



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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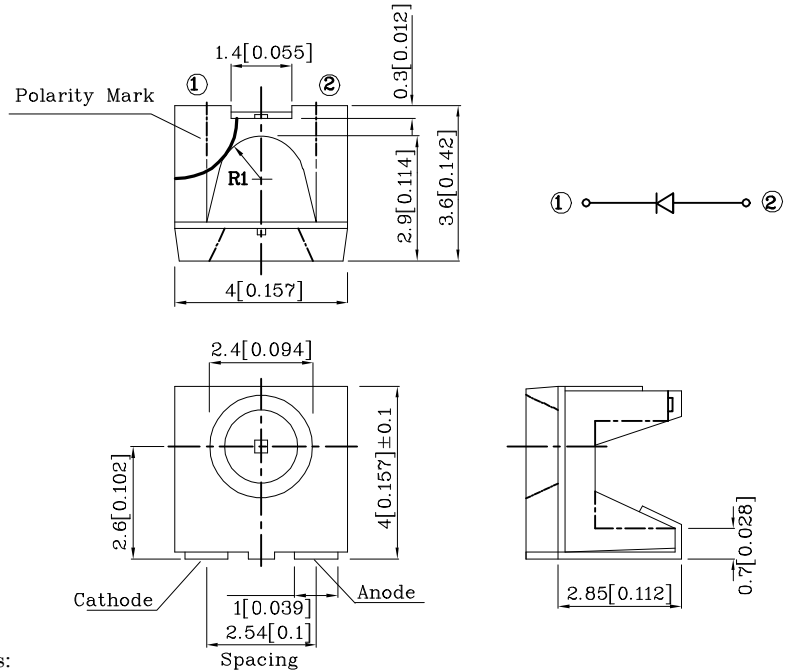
**Features**

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 500pcs/ Reel
- MSL (Moisture Sensitivity 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<br>(T <sub>A</sub> =25°C)             |                  | Blue<br>(InGaN) | Unit |
|--|------------------|-----------------|------|
| Reverse Voltage  | V <sub>R</sub>   | 5               | V    |
| Forward Current  | I <sub>F</sub>   | 30              | mA   |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | i <sub>FS</sub>  | 150             | mA   |
| Power Dissipation  | P <sub>D</sub>   | 120             | mW   |
| Operating Temperature  | T <sub>A</sub>   | -40 ~ +85       | °C   |
| Storage Temperature  | T <sub>stg</sub> | -40 ~ +85       |      |
| Electrostatic Discharge Threshold<br>(HBM)                     |                  | 250             | V    |

A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

| Operating Characteristics<br>(T <sub>A</sub> =25°C)                             |                | Blue<br>(InGaN) | Unit |
|---|----------------|-----------------|------|
| Forward Voltage (Typ.)<br>(I <sub>F</sub> =20mA)                                | V <sub>F</sub> | 3.3             | V    |
| Forward Voltage (Max.)<br>(I <sub>F</sub> =20mA)                                | V <sub>F</sub> | 4               | V    |
| Reverse Current (Max.)<br>(V <sub>R</sub> =5V)                                  | I <sub>R</sub> | 50              | uA   |
| Wavelength of Peak<br>Emission CIE127-2007*(Typ.)<br>(I <sub>F</sub> =20mA)     | λ <sub>P</sub> | 460*            | nm   |
| Wavelength of Dominant<br>Emission CIE127-2007*(Typ.)<br>(I <sub>F</sub> =20mA) | λ <sub>D</sub> | 465*            | nm   |
| Spectral Line Full Width<br>At Half-Maximum (Typ.)<br>(I <sub>F</sub> =20mA)    | Δλ             | 25              | nm   |
| Capacitance (Typ.)<br>(V <sub>F</sub> =0V, f=1MHz)                              | C              | 100             | pF   |

| Part Number | Emitting Color | Emitting Material | Lens-color  | Luminous Intensity<br>CIE127-2007*<br>(I <sub>F</sub> =20mA)<br>mcd |      | Wavelength<br>CIE127-2007*<br>nm<br>λ <sub>P</sub> | Viewing Angle<br>2θ 1/2 |
|-------------|----------------|-------------------|-------------|---|------|--|-------------------------|
|             |                |                   |             | min.  | typ. |  |                         |
| XZCBD67S    | Blue           | InGaN             | Water Clear | 80*   | 218* | 460*   | 120°                    |

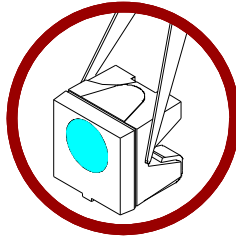
\*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

## Handling Precautions

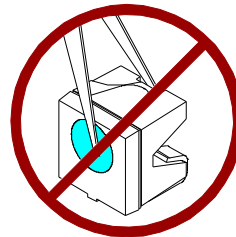
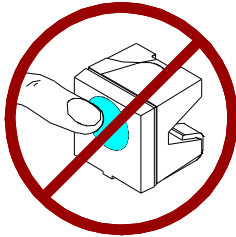
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force.

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.

