

Shvabe Opto-Electronics (Meizhou) Co., Ltd
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DATASHEET

Product LED
Model S-3528YC-T30
Lens Color Water Clear
Source Color Yellow
Date 14.03.2017
Version 1.0

FOR REFERENCE ONLY

Shvabe Opto-Electronics (Meizhou) Co., LTD

Post address:

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Guangdong Province, China



Management:

CEO of Shvabe Opto-Electronics (Meizhou) Co., LTD - Danil Fomchenko

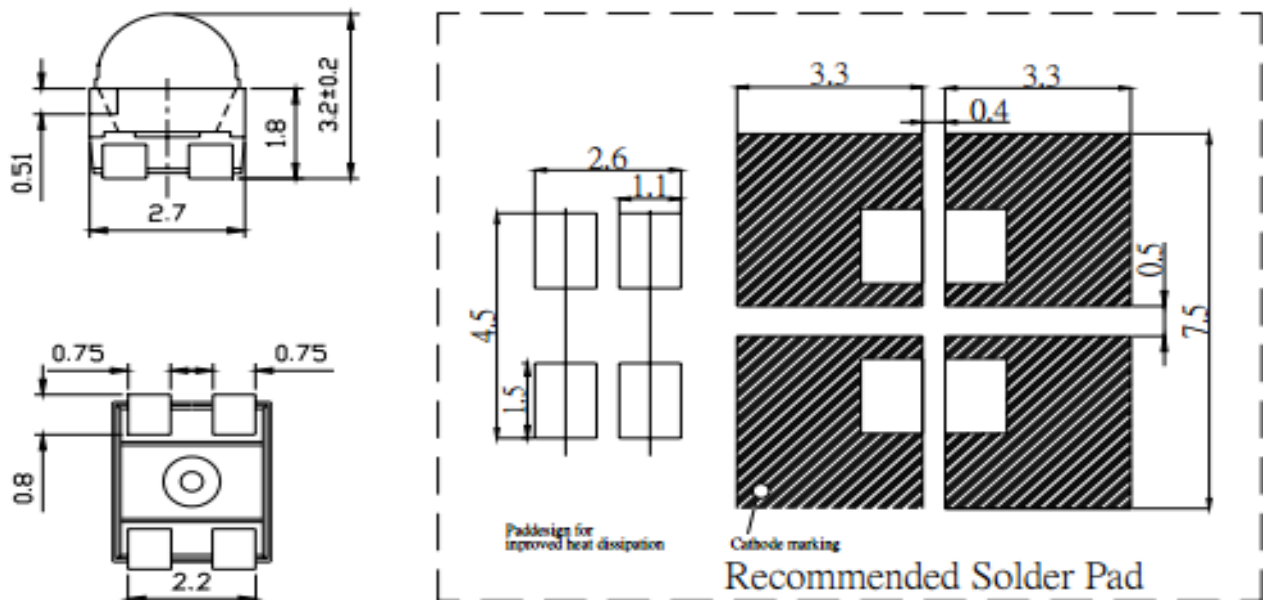
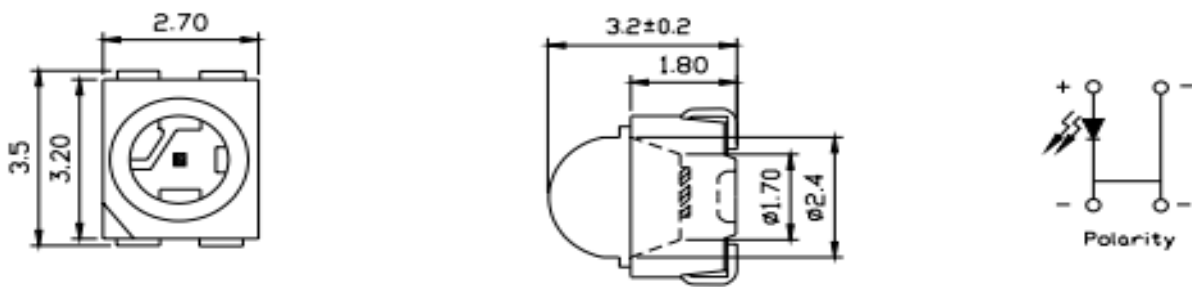
Applications:

