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1.6 x 0.8 mm SMD Chip LED Lamp

#### **Features**

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 4,000pcs/ Reel
- $\bullet$  MSL (Moisture Sensitivity Level): 3
- RoHS compliant



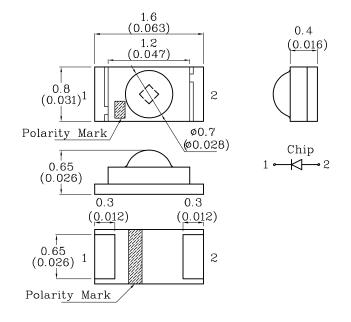




# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE

DEVICES

## Package Schematics



#### Notes:

- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is  $\pm 0.15(0.006")$  unless otherwise noted.
- 3. Specifications are subject to change without notice.

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

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 (T <sub>A</sub> =25°C)		Blue (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.) $(V_R=5V)$	$I_{\mathrm{R}}$	50	uA	
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λP	460*	nm	
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λD	465*	nm	
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	25	nm	
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	100	pF	

Luminous Intensity

138\*

40\*

Part Number	Emitting Color	Emitting Material	Lens-color	CIE127-2007* (I <sub>F</sub> =20mA) mcd	Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min. typ.		

Water Clear

InGaN

Blue

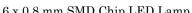
XZCBD53W-8ST

460\*

Wavelength

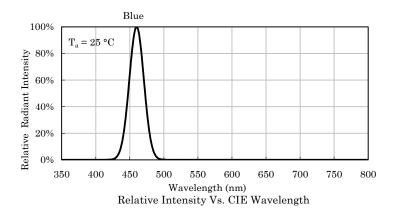
100°

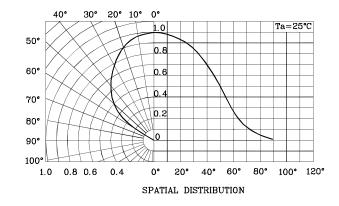
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.



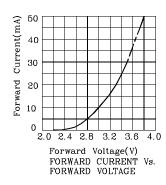


1.6 x 0.8 mm SMD Chip LED Lamp

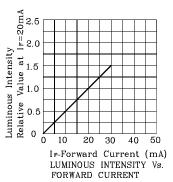


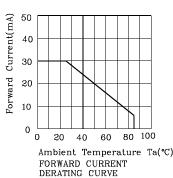


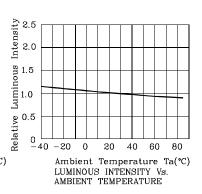
#### Blue



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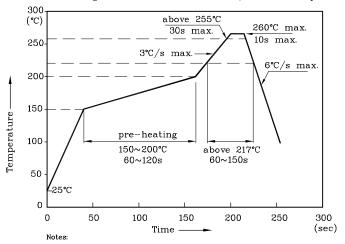






# LED is recommended for reflow soldering and soldering profile is shown below.

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



- 1. All temperatures refer to the center of the package,
- measured on the package body surface facing up during reflow.

  2. Do not apply any stress to the LED during high temperature conditions.

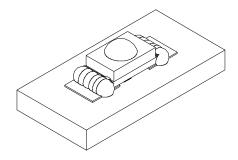
  3. Maximum number of soldering passes: 2



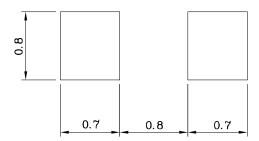
 $1.6 \times 0.8 \text{ mm}$  SMD Chip LED Lamp



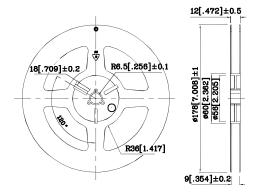
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



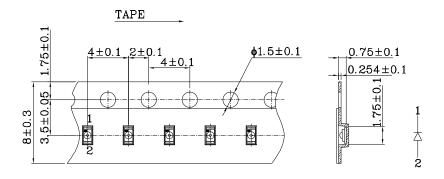
**♦** Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



# **❖** 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:

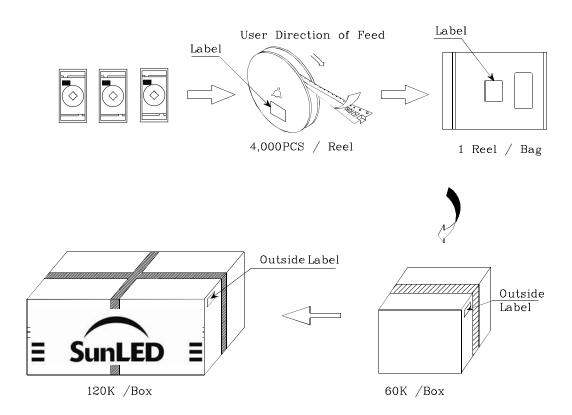
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

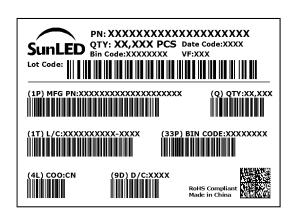
Note: Accuracy may depend on the sorting parameters.





#### PACKING & LABEL SPECIFICATIONS





# TERMS OF USE

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- 2. Contents within this document are subject to improvement and enhancement changes without notice.
- 3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
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