

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

### **Features**

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



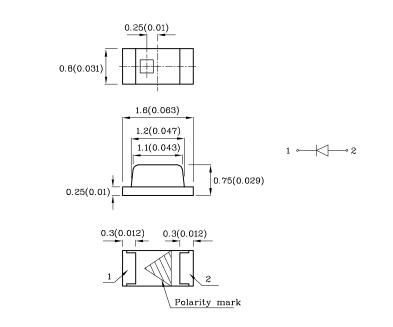




# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE

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 <sub>A</sub> =25°C)	Green (InGaN)	Unit		
Reverse Voltage	$V_{\rm R}$	5	V	
Forward Current	$I_{\mathrm{F}}$	30	mA	
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	ifs	100	mA	
Power Dissipation	$P_{D}$	120	mW	
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85	-0	
Electrostatic Discharge Threshold (HBM)	450	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 (T <sub>A</sub> =25°C)		Green (InGaN)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	3.2	V	
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{ m F}$	4	V	
Reverse Current (Max.) $(V_R=5V)$	$I_R$	50	μА	
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λР	520*	nm	
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λD	525*	nm	
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	35	nm	
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	100	pF	

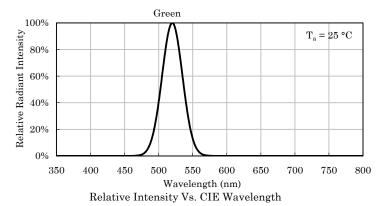
Part Number	Emitting Color	Emitting Material	Lens-color	CIE127-2007* (I <sub>F</sub> =20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZM2DG53W-1	Green	InGaN	Water Clear	500*	795*	520*	130°

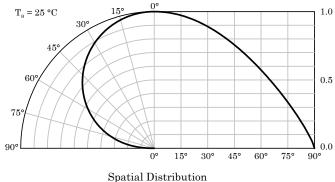
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

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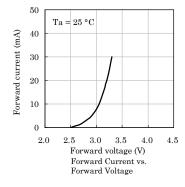


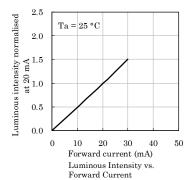


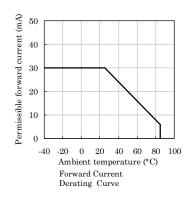


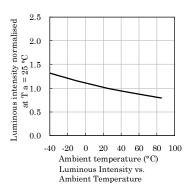


# **❖** Green



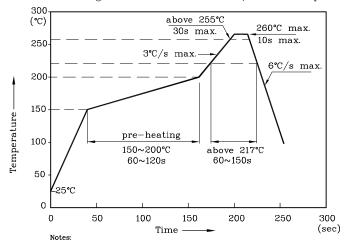






# LED is recommended for reflow soldering and soldering profile is shown below.

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.

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

  Maximum number of soldering passes: 2

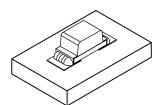


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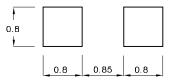
 $1.6 \times 0.8 \text{ mm}$  SMD Chip LED Lamp



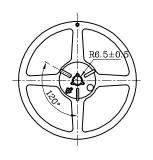
❖ The device has a single mounting surface. The device must be mounted according to the specifications.

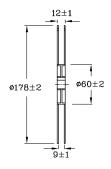


❖ Recommended Soldering Pattern (Units: mm; Tolerance:  $\pm 0.1$ )

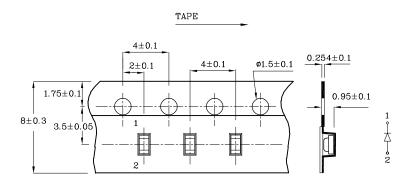


❖ Reel Dimension (Units:mm)





**❖** 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:

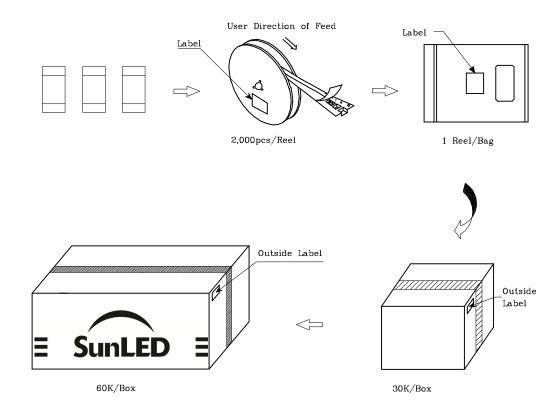
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

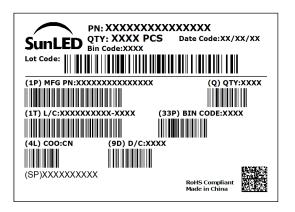
Note: Accuracy may depend on the sorting parameters.





# PACKING & LABEL SPECIFICATIONS





#### TERMS OF USE

- 1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
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- 7. Additional technical notes are available at https://www.SunLEDusa.com/TechnicalNotes.asp

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