- 1) Traffic lights
- 2) Backlighting
- 3) Marker lights
- 4) Substitution of micro incandescent lamp
- 5) Interior and exterior automotive lighting

Appearance:



Dimensions:



Notes:

1. All dimensions are in millimeters.
 2. Tolerance is $\pm 0.20\text{mm}$ unless otherwise noted.
 3. Protruded resin under flange is 1.0mm max
 4. Lead spacing is measured where the leads emerge from the package.
 5. Caution in ESD: Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED.
- All devices, equipment and machinery must be properly grounded.

Absolute Maximum Ratings at Ta=25°C

| Items | Symbol | MAX. | Unit |
|----------------------------|-------------------|--------------------------|------|
| Power Dissipation | P _D | 180 | mW |
| Peak Forward Current | I _{FP} | 200 | mA |
| Continuous Forward Current | I _F | 50 | mA |
| Operating Temperature | T _{opr} | -40~ +85 | °C |
| Storage Temperature | T _{stg} | -40~ +100 | °C |
| Lead Soldering Temperature | T _{slid} | +235~ +240 for 5 seconds | °C |

Electrical / Optical Characteristics at Ta=25°C (If=20mA only)

| Items | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|---------------------|--------|------|------|------|------|----------------|
| Luminous Intensity | IV | 4000 | 5000 | 6000 | mcd | If=20mA |
| Viewing Angle | 2θ1/2 | 25 | 30 | 35 | Deg | If=20mA |
| Dominant Wavelength | λd | 588 | 590 | 596 | nm | If=20mA |
| Forward Voltage | VF | 1,9 | 2,1 | 2,45 | V | If=20mA |
| Reverse Current | IR | --- | --- | 10 | μA | VR=5V |

Notice:

1) The tolerance of intensity:±15%, The tolerance of wave length:±1nm,The tolerance of forwards voltage: ±0.05V. Only reference for above data when testing.

2) The parameters of "Forward Voltage" have not relation with parameters of "Luminous Intensity", "Viewing Angle" and "Dominant Wavelength". Specified parameters of the voltage is independent of them.

Additional testing results (for reference only)

| | | | | | | | | |
|--------------------|-----|------|------|------|------|------|------|-------|
| Forward Current | mA | 10 | 15 | 20 | 25 | 30 | 40 | 50 |
| Forward Voltage | V | 1,96 | 2,01 | 2,06 | 2,09 | 2,14 | 2,18 | 2,28 |
| Luminous Intensity | mcd | 2533 | 3660 | 5307 | 6639 | 7498 | 8527 | 10997 |

Notice:

