

 $2.0 \times 1.25 \text{ mm}$  SMD Chip LED Lamp

# **Features**

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







Jun 01,2017

# ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

# Package Schematics (0.079)1.25 (0.049) R0.4 (0.016) 0.65 (0.026) Chip 1.05 (0.041) 0.4 (0.016) 0.4 (0.016) $\begin{pmatrix} 1.05 \\ (0.041) & 1 \end{pmatrix}$ 2 Polarity mark

#### 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)	Green (AlGaInP)	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	$i_{\mathrm{FS}}$	150	mA		
Power Dissipation	$P_{D}$	75	mW		
Operating Temperature	$T_{\rm A}$	-40 ~ +85	°C		
Storage Temperature	Tstg	-40 ~ +85	C		

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 (AlGaInP)	Unit	
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	2.1	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	2.5	V	
Reverse Current (Max.) $(V_R=5V)$	$I_R$	10	uA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λР	574*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λD	570*	nm
Spectral Line Full Width Lt Half-Maximum (Typ.) $\triangle \lambda$ $\Lambda$		20	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	15	pF

Luminous Intensity

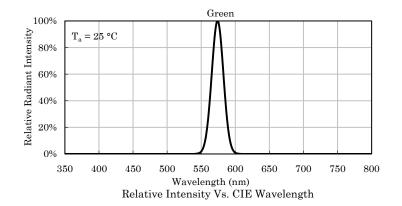
	Part umber	Emitting Color	Emitting Material	Lens-color	CIE127-20 (I <sub>F</sub> =20m mcd	007*	Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
					min.	typ.		
XZV	G54W-8	Green	AlGaInP	Water Clear	120*	347*	574*	40°

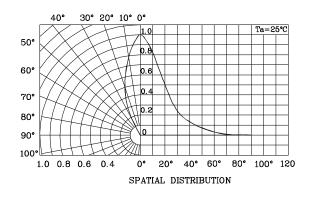
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

Wavelength

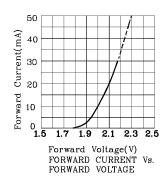


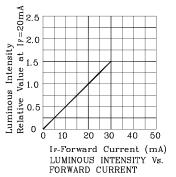


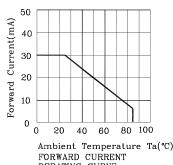


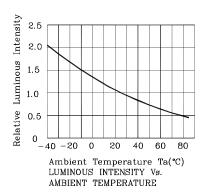


## Green



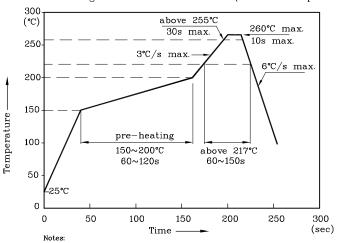






# LED is recommended for reflow soldering and soldering profile is shown below.

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.

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

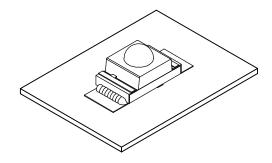
  3. Maximum number of soldering passes: 2



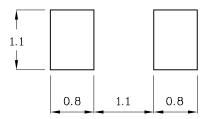


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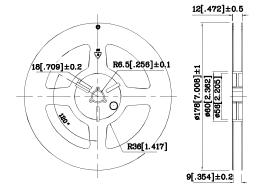
♦ The device has a single mounting surface. The device must be mounted according to the specifications.



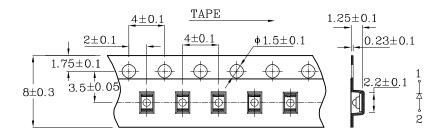
**♦** Recommended Soldering Pattern (Units:mm; Tolerance: ± 0.1)



# **♦** 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:

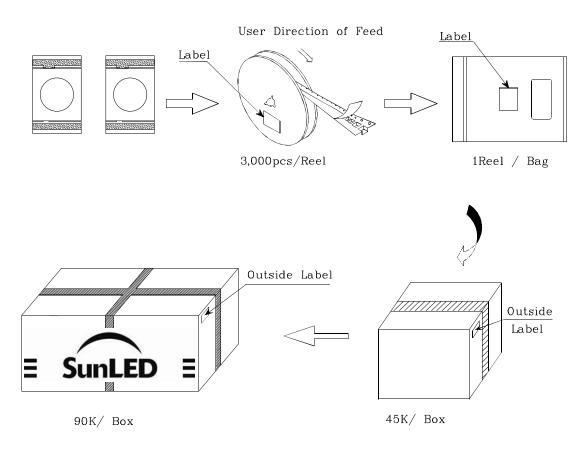
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

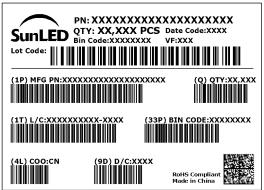
Note: Accuracy may depend on the sorting parameters.





#### PACKING & LABEL SPECIFICATIONS





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- 2. Contents within this document are subject to improvement and enhancement changes without notice.
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XDSB8972 V1-Z Layout: Maggie L.