

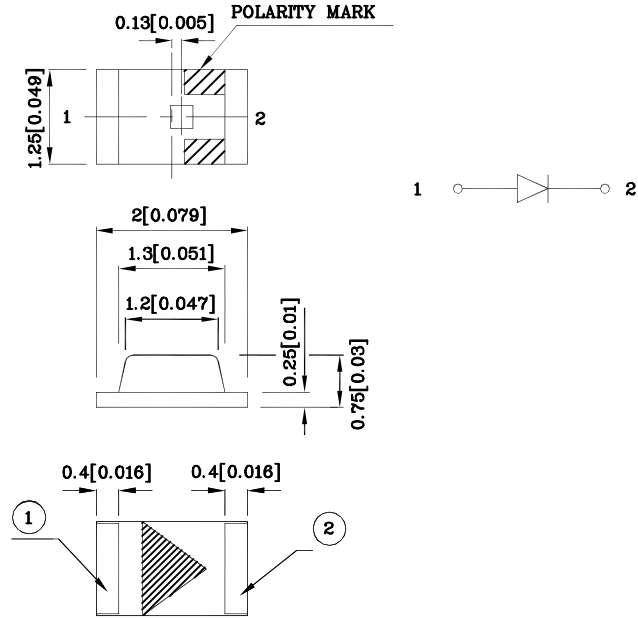
**Features**

- Ideal for indication light on hand held products
- Long life and robust package
- Variety of lens types and color choices available
- Package : 2000 pcs / reel
- Moisture sensitivity level : level 3
- RoHS compliant



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

**Package Schematics**



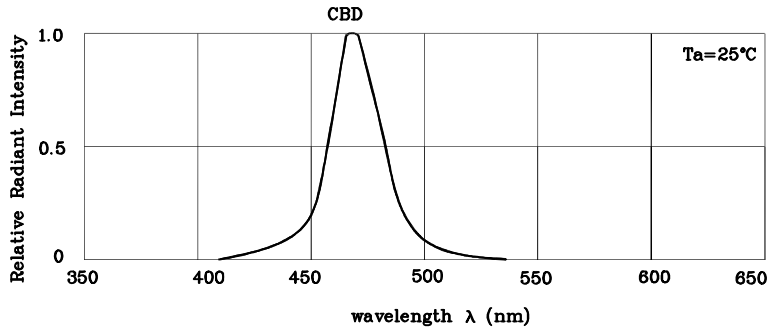
**Notes:**

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

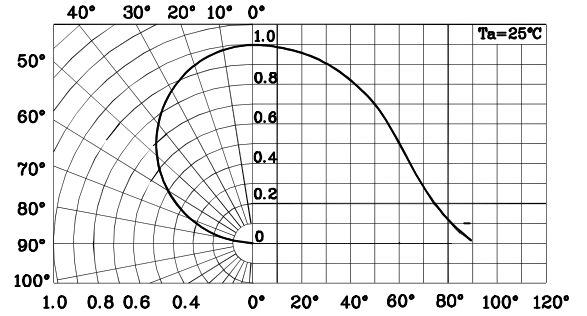
Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ )		CBD (InGaN)	Unit
Reverse Voltage	$V_R$	5	V
Forward Current	$I_F$	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	$i_{FS}$	150	mA
Power Dissipation	$P_D$	120	mW
Operating Temperature	$T_A$	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-40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

Operating Characteristics ( $T_A=25^\circ\text{C}$ )		CBD (InGaN)	Unit
Forward Voltage (Typ.) ( $I_F=20\text{mA}$ )	$V_F$	3.3	V
Forward Voltage (Max.) ( $I_F=20\text{mA}$ )	$V_F$	4	V
Reverse Current (Max.) ( $V_R=5\text{V}$ )	$I_R$	50	$\mu\text{A}$
Wavelength of Peak Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_P$	468	nm
Wavelength of Dominant Emission (Typ.) ( $I_F=20\text{mA}$ )	$\lambda_D$	470	nm
Spectral Line Full Width At Half-Maximum (Typ.) ( $I_F=20\text{mA}$ )	$\Delta\lambda$	25	nm
Capacitance (Typ.) ( $V_F=0\text{V}$ , $f=1\text{MHz}$ )	$C$	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity ( $I_F=20\text{mA}$ ) mcd		Wavelength nm $\lambda_P$	Viewing Angle 2 $\theta$ 1/2
				min.	typ.		
XZCBD54W-1	Blue	InGaN	Water Clear	55	98	468	120°