1. Suggest current is 20mA
2. If work at max 20mA, the guaranty working is 2 years

Typical Electrical / Optical Characteristics Curves

at $T_a=25^{\circ}\text{C}$ Unless Otherwise Noted

Figure №1

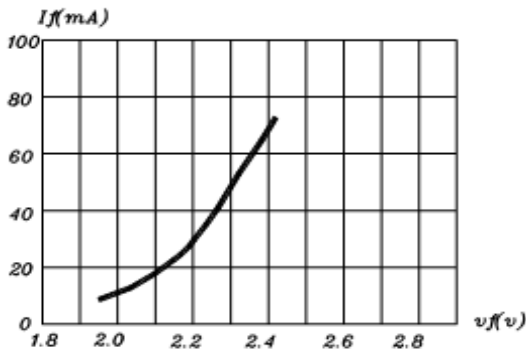


Fig.1 Forward current vs. Forward Voltage

Figure №2

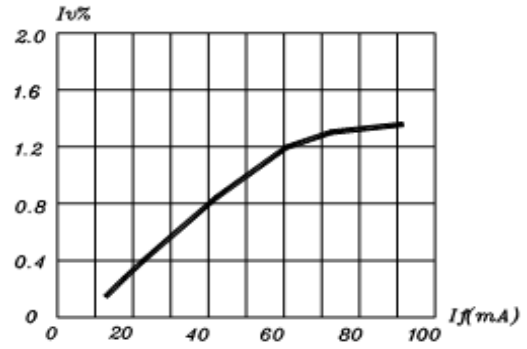


Fig.2 Relative luminous Intensity vs. Forward Current

Figure №3

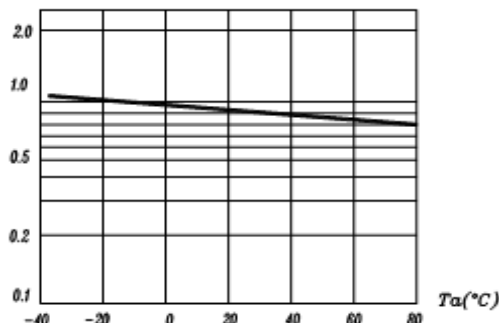


Fig.3 Relative luminous Intensity vs. Ambient Temperature

Figure №4

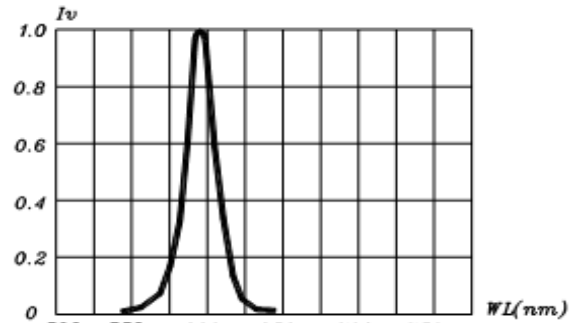


Fig.4 Relative luminous Intensity vs. Wavelength

Figure №5

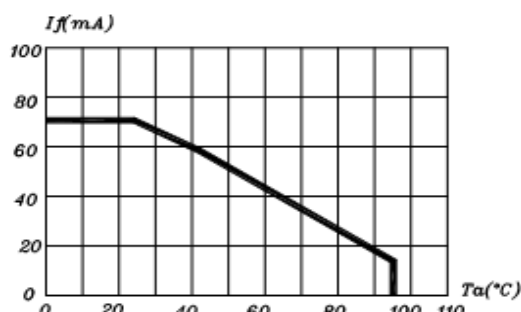
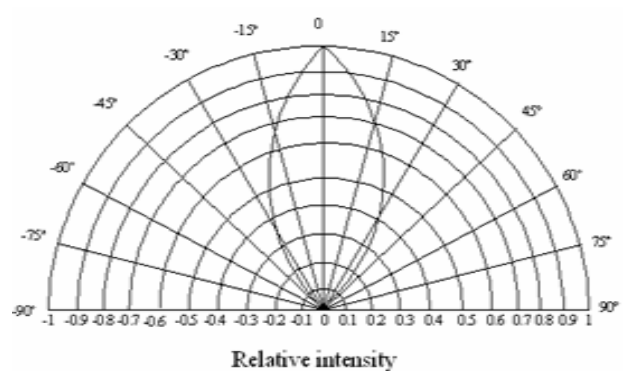


Fig.5 Maximum Forward Current vs. Ambient Temperature

Figure №6



Explanation:

