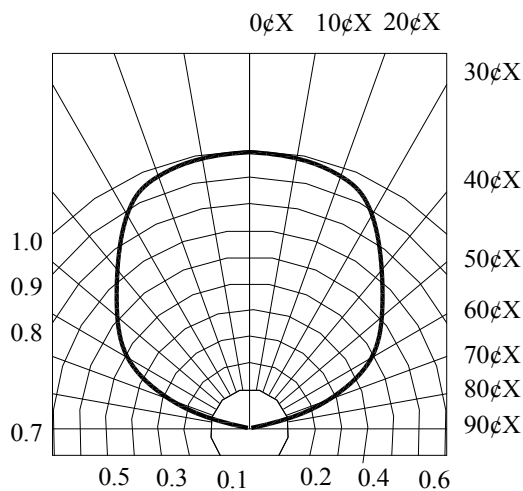
Relative Luminous Flux VS. Forward Current



Forward Current VS. Ambient Temperature



Relative Luminous Flux VS. Ambient Temperature



Radiation Diagram



Label Description

| | | | |
|--|---------------------------------|--------------------------------------|---------------------------------|
|  深圳市晶锐光电有限公司 ShenzhenJingrui photoelectric Co.,Ltd SMD model: <u>XXXXXXXXXXXXXXXXXX</u> | | SMD model: <u>XXXXXXXXXXXXXXXXXX</u> | |
| Lot NO: <u>XXXXXXXXXXXXXXXXXX</u> | | Lot NO: <u>XXXXXXXXXXXXXXXXXX</u> | |
| VF: <u>xxxx</u> | IF: <u>xxxx</u> | Drive voltage: <u>xxxx</u> | IF: <u>xxxx</u> |
| IV: <u>xxxx</u> | Ra: <u>xxx</u> R9: <u>xxx</u> | IV: <u>xxxx</u> | Ra: <u>xxx</u> R9: <u>xxx</u> |
| LM/W: <u>xxxx</u> | SDCM: <u>xxxx</u> | LM/W: <u>xxxx</u> | SDCM: <u>xxxx</u> |
| CCT: <u>xxxx</u> | BIN: <u>xxxx</u> | CCT: <u>xxxx</u> | BIN: <u>xxxx</u> |
| QTY: <u>xxxx</u> | DATE: <u>xxxx</u> | QTY: <u>xxxx</u> | DATE: <u>xxxx</u> |

Forward Voltage (tolerance is $\pm 0.05V@IF=60mA$):

