

东莞东颖光电科技有限公司

DONGGUAN DONG YING OPTOELECTRONICS TECHNOLOGY CO.,LTD.

样品承认书

SPECIFICATION FOR APPROVAL

| | |
|------------------------|--|
| 客户名 Customer | |
| 品名 Product Name | |
| 编号 Version number | |
| 规格 Dimension | |
| 材质 Texture of material | |
| 数量 Number | |
| 日期 Date | |

制造确认 Product confirm and sign

| | | | | |
|-----|-----|-----|----|----|
| 工程部 | 制作部 | 品质部 | 审核 | 签章 |
| | | | | |

检查结果

INSPECT RESULT

☐ 合格

ACCEPT

☐ 不合格

REJECT

客户确认 Customer confirm and sign

| | | | | |
|-----|-----|----|----|----|
| 工程部 | 品管部 | 审核 | 确认 | 签章 |
| | | | | |

检查结果

INSPECT RESULT

☐ 合格

ACCEPT

☐ 不合格

REJECT

说明 REMARK:

■样品 (sample)

产品名: _____

物料编号: _____

检验员: _____

日期: _____

Features:

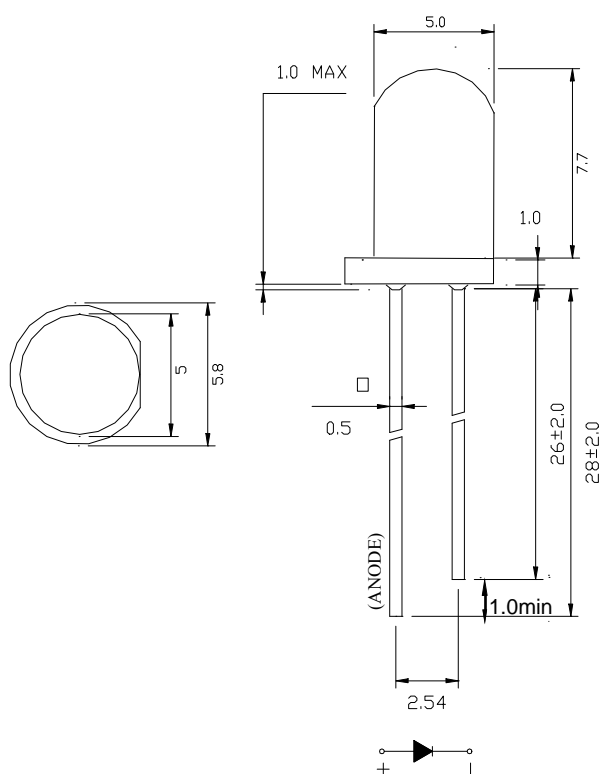
- . Choice of various viewing angles
- . Available on tape and reel.
- . Reliable and robust
- . Pb free
- .The product itself will remain within RoHS compliant version.

Technical Data Sheet

This product is generally used as indicator and luminary for electronic equipment such as household appliance, communication equipment, and dashboard.

Applications

- TV set
- Monitor
- Telephone
- Computer

Package Dimensions:**NOTES**

- 1.All dimensions are in millimeters .
- 2.Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.

DONGGUAN DONG YING OPTOELECTRONICS TECHNOLOGY CO.,LTD.

5YY4-Y-T

Selection Guide

| Part No. | Dice | Lens Type | Luminous intensity(mcd) @ 20mA | | | Viewing Angle |
|----------|---------------------|--------------------|-----------------------------------|-----|-----|------------------|
| | | | Min | Typ | Max | 201/2 |
| 5YY4-Y-T | Yellow (AlGaInP) | Yellow Diffused | 200 | - - | 300 | 20 |

Note:

1.1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

2.the above luminous intensity measurement allowance tolerance $\pm 15\%$

Electrical / Optical Characteristics at Ta=25°C

| Parameter | Symbol | Min. | Typ. | Max | Units | test conditions |
|---------------------|-------------|------|------|-----|-------|-----------------|
| Forward Voltage | VF | 1.8 | 2.0 | 2.4 | V | IF=20mA |
| Reverse Current | IR | - - | - - | 10 | uA | VR = 5V |
| Dominate Wavelength | λ_d | 585 | - - | 590 | nm | IF=20mA |

Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Rating | Units |
|--|--------|---------------------|-------|
| Power Dissipation | Pd | 60 | mW |
| DC Forward Current | IF | 20 | mA |
| Peak Forward Current [1] | IFP | 60 | mA |
| Reverse Voltage | VR | 5 | V |
| Electrostatic Discharge | ESD | 2000 | V |
| Operating Temperature | Topr | -40~+80 | °C |
| Storage Temperature | Tstg | -40~+100 | °C |
| Lead Soldering Temperature [1.6mm(.063") From Body] | | 250°C for 5 seconds | |

