

PRODUCT SPECIFICATION

C/N: 2700

4.8mm STRAWHAT WHITE LED LAMP

| Approved By | Checked By | Prepared By |
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| | | |

Light Emitting Diode

4.8mm STRAWHAT WHITE LED LAMP

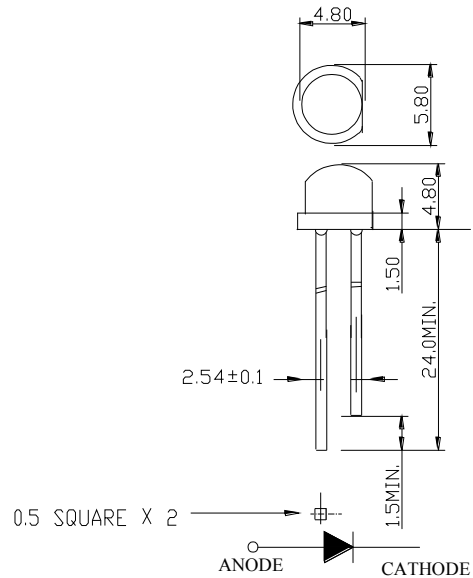
Features

- ✘ High intensity
- ✘ Reliable and rugged
- ✘ Low current requirement
- ✘ IC compatible

Description

The WHITE Lamps are made With INGaN/Sapphire chip and water clear epoxy resin.

Package Dimensions



| Part NO. | LED chip | | Lens Color |
|----------|----------------|----------------|-------------|
| | Material | Emitting Color | |
| 2700 | INGaN/Sapphire | WHITE | Water clear |

Notes:

1. All dimensions in mm tolerance ± 0.2 mm unless otherwise noted.
2. An epoxy meniscus may extend about 1.5mm down the lead
3. Burr around bottom of epoxy may be 0.5mm max.

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Absolute Maximum Ratings(Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|---|--------|-----------|------|
| Power Dissipation | PD | 100 | mW |
| Forward Current (DC) | IF | 30 | mA |
| Peak Forward Current(Pulse width ≤ 0.1msec) | IFP | 100 | mA |
| Reverse Voltage | VR | 5.0 | V |
| Electro-Static-Discharge | ESD | 1000 | V |
| Operation Temperature Range | Topr | -25to+85 | °C |
| Storage Temperature Range | Tstg | -40to+100 | °C |
| Lead Soldering Temperature(3.0mm from body) for 5 seconds | | 260 | °C |

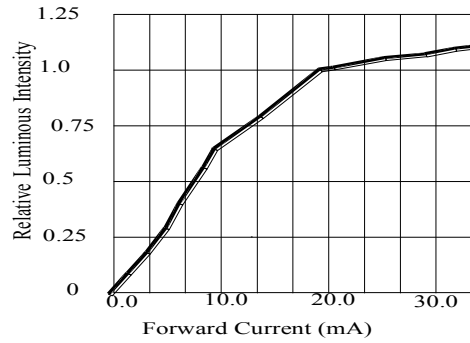
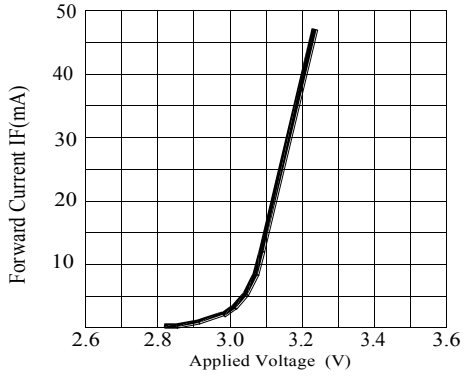
Typical Electrical and Optical Characteristics(Ta=25°C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|------------------------------|--------|-----------|------|------|------|------|
| Luminous Intensity | Iv | If=20mA | 1500 | | 2000 | mcd |
| Forward Voltage | Vf | If=20mA | 2.9 | | 3.4 | v |
| Reverse Current | Ir | Vr=5v | | | 10 | uA |
| CIE Chromaticity Coordinates | X | If=20mA | 0.40 | | 0.42 | |
| | Y | | 0.40 | | 0.45 | |
| Viewing Angle | 2Θ 1/2 | If=20mA | | 90 | | deg |