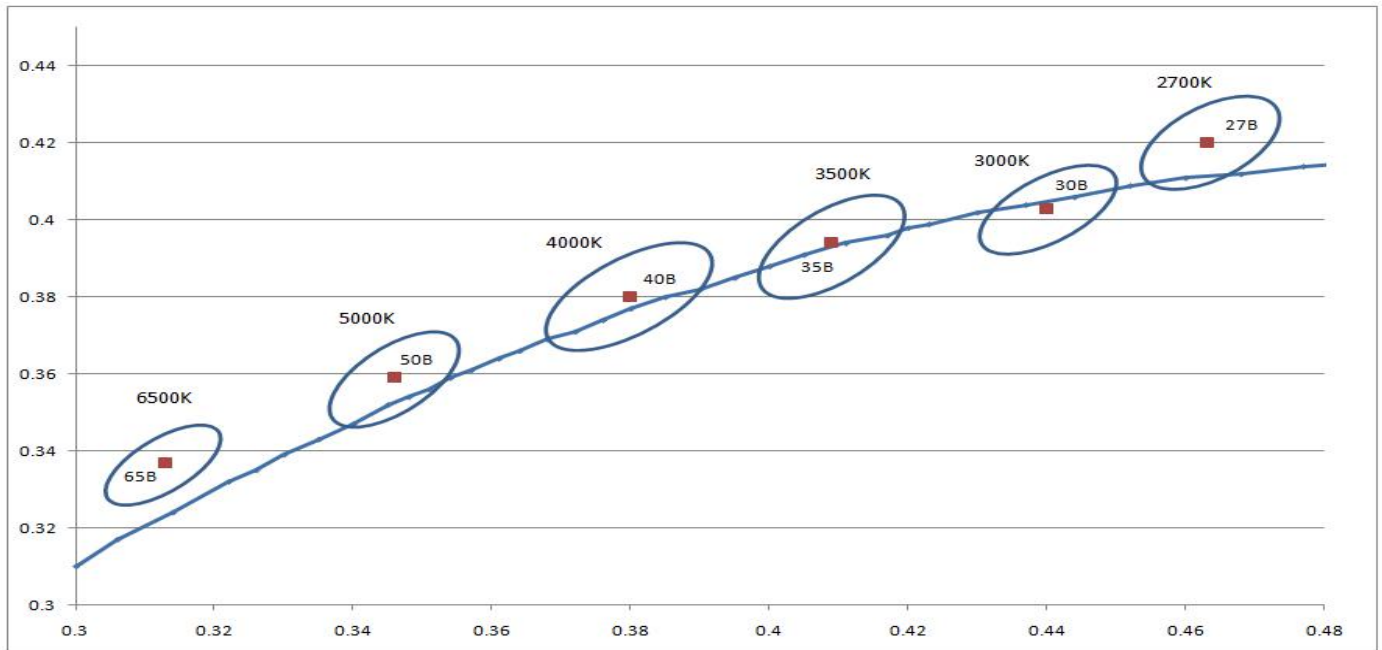
| BIN CODE | Min.(v) | Max.(v) |
|----------|---------|---------|
| | 2.8 | 2.9 |
| | 2.9 | 3.0 |
| | 3.0 | 3.1 |
| | 3.1 | 3.2 |
| | | |

Luminous Flux (tolerance is $\pm 10%@ IF=60mA$):

| CCT(K) | 3500-7000K | | 2400-3500K | |
|----------|------------|-----------|------------|-----------|
| BIN CODE | Min (LM) | Max (LM) | Min (LM) | Max (LM) |
| | 24 | 26 | 22 | 24 |
| | 26 | 28 | 24 | 26 |
| | 28 | 30 | 26 | 28 |
| | 30 | 32 | 28 | 30 |
| | 32 | 34 | 30 | 32 |



CIE Chromaticity Diagram(tolerance is $\pm 0.005@IF=60mA$)

