

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

#### **Features**

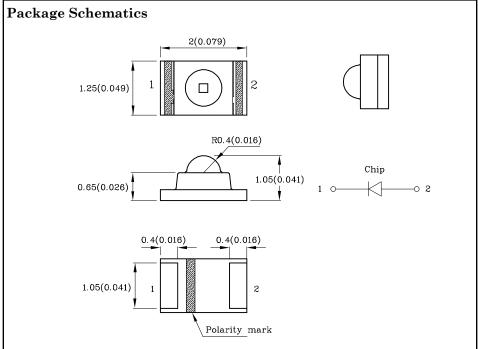
- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 3,000pcs/ Reel
- $\bullet$  MSL (Moisture Sensitivity Level): 3
- Halogen-free
- RoHS compliant







# ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES



#### 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)		Red (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	$P_{D}$	84	mW
Operating Temperature	$T_{A}$	-40 ~ +85	$^{\circ}\mathrm{C}$
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 ( $T_A=25$ °C)		Red (AlGaInP)	Unit
Forward Voltage (Typ.) ( $I_F$ =20mA)	$V_{\mathrm{F}}$	2.2	V
Forward Voltage (Max.) ( $I_F$ =20mA)	$V_{\mathrm{F}}$	2.8	V
Reverse Current (Max.) $(V_R=5V)$	${ m I}_{ m R}$	10	μА
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λР	640*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) $(I_F=20\text{mA})$	λD	625*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	20	nm
Capacitance (Typ.) $(V_F=0V, f=1MHz)$	С	27	pF

Part Number	Emitting Color	Emitting Lens-color Material	Luminous Intensity CIE127-2007* (I <sub>F</sub> =20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2	
				min.	typ.		
XZM2CRK54WA-8	Red	AlGaInP	Water Clear	3000 1000*	5990 1990*	640*	40°

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

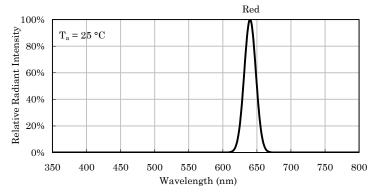
Feb 27,2023

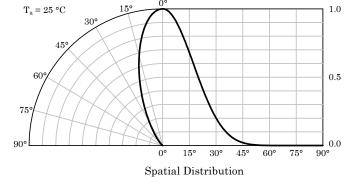
XDSB8977 V4-X Layout: Maggie L.

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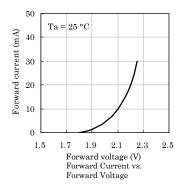


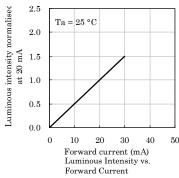


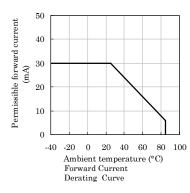


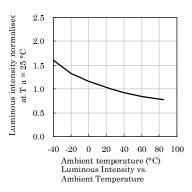
Relative Intensity Vs. CIE Wavelength

# **❖** Red



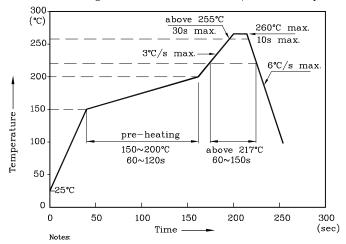






# LED is recommended for reflow soldering and soldering profile is shown below.

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



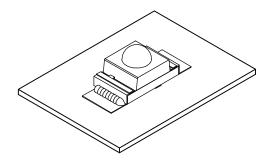
- 1. All temperatures refer to the center of the package,
- measured on the package body surface facing up during reflow. 2. Do not apply any stress to the LED during high temperature conditions.

  3. Maximum number of soldering passes: 2

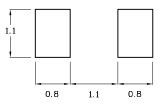




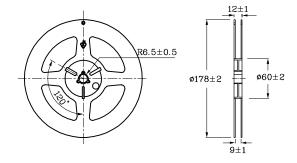
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



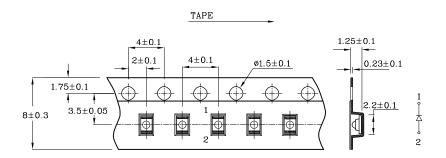
**♦** Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



❖ Reel Dimension (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

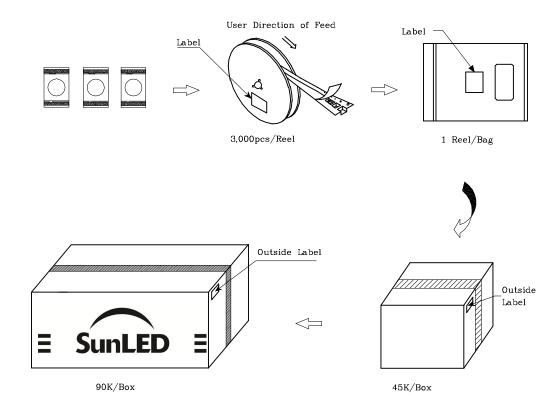
Note: Accuracy may depend on the sorting parameters.

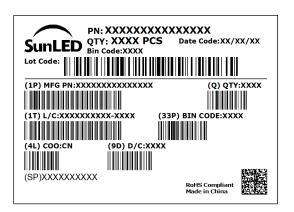
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## PACKING & LABEL SPECIFICATIONS

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