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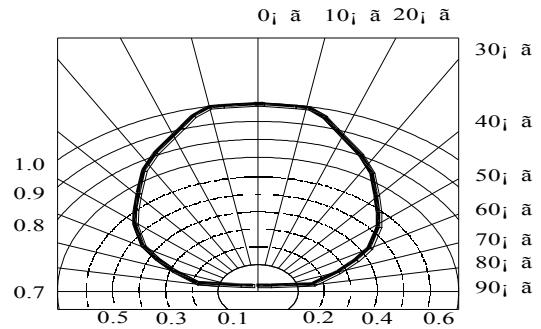
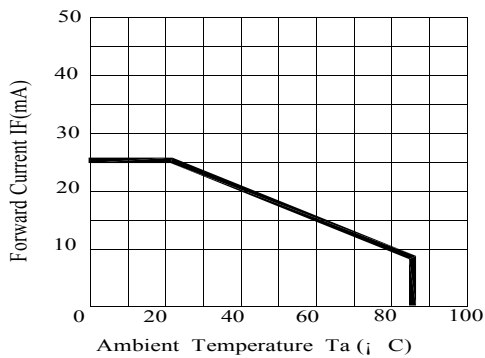
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Typical Electrical / Optical Characteristics Curves



FORWARD CURRENT VS.APPLIED VOLTAGE

FORWARD CURRENT VS. LUMINOUS INTENSITY



AMBIENT TEMPERA TURE VS.FORWARD CURRENT

RADIATION DIAGRAM

Light Emitting Diode

Please read the following notes before using the datasheets:

一、 If you need pin to be bent because of design:

- 1、 The lead frame can only be bent or cut when it is 3mm or above away from the colloid.
- 2、 The molding of material if needed must be finished before soldering, while molding the PIN is not allowed to be the fulcrum and must be finished by professional with fixture;
- 3、 Lead frame molding must guarantee that the space between lead is same as Circuitry Board
- 4、 High voltage static electricity could be produced while molding the Pin because of vibration friction of machine, so the machine must be reliably gRECTANGULARing (By way of blowing ion fan to eliminate static electricity)

二、 Soldering Condition :

- 1、 Do not conduct the electricity while soldering the LED
- 2、 Do not forces while the lead are in the heating condition.
- 3、 Max. soldering condition:

| Manual soldering : | Wave soldering |
|-----------------------------------|--|
| Max. Power of iron: 30 W | Highest Warm up temperature : 120°C |
| Highest Temperature: 300 °C | Highest Dip soldering temperature 260 °C |
| Longest Soldering time: 3 seconds | Longest Dip soldering time: 5 seconds |
| Soldering position: | Dip soldering position: |
| 3mm above from the colloid base | 3mm above from the colloid base. |

三、 Anti-static notice :

- 1、 All the LED instrument must be grounding
- 2、 All the people, who are possible to touch the LED must wear anti-static wrists and gloves.
- 3、 Any LED damaged by static will appear some bad characters, such as , leakage current increase, Static forward voltage decrease.

四、 Over current protection :

- 1、 Add protective resistor in series to make it work stable.
- 2、 Resistor value formula: $R = (VCC - V_F) / I_F$ (VCC is power supply voltage, V_F is LED drive voltage, I_F is forward current.)

五、 Electrical performance test and application :

- 1、 While testing V_F, brightness and wavelength, the current must be set with 20mA; test V_R, I_R must be set with 10uA; Test I_R, V_R must be set with 5V.
- 2、 Whiling testing and using LED, LED must be provided with the same current and tested by constant current source, and then we can make sure the brightness and consistency of other characteristics
- 3、 LED used under the environment temperature between -30 °C ~ + 60 °C
- 4、 When the products are well sorted, please do not use it to the same products with different classes or bag Numbers (Marked in the label), so as to avoid the color and brightness difference. If it is necessary to use with mix bags, please use strictly according to the sequence of bag number. (Not recommended to use like this)