SunLED
www.SunLEDusa.com

**Part Number: XZCBD67S**

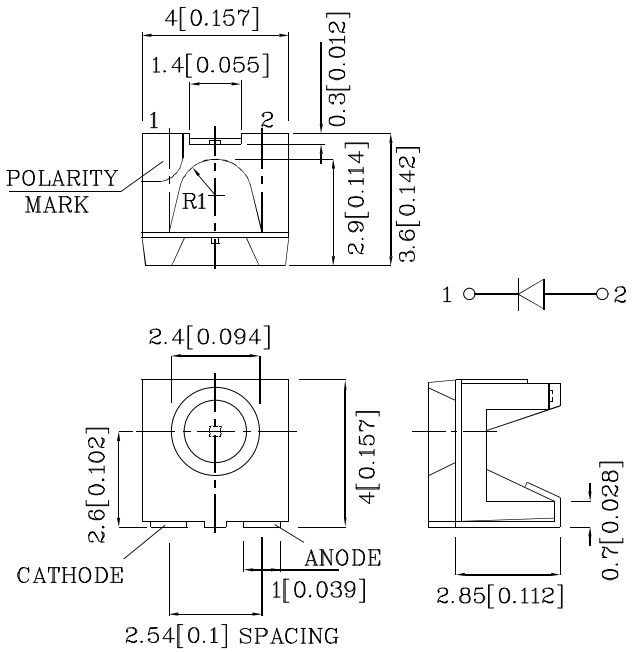
4.0x4.0mm RIGHT ANGLE SURFACE MOUNT LED LAMP

## Features

- Ideal for indication light on hand held products
- Long life and robust package
- Variety of lens types and color choices available
- Package : 500pcs / reel
- Moisture sensitivity level : level 3
- RoHS compliant

**ATTENTION**
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

## Package Schematics




Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

| **Absolute Maximum Ratings ($T_A$=25°C)** | | **CBD (InGaN)** | **Unit** |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 5 | V |
| Forward Current | $I_F$ | 30 | mA |
| Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width | $i_{FS}$ | 150 | mA |
| Power Dissipation | $P_D$ | 120 | mW |
| Operating Temperature | $T_A$ | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | |
| Electrostatic Discharge Threshold (HBM) | | 250 | V |

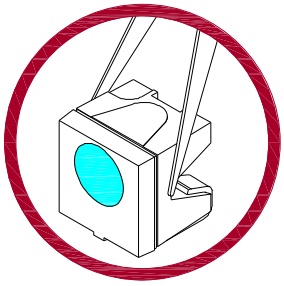
| **Operating Characteristics ($T_A$=25°C)** | | **CBD (InGaN)** | **Unit** |
|---|---|---|---|
| Forward Voltage (Typ.) ($I_F$=20mA) | $V_F$ | 3.3 | V |
| Forward Voltage (Max.) ($I_F$=20mA) | $V_F$ | 4 | V |
| Reverse Current (Max.) ($V_R$=5V) | $I_R$ | 50 | uA |
| Wavelength of Peak Emission (Typ.) ($I_F$=20mA) | λP | 468 | nm |
| Wavelength of Dominant Emission (Typ.) ($I_F$=20mA) | λD | 470 | nm |
| Spectral Line Full Width At Half-Maximum (Typ.) ($I_F$=20mA) | △λ | 25 | nm |
| Capacitance (Typ.) ($V_F$=0V, f=1MHz) | C | 100 | pF |

| Part Number | Emitting Color | Emitting Material | Lens-color | Luminous Intensity ($I_F$=20mA) mcd | | Wavelength nm λP | Viewing Angle 2θ 1/2 |
|---|---|---|---|---|---|---|---|
| | | | | min. | typ. | | |
| XZCBD67S | Blue | InGaN | Water Clear | 110 | 218 | 468 | 120° |

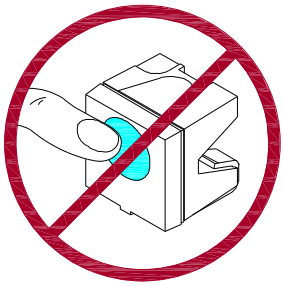
## Handling Precautions

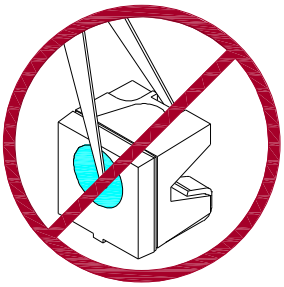
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.
As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might lead to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools.

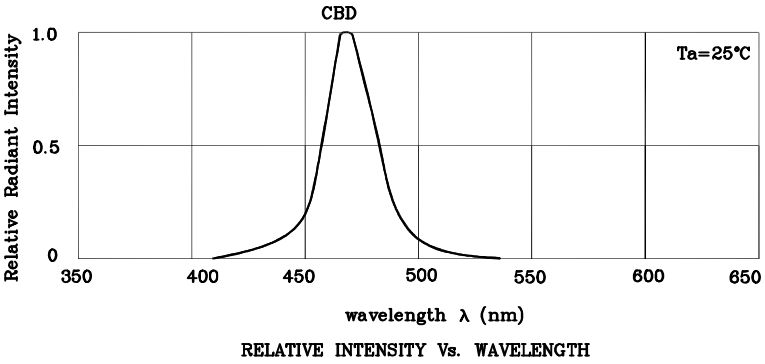


2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

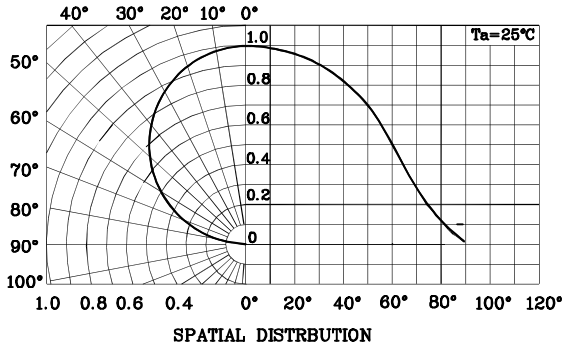




3. As silicone encapsulation is permeable to gases, some corrosive substances such as $H_2S$ might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.