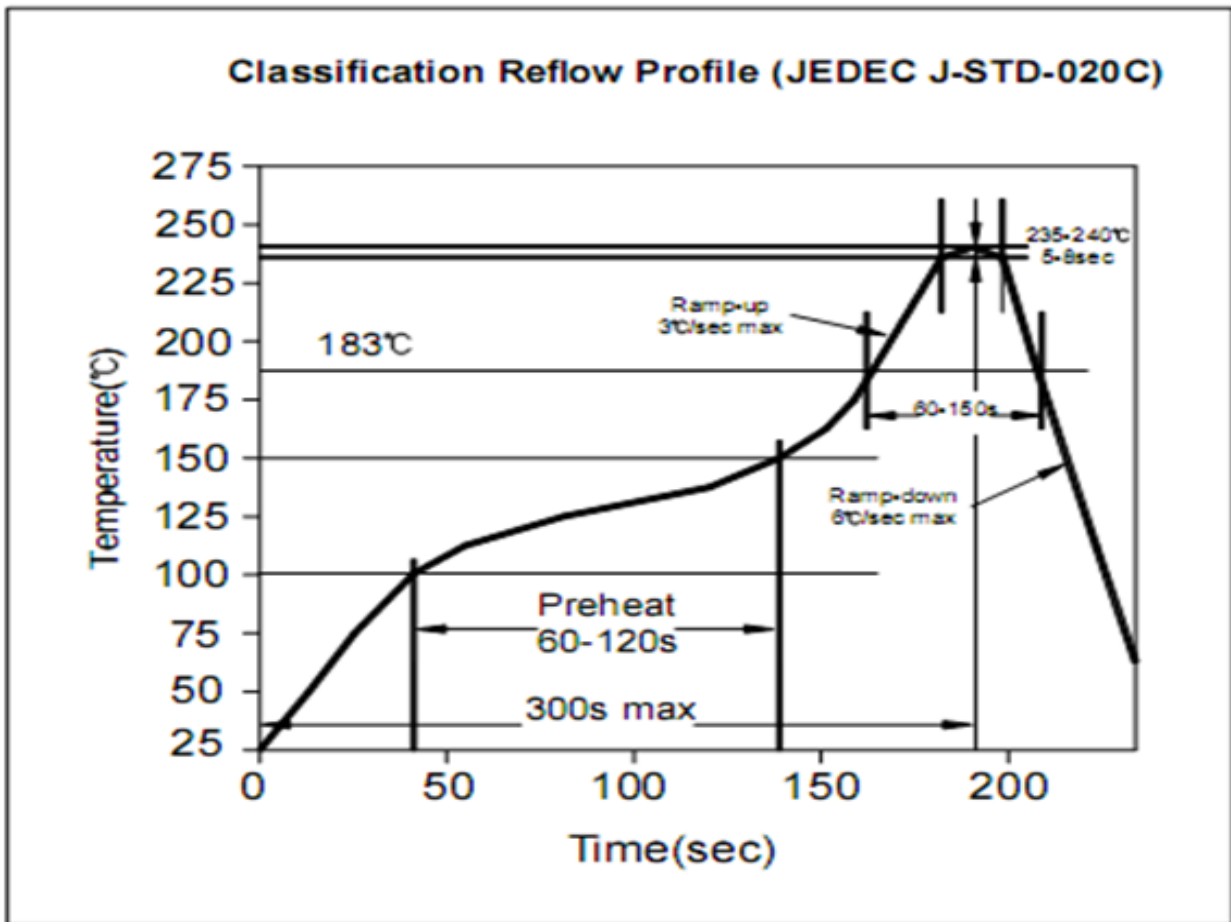
№2 figure: Different current has different percent of brightness. 0.4 is nominal - 20mA.

№3 figure: When LED in non-operating state, the luminous intensity changes due to the ambient temperature.