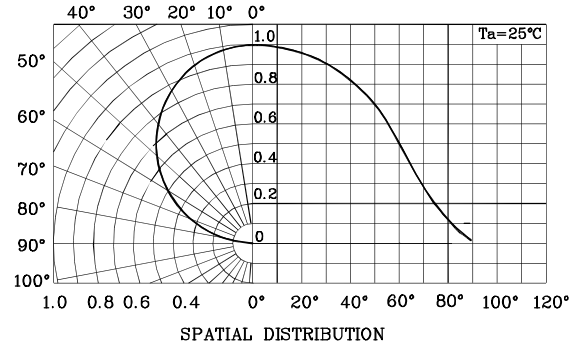
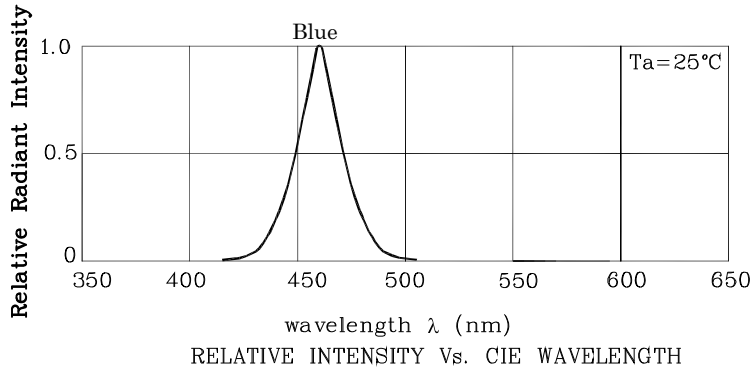


2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.

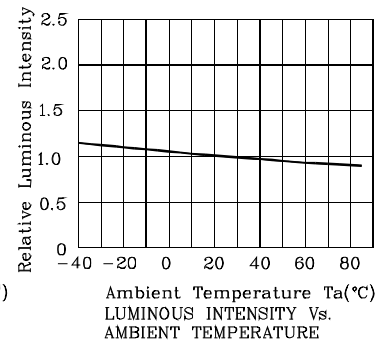
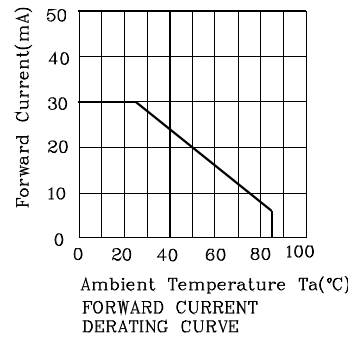
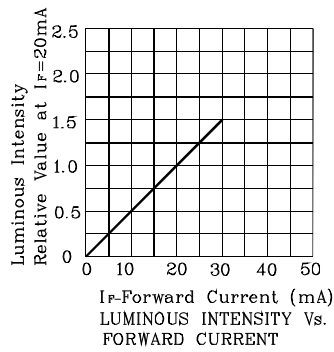
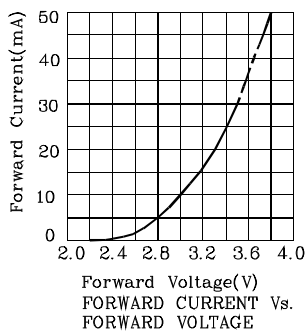


3. As silicone encapsulation is permeable to gases, some corrosive substances such as H<sub>2</sub>S might corrode silver plating of leadframe. Special care should be taken if an LED with silicone encapsulation is to be used near such substances.



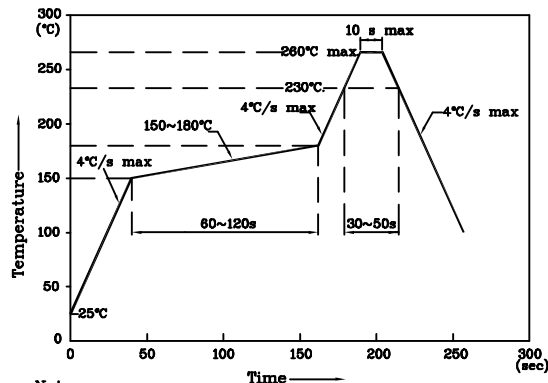


❖ Blue



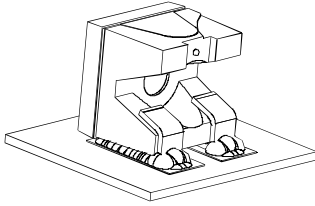
**LED is recommended for reflow soldering and soldering profile is shown below.**

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

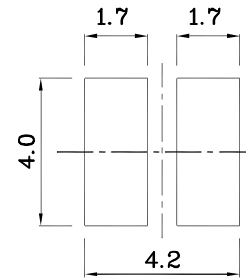


- Notes:
1. Maximum soldering temperature should not exceed 280°C
  2. Recommended reflow temperature: 145°C-260°C
  3. Do not put stress to the epoxy resin during high temperatures conditions

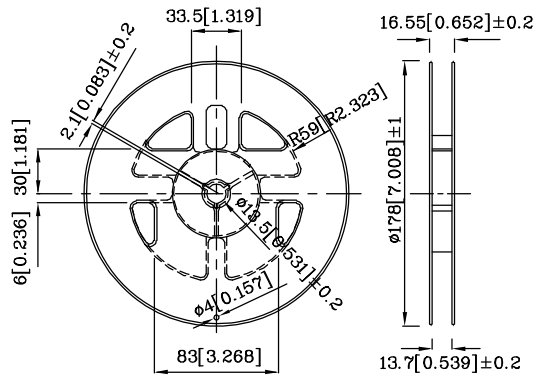
❖ The device has a single mounting surface.  
The device must be mounted according to  
the specifications.