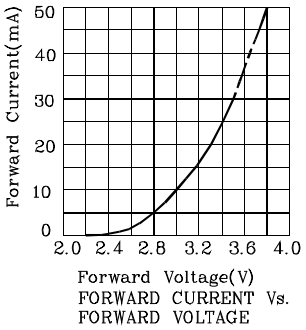



RELATIVE INTENSITY Vs. WAVELENGTH

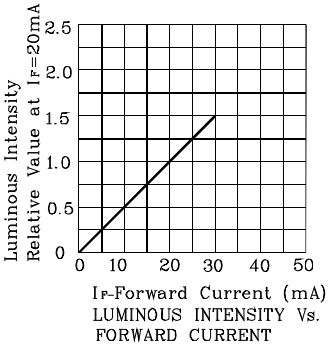



SPATIAL DISTRBUTION

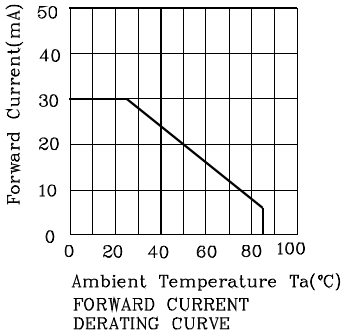
## ❖ CBD



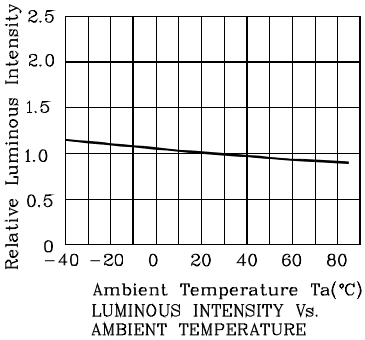

FORWARD CURRENT Vs. FORWARD VOLTAGE




LUMINOUS INTENSITY Vs. FORWARD CURRENT



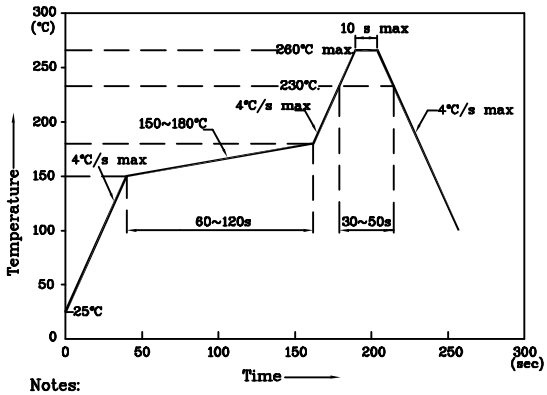

FORWARD CURRENT DERATING CURVE




LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

**LED is recommended for reflow soldering and soldering profile is shown below.**

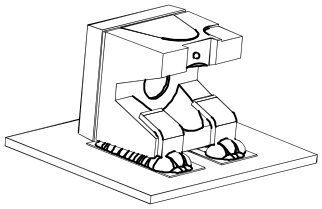
**Reflow Soldering Profile for SMD Products (Pb−Free Components)**



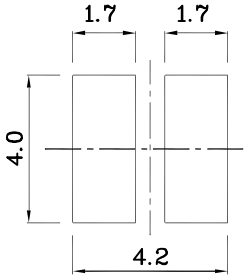

**Notes:**

1. **Maximum soldering temperature should not exceed 260℃**
2. **Recommended reflow temperature: 145℃−260℃**
3. **Do not put stress to the epoxy resin during high temperatures conditions**

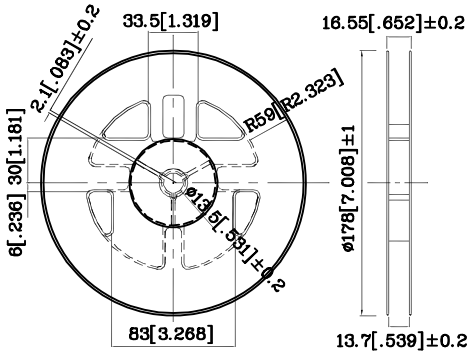
❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



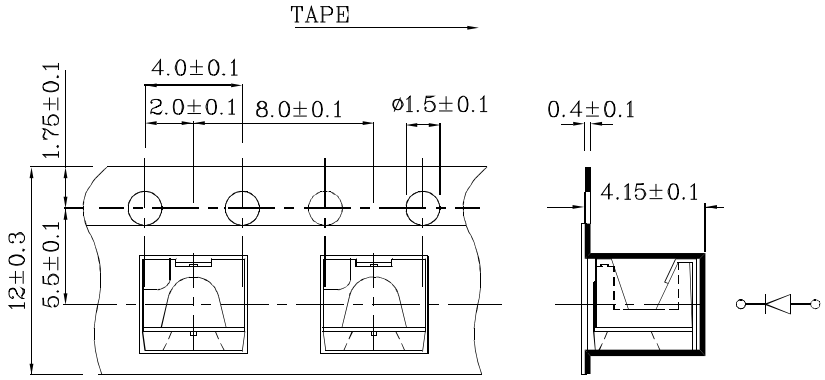
❖ **Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)**




❖ **Reel Dimension**




❖ **Tape Specification (Units : mm)**




Remarks:

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous intensity / luminous flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

## PACKING & LABEL SPECIFICATIONS