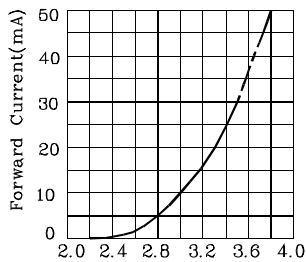


RELATIVE INTENSITY Vs. WAVELENGTH

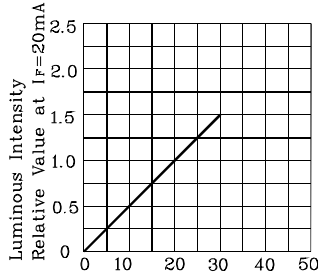


SPATIAL DISTRIBUTION

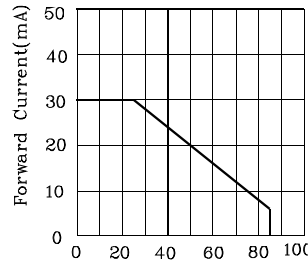
❖ CBD



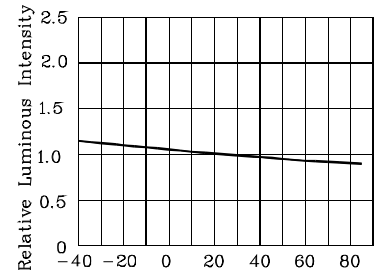
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



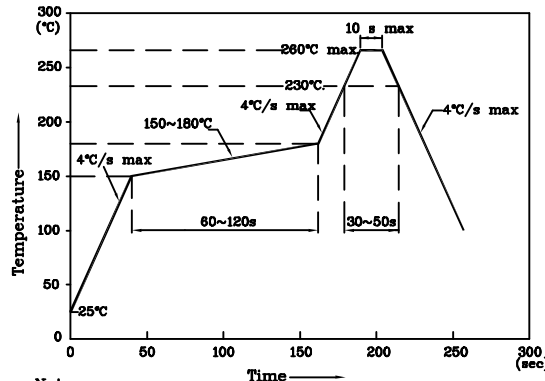
FORWARD CURRENT DERATING CURVE



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)**



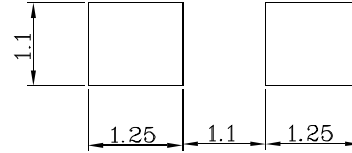
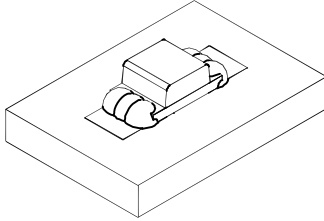
**Notes:**

1. Maximum soldering temperature should not exceed 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.

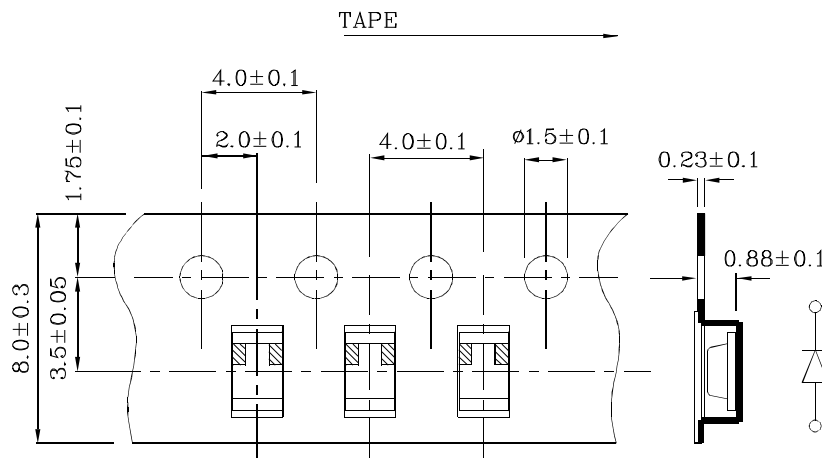
❖ Recommended Soldering Pattern  
(Units : mm; Tolerance:  $\pm 0.1$ )