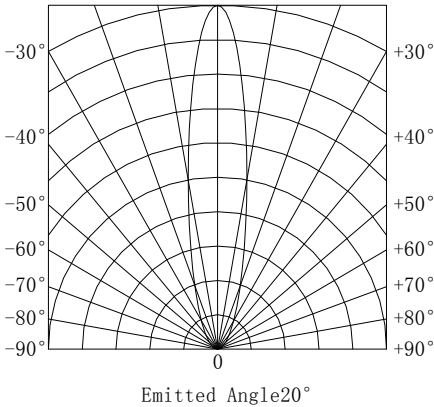
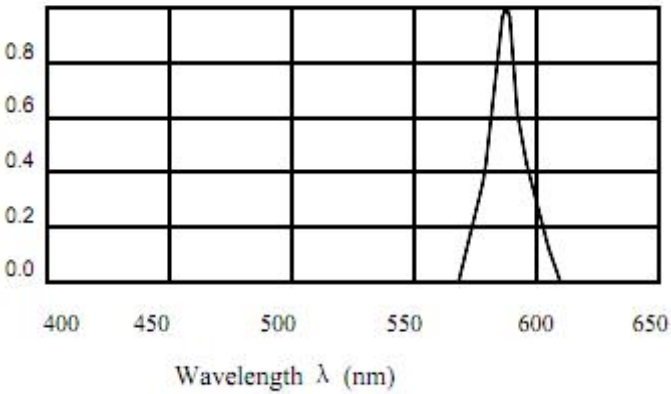
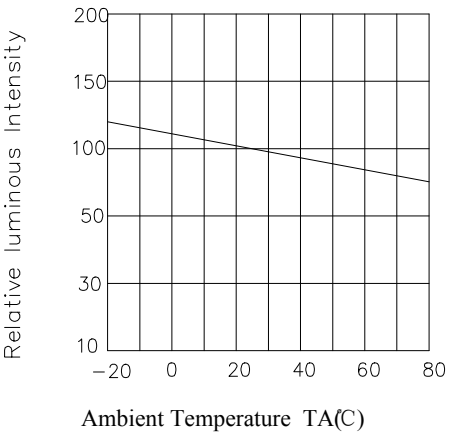
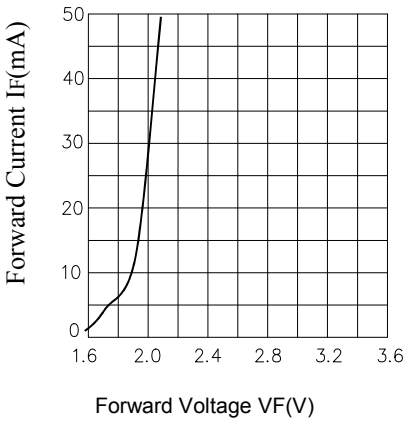
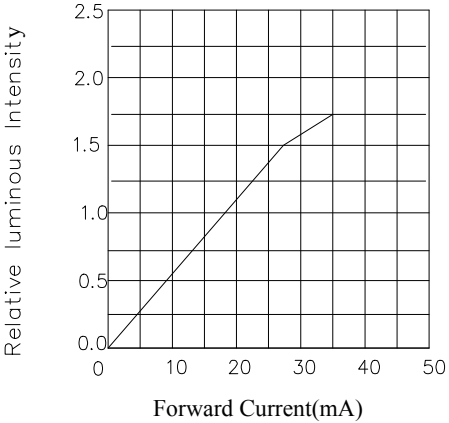
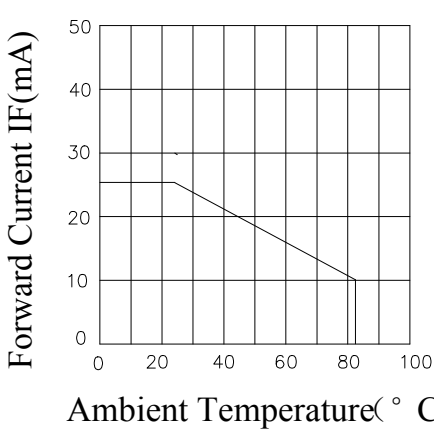
Note:

1. 1/10 Dut cycle,0.1ms pulse width.

2. The above forward voltage measure ment allowance tolerance $\pm 0.1V$.

Typical optical characteristics curves

Ambient Temperature VS. Forward Current



Reliability Test

| Classification | Test Item | Test Condition | Sample | AC/Re |
|--------------------|---|--|--------|-------|
| Endurance Test | Operation Life | Ta=Under Room Temperature As Per Data Sheet Maximum Rating *Test Time=1000HRS(-24HRS,+72HRS) | 22 | 0/1 |
| | High Temperature High Humidity Storage | Ta=85℃ RH=85% Test Time=1000HRS± 2HRS | 22 | 0/1 |
| | High Temperature High Humidity Reverse BIAS | Ta=85℃ RH=85% Test Time=500HRS(-24HRS,+48HRS) | 22 | 0/1 |
| | High Temperature Storage | Ta=105±5℃ *Test Time=1000HRS(-24HRS,+72HRS) | 22 | 0/1 |
| | Low Temperature Storage | Ta=-40±5℃ *Test Time=1000HRS(-24HRS,+72HRS) | 22 | 0/1 |
| | | | | |
| Environmental Test | Temperature Cycling | 105℃ ~ 25℃ ~ -40℃ ~ 25℃ 30mins 5mins 30mins 5mins 10Cycles | 22 | 0/1 |
| | Thermal Shock | 105℃±5℃ ~-40℃±5℃ 10mins 10mins 10Cycles | 22 | 0/1 |
| | Solder Resistance | T.sol=260±5℃ Dwell Time=10±1secs | 22 | 0/1 |
| | Solderability | T.sol=230±5℃ Dwell Time=5±1secs | 22 | 0/1 |

The appearance and specifications of the product may be modified for improvement,without prior notice.

