

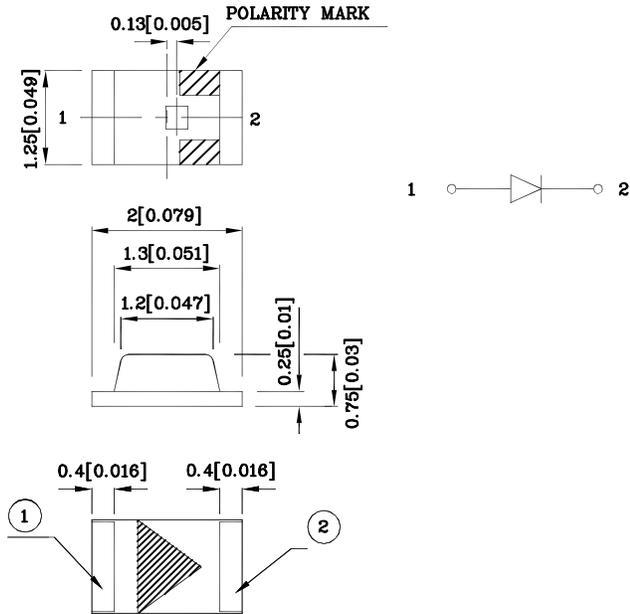
**Features**

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS compliant



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

**Package Schematics**



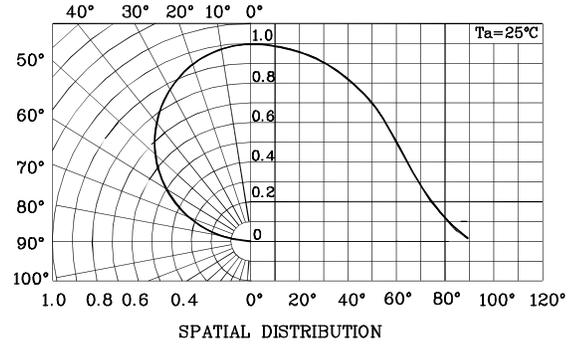
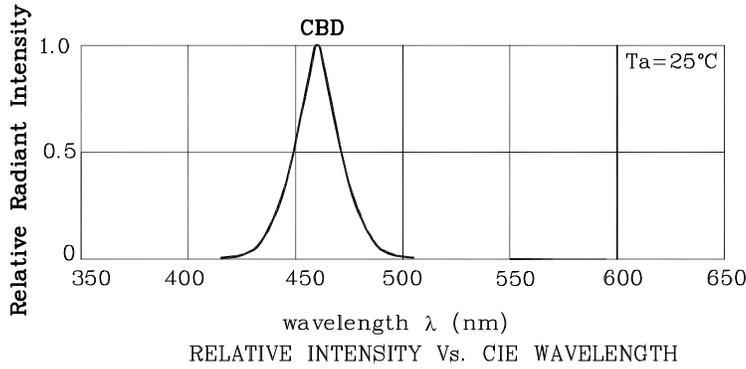
- Notes:
1. All dimensions are in millimeters (inches).
  2. Tolerance is  $\pm 0.1(0.004)$  unless otherwise noted.
  3. Specifications are subject to change without notice.

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

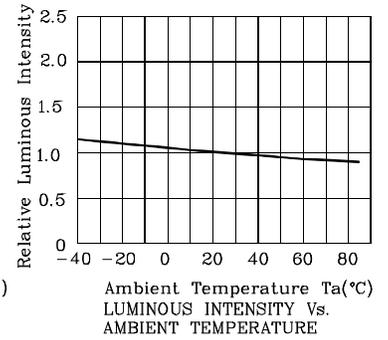
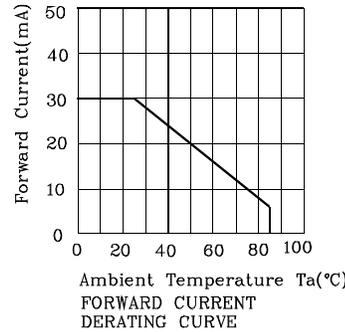
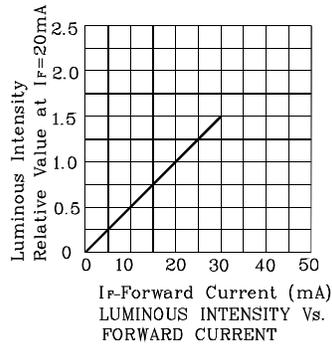
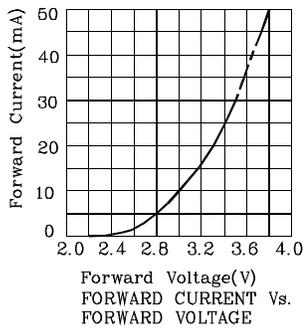
| Operating Characteristics<br>( $T_A=25^\circ\text{C}$ )                        |                 | CBD<br>(InGaN) | Unit          |
|--|-----------------|----------------|---------------|
| Forward Voltage (Typ.)<br>( $I_F=20\text{mA}$ )                                | $V_F$           | 3.3            | V             |
| Forward Voltage (Max.)<br>( $I_F=20\text{mA}$ )                                | $V_F$           | 4              | V             |
| Reverse Current (Max.)<br>( $V_R=5\text{V}$ )                                  | $I_R$           | 50             | $\mu\text{A}$ |
| Wavelength of Peak<br>Emission CIE127-2007*(Typ.)<br>( $I_F=20\text{mA}$ )     | $\lambda_P$     | 460*           | nm            |
| Wavelength of Dominant<br>Emission CIE127-2007*(Typ.)<br>( $I_F=20\text{mA}$ ) | $\lambda_D$     | 465*           | nm            |
| Spectral Line Full Width<br>At Half-Maximum (Typ.)<br>( $I_F=20\text{mA}$ )    | $\Delta\lambda$ | 25             | nm            |
| Capacitance (Typ.)<br>( $V_F=0\text{V}$ , $f=1\text{MHz}$ )                    | C               | 100            | pF            |