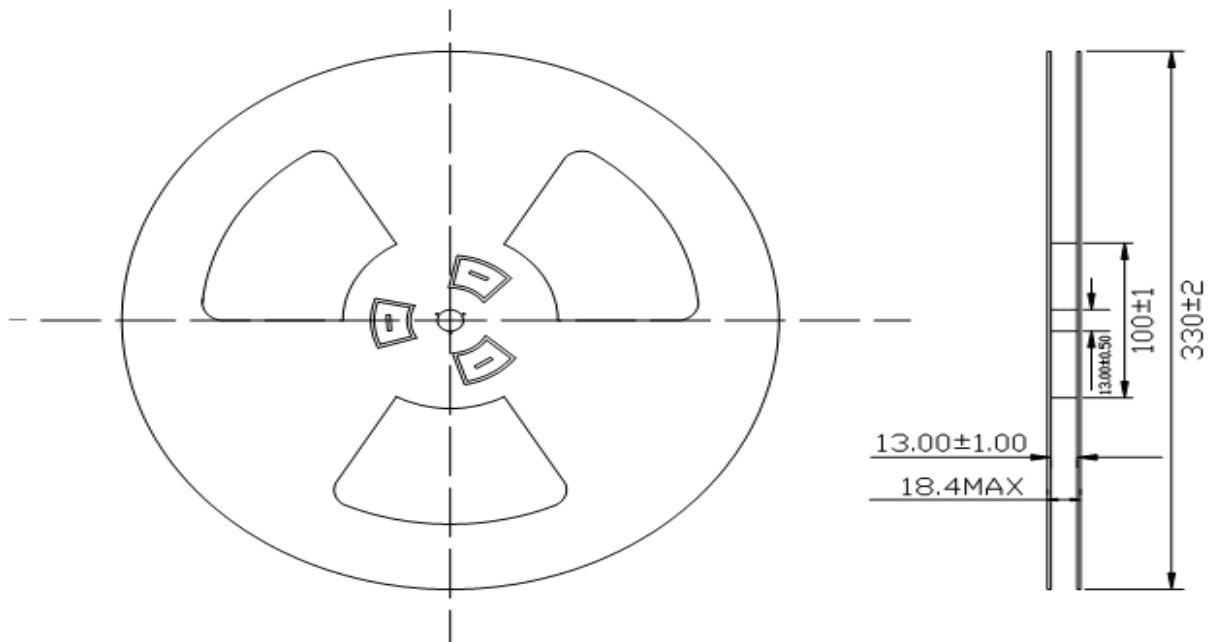
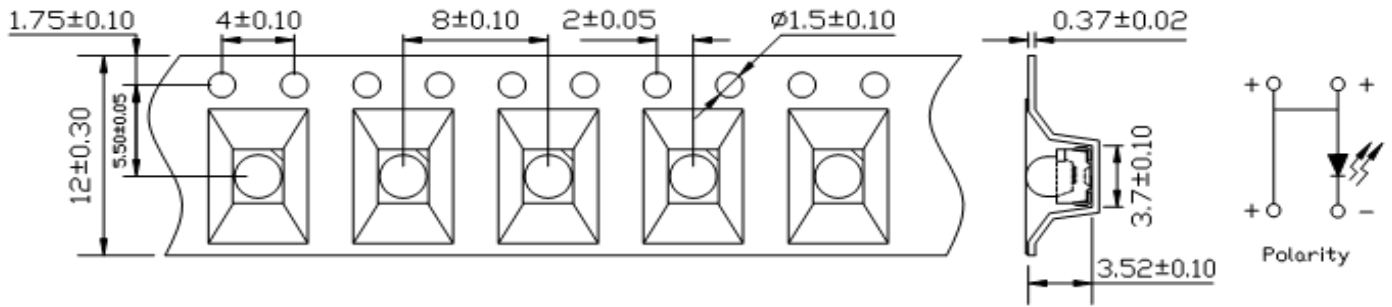
№5 figure: The higher ambient temperature, the lower operating current.

Soldering Profile

Lead Solder



Packing Specification



Dimensions are specified as follows: mm

Normal packing quantity: 2 000 pcs/reel

Suggested Way of Usage:

The using of the LED are limited by current.

Recommended forward current is 20mA, the lifespan more 2 years.

The maximum forward current is 50mA. More than 20mA, lifespan will be reduced.