❖ Reel Dimension



❖ Tape Specification (Units : mm)



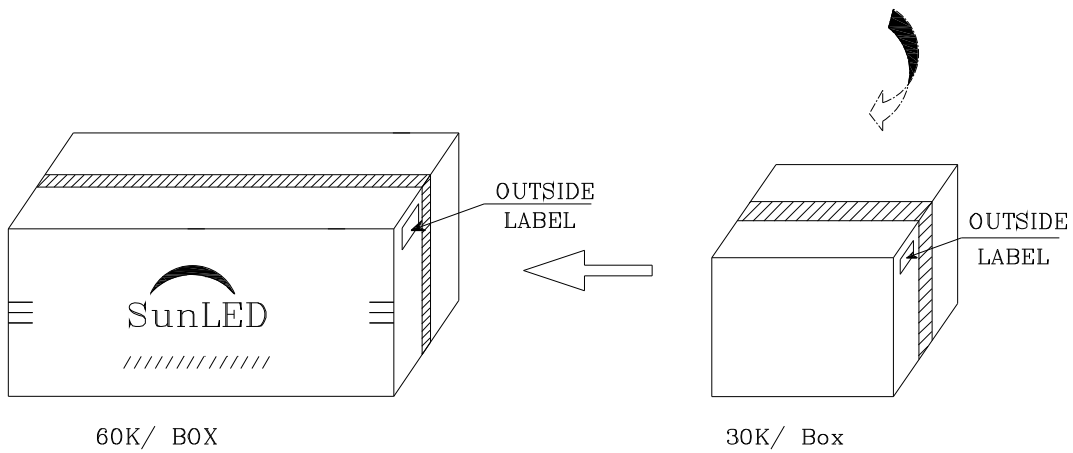
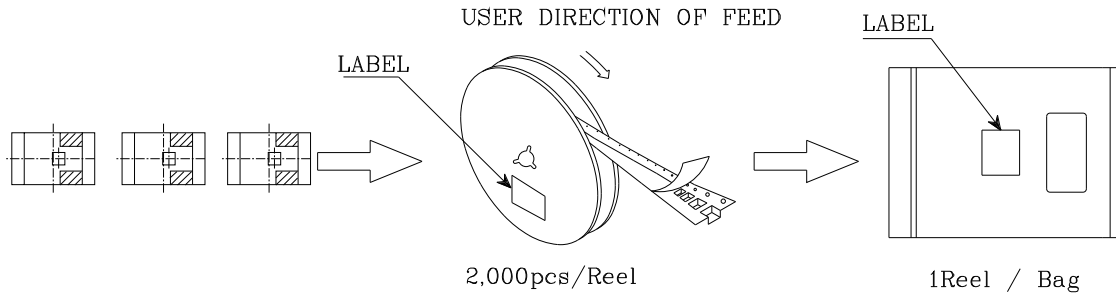
Remarks:


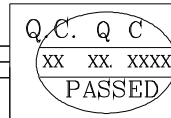

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

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.

**PACKING & LABEL SPECIFICATIONS**



		
P/NO : XZxxx54x-1		
QTY : 2,000 pcs		CODE: XXX
S/N : XX		
LOT NO:		
 xxxxxxxxxxxxxxxxxxxxxx		
RoHS Compliant		