| Part Number | Emitting Color | Emitting Material | Lens-color  | Luminous Intensity<br>CIE127-2007*<br>( $I_F=20\text{mA}$ )<br>mcd |      | Wavelength<br>CIE127-2007*<br>nm<br>$\lambda_P$ | Viewing Angle<br>2 $\theta$ 1/2 |
|-------------|----------------|-------------------|-------------|--|------|---|---------------------------------|
|             |                |                   |             | min.   | typ. |   |                                 |
| XZCBD54W-1  | Blue           | InGaN             | Water Clear | 40*  | 98*  | 460*  | 120°                            |

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

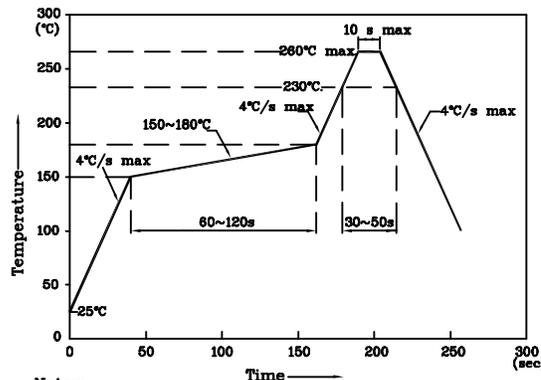


❖ CBD



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

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

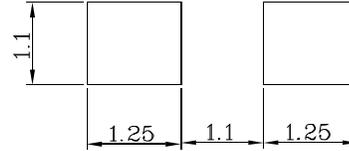
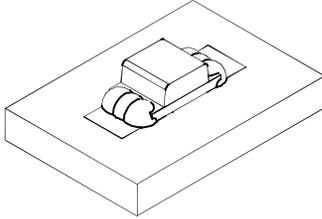


- Notes:
1. Maximum soldering temperature should not exceed 280°C
  2. Recommended reflow temperature: 145°C-260°C
  3. Do not put stress to the epoxy resin during high temperatures conditions

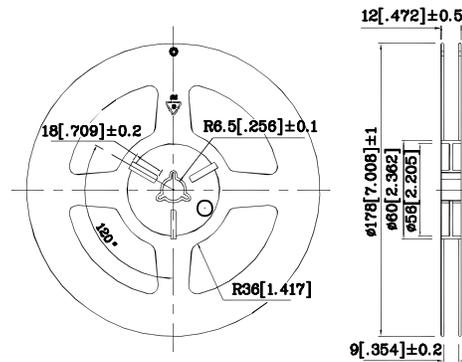


❖ The device has a single mounting surface.  
The device must be mounted according to the specifications.

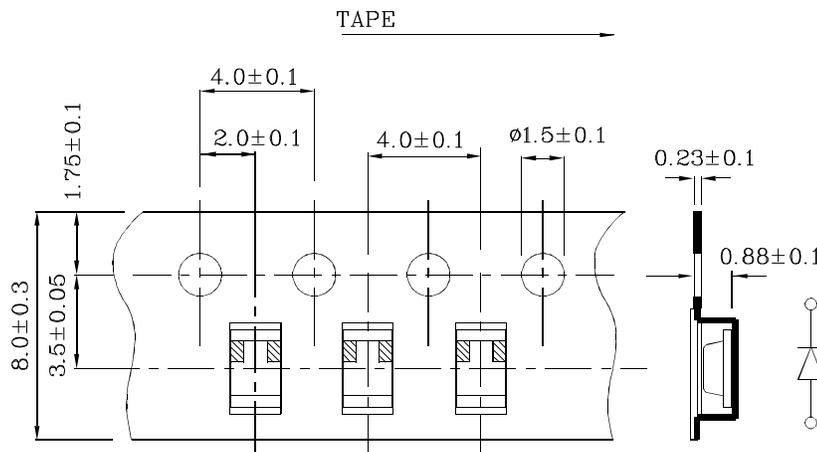
❖ Recommended Soldering Pattern  
(Units : mm; Tolerance:  $\pm 0.1$ )



❖ 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:  $\pm 1\text{nm}$
2. Luminous intensity / luminous flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.

