

## Part Number: ZCBD78W

3.2x2.4mm SMD CHIP LED LAMP

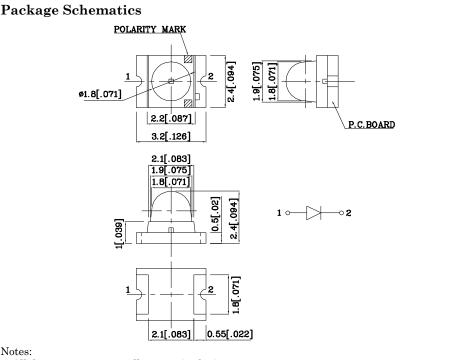
#### Features

- Ideal for indication light on hand held products
- Long life and robust package
- Variety of lens types and color choices available
- Package : 1500pcs / reel
- Moisture sensitivity level : level 3
- RoHS compliant





ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



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.

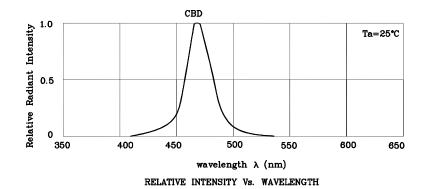
Absolute Maximum Ratings (T <sub>A</sub> =25°C)	CBD (InGaN)	Unit		
Reverse Voltage	$V_{\mathrm{R}}$	5	V	
Forward Current	$\mathbf{I}_{\mathrm{F}}$	30	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	150	mA	
Power Dissipation	PD	120	mW	
Operating Temperature	$T_{\rm A}$	$-40 \sim +85$	°C	
Storage Temperature	Tstg	$-40 \sim +85$		
Electrostatic Discharge Threshold (HBM)		250	V	

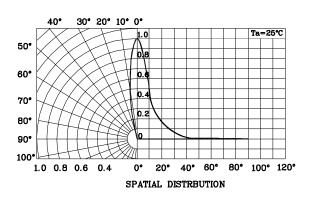
Operating Characteristics (T <sub>A</sub> =25°C)		CBD (InGaN)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	3.3	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	4	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_R$	50	uA
Wavelength of Peak Emission (Typ.) (I <sub>F</sub> =20mA)	λP	468	nm
Wavelength of Dominant Emission (Typ.) (I <sub>F</sub> =20mA)	λD	470	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$ riangle\lambda$	25	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Inter (I <sub>F</sub> =20 mo	)mÅ)	Wavelength nm λP	Viewing Angle 20 1/2
				min.	typ.		
ZCBD78W	Blue	InGaN	Water Clear	450	795	468	20°

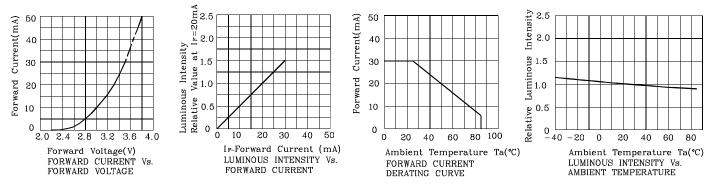
SDSA8127 V1 Layout: Maggie L.







♦ CBD



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

300 (°C) 10 s max iner? 250 4°C/s C/s max 200 150~180 4°C/s max 150 Temperature 30~50s 60~120s 100 50 0 150 0 50 100 200 250 300 (sec) Time Notes:

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

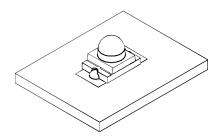
1. Maximum soldering temperature should not exceed 260°C

2. Recommended reflow temperature: 145°C-260°C 3. Do not put stress to the epoxy resin during

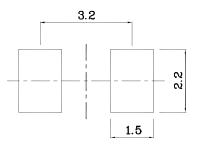
high temperatures conditions



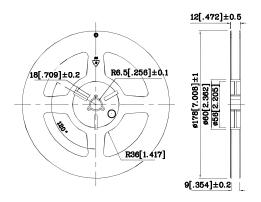
The device has a single mounting surface. The device must be mounted according to the specifications.



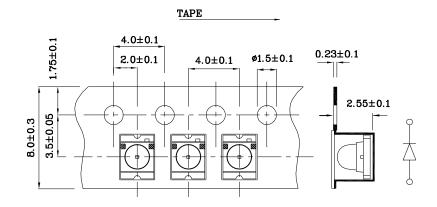
#### Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)



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