1.Storage time

LED can be stored for a year under the condition:the temperature of 5℃-28℃ and humility of RH60%,These production must be re-inspected and tested before use if their storage time exceed a year.

2.ESD countermeasure

Static electricity and high volt can damage LED,The production whose Die material is InGa must strictly required to prevent ESD,must put on static glove and static fillet,Soldering tool and the cover of device must connect the ground, soldering condition follows the related stating of production specification manual.

3.Soldering

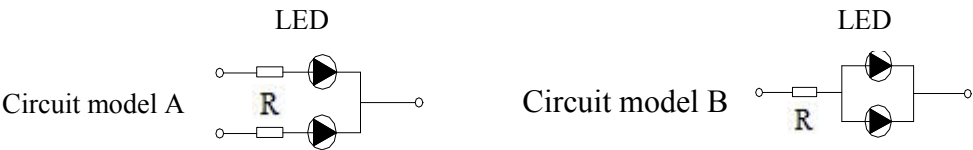
When soldering leave a minimum of 2mm clearance from the base of the lens to the soldering point.
Dipping the lens into the solder must be avoided.
Do not apply any external stress to the lead frame during soldering while the LED is at high temperature.
Recommended soldering conditions:

| Soldering iron | | Wave soldering | |
|----------------|------------------------------|-------------------------------|------------------------|
| Temperature | 320℃ Max | Pre-heat Pre-heat time | 100℃ Max 60 sec.Max |
| Soldering time | 3 sec.Max (one time only) | Solder wave Soldering time | 250℃ Max 5 sec.Max |

Note: Excessive soldering temperature and/or time might result in deformation of the LED lens or catastrophic failure of the LED.

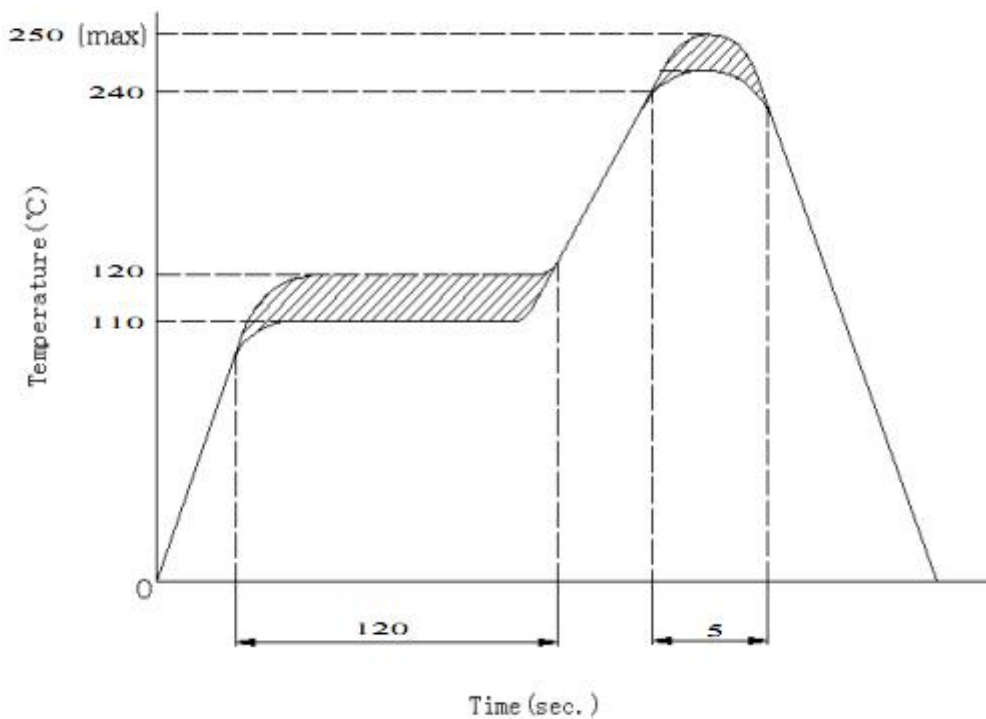
4.Drive Method

An LED is a current-operated device,In order to ensure intenity 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 A below.



- (A)Recommended circuit
- (B)The brightness of each LED might appear different due to the differences in the I-V characteristics of those LEDs.

Soldering temperature curve chart



NOTES

- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature. DXJ