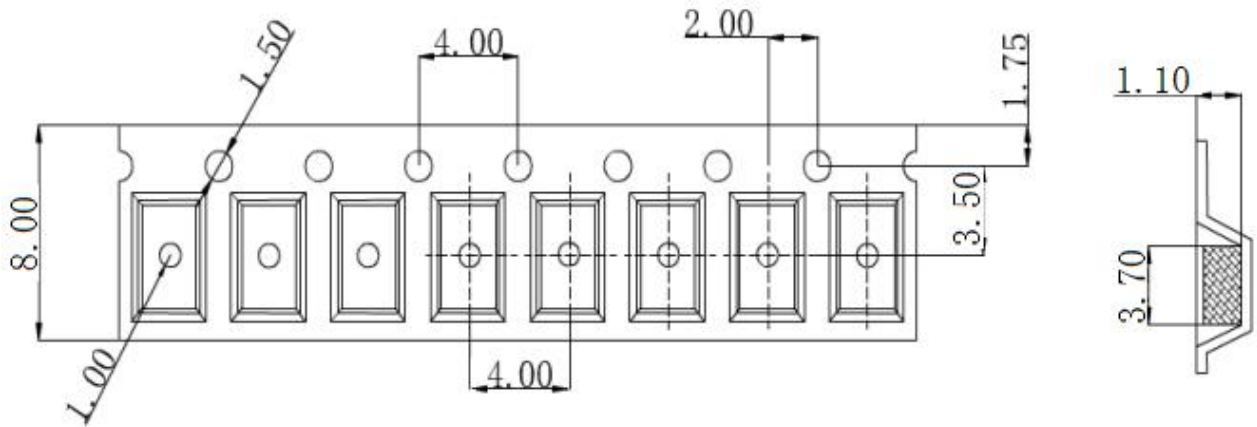


Bin Range of Chromaticity Coordinate

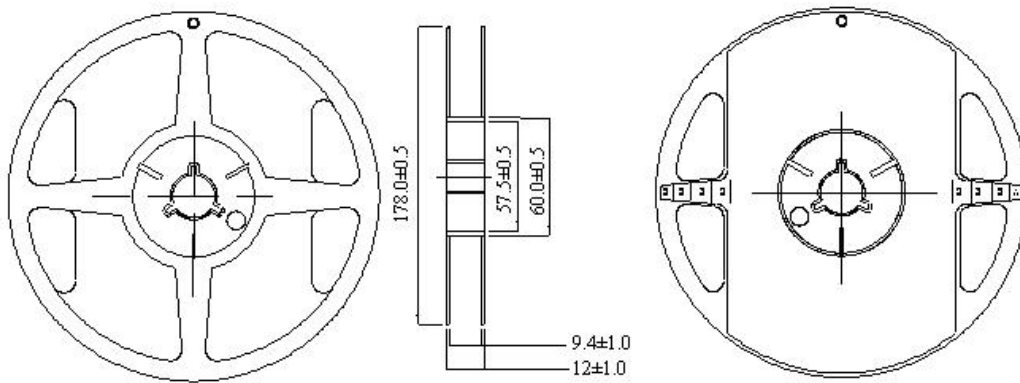
| CCT | Bin code Bin | | CIE-X | CIE-Y |
|-------|--------------|-----------|-------|-------|
| 6500k | E65 | 6200-6800 | 0.313 | 0.337 |
| 5700K | F57 | 5500-6000 | 0.329 | 0.342 |
| 5000K | E50 | 4800-5200 | 0.346 | 0.359 |
| 4000K | E40 | 3800-4200 | 0.380 | 0.380 |
| 3500k | E35 | 3250-3650 | 0.409 | 0.394 |
| 3000K | E30 | 2900-3100 | 0.44 | 0.403 |
| 2700K | E27 | 2600-2800 | 0.463 | 0.42 |

Tapping specifications (Units: mm)

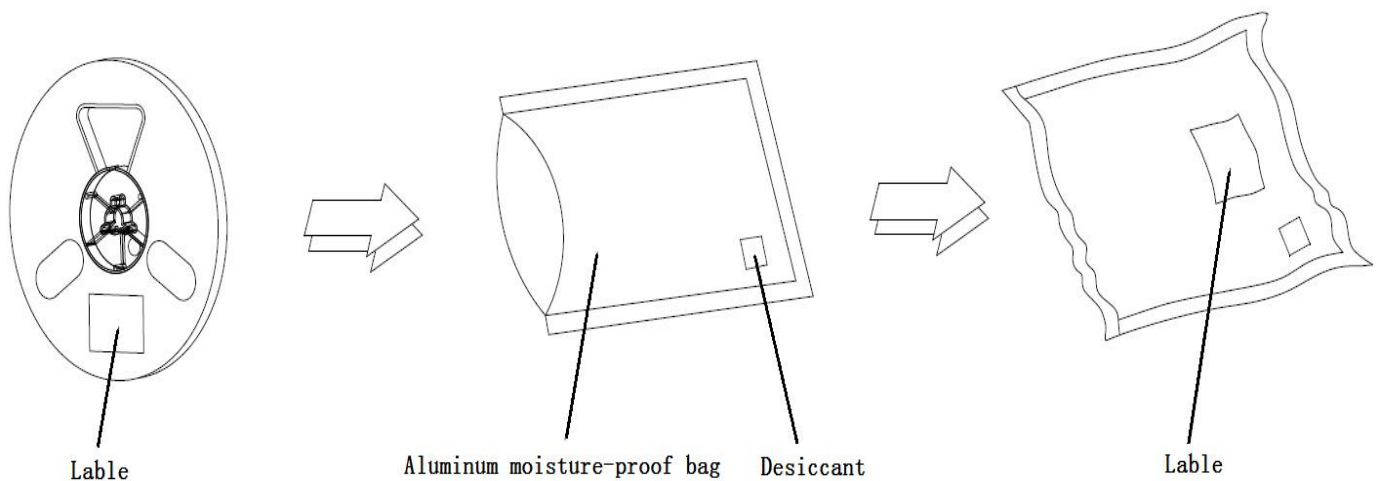
Loaded quantity: 4000 pcs/reel or 18000pcs/reel