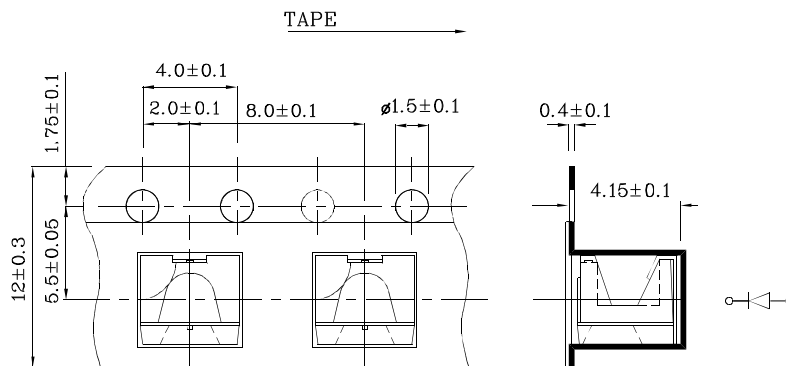
❖ Recommended Soldering Pattern  
(Units : mm; Tolerance: ± 0.1)



❖ Reel Dimension



❖ Tape Specification (Units : mm)



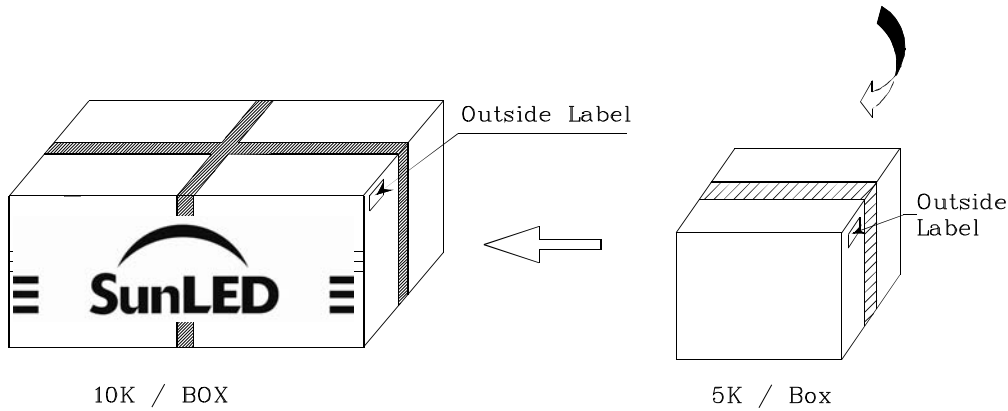
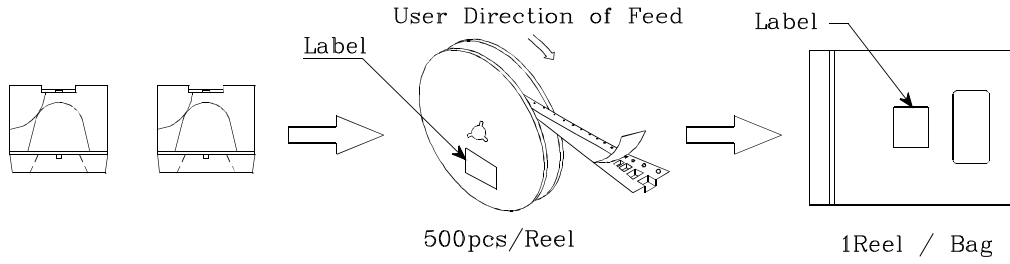
Remarks:



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**



|  |  |  |      |     |          |        |
|--|--|--|------|-----|----------|--------|
|                               |  | <table border="1"> <tr><td>Q.C.</td></tr> <tr><td>Q C</td></tr> <tr><td>XX XX XX</td></tr> <tr><td>PASSED</td></tr> </table> | Q.C. | Q C | XX XX XX | PASSED |
| Q.C.   |  |  |      |     |          |        |
| Q C  |  |  |      |     |          |        |
| XX XX XX   |  |  |      |     |          |        |
| PASSED   |  |  |      |     |          |        |
| P/NO : XZxxx67x  |  |  |      |     |          |        |
| QTY : 500 pcs  |  | CODE: XXX  |      |     |          |        |
| S/N : XX   |  |  |      |     |          |        |
| LOT NO:  |  |  |      |     |          |        |
| <br>XXXXXXXXXXXXXXXXXXXXXXXX |  |  |      |     |          |        |
| RoHS Compliant   |  |  |      |     |          |        |

**TERMS OF USE**

1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
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4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
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