Reel Dimensions



Moisture Resistant Packing Process



Reliability Test Items And Conditions:



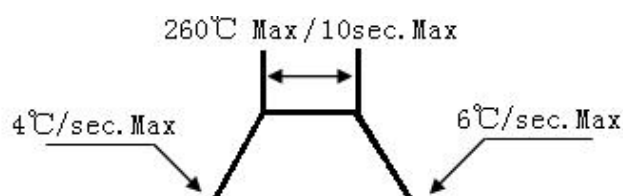
| Test Item | Test Conditions | Time | Quantity | Ac/Re |
|---|--|-------------|----------|-------|
| Reflow | Temp:260°C max T=10sec | 3 times. | 22PCS | 0/1 |
| Temperature Cycle | 100°C ± 5°C/30min ↑ ↓ 5min -40°C ± 5°C/30min | 100 Cycles. | 22PCS | 0/1 |
| Thermal Shock | 100°C ± 5°C/15min ↑ ↓ 5min -40°C ± 5°C/15min | 100 Cycles. | 22PCS | 0/1 |
| High Temperature Storage | Temp. :100°C | 1000Hrs. | 22PCS | 0/1 |
| Low TemperatureStorage | Temp. :-40°C | 1000Hrs. | 22PCS | 0/1 |
| Life Test | Ta=25°C IF=60mA | 1000Hrs. | 22PCS | 0/1 |
| High Temperature High Humidity Life Test | 85°C ± 5°C/85%RH IF=60mA | 1000Hrs. | 22PCS | 0/1 |

Failure Criteria

| Test Items | Symbol | Test Condition | Criteria for Judgment | |
|-----------------|--------|----------------|-----------------------|------------------|
| | | | Min | Max |
| Forward Voltage | VF | IF =60mA | - | Initial Data×1.1 |
| Reverse Current | IR | VR=5V | - | 10μA |
| Luminous Flux | LM | IF=60mA | Initial Data×0.7 | - |

SMT Reflow Soldering Instructions

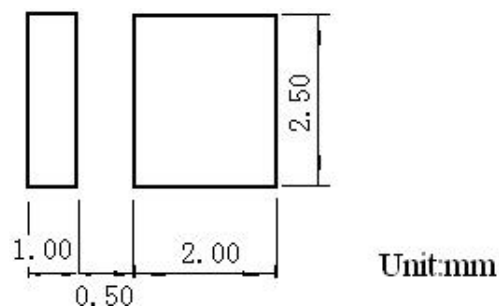
Adr: Shenzhen city
 地址: 广东省深圳
 Tel/电话: 0755-290





1. Reflow soldering shall not be done more than two times.
2. When soldering ,do not put stress on the LEDs during heating.

• Recommended soldering pattern



• Soldering iron

1. When hand solding, keep the temperature of iron below less 300°C less than 3 seconds.
2. The hand solder should be done only one time.

• Repairing

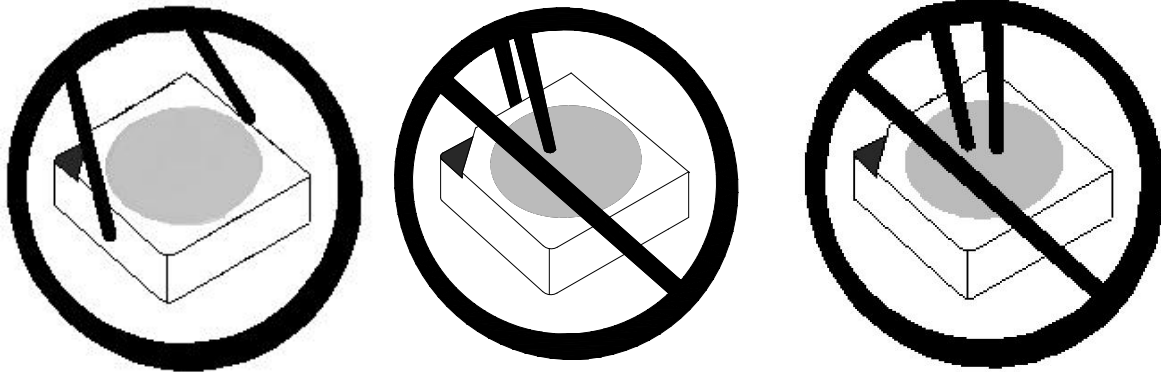
Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure).It should be confirmed in advance whether the characteristics of LEDs will not be damaged by repairing.

• Cautions

The encapsulated material of the LEDs is silicone. Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when use the picking up nozzle, the pressure on the silicone resin should be proper.

Handing Precautions

- 1.Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.



2. When populating boards in SMT production, that mechanical pressure on the surface of the resin must be prevented; A pliable material is suggested for the nozzle tip to avoid scratching or damaging the led surface during pickup.
3. The outer diameter of the smd pickup nozzle should not exceed the size of the led; The inner diameter of the nozzle should be as large as possible.
4. LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material.

Storage

- The LED should be stored at 30°C or less and 60%RH or less before opening the package. The storage shall not be over three month.
- After opening the package, if the LEDs will be infrared reflow solding, Oxygen phase reflow solding or any other welding.
 - a. must be used within 24 hours.
 - b. stored at less than 30%RH.
- If the situation does not satisfy a or b, the LEDs must be roasted.
- If the LEDs need to be roasted, the roast conditions is :65°C±5°C/12hours.
- Acid, alkaliand corrosive gas should be avoided in storage environment and intensively shock and high magnetic field also avoided.

ESD(Static Electricity)

- Static electricity or Peak surge voltage may damage LED and instantaneous voltage shall be avoided when turning on or off the lights.
- Please wear anti-static wrist strap, anti-static glove and anti-static shoes and , and all the equipment as well as instruments must be grounded well. After LED damaged, leakage current increases obviously and forward voltage drops under low current, , which leads failed light under low current.

Cleaning

- Ultrasonic cleaning is not allowed. We recommend isopropyl alcohol or pure alcohol to for cleaning or dipping within 1 minute and reuse after 15 minutes in room temperature. LThe radiant surface shall be clean after cleaning andotherwisemayh influence radiant color.



- Isoamyl acetate, trichloroethylene, acetone, sulfide, nitride, acid, alkaliand salt shall be avoided from LED, which may cause damage toLED.

Test

- The LED should be driven under rated current and current-limiting resistor shall be added in the circuit so as to avoid damage to LED from enormous current fluctuation caused by slight voltage change.
- Surge voltage shall be avoided when the circuit turns on or off, so to not damage the LED.

Other

Radiant color of LED will be slightly changed under different currentand it is recommended that LED is be used in series with resistor.when LED lighted, please don't watch the radiant surface, otherwise LED may damage your eyes.