

 $3.2 \times 1.6 \text{ mm}$  SMD Chip LED Lamp

## **Features**

- 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

# 3.2(0.126) 2(0.079) 1.9(0.075) 0.25(0.01)

0.5(0.02)

### Notes:

1. All dimensions are in millimeters (inches).

Package Schematics

- 2. Tolerance is  $\pm 0.2(0.008")$  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	ifs	185	mA	
Power Dissipation	$P_{\mathrm{D}}$	75	mW	
Operating Temperature	$T_{A}$	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85	1	

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 <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.95	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	2.5	V
Reverse Current (Max.) $(V_R=5V)$	$I_R$	10	μA
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λΡ	645*	nm
Wavelength of Dominant Emission CIE127-2007* (Typ.) $(I_F=20\text{mA})$	λD	630*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	Δλ	28	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	35	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity CIE127-2007* (I <sub>F</sub> =20mA) mcd		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
				min.	typ.		
XZMDK55W-1	Red	AlGaInP	Water Clear	120 40*	228 79*	645*	140°

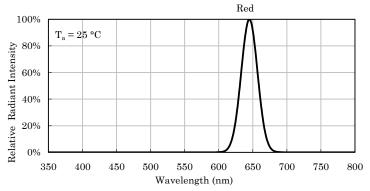
<sup>\*</sup>Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

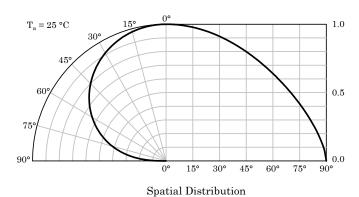
Feb 27,2023

XDSA1318 V13-X Layout: Maggie L.



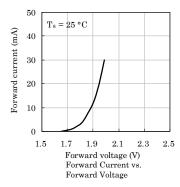


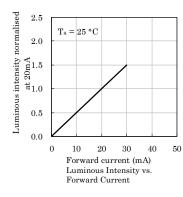


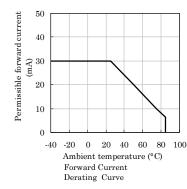


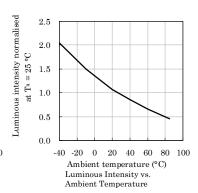
Relative Intensity Vs. CIE Wavelength

**❖** Red



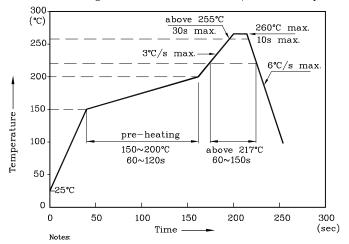






# LED is recommended for reflow soldering and soldering profile is shown below.

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.

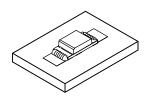
  3. Maximum number of soldering passes: 2

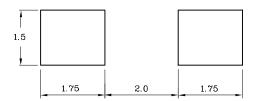




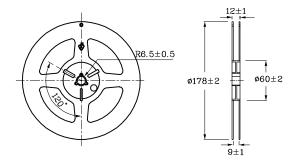
❖ The device has a single mounting surface. The device must be mounted according to the specifications.

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

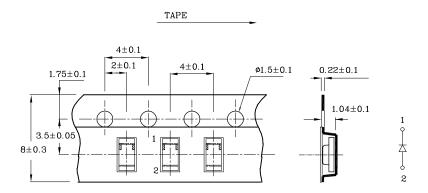




# ❖ Reel Dimension (Units:mm)



# **❖** 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:

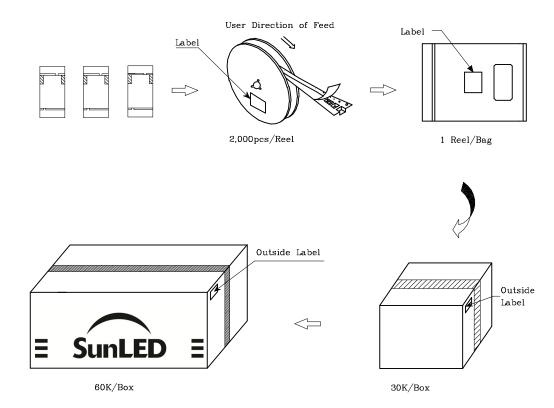
- 1. Wavelength: +/-1nm
- 2. Luminous intensity / luminous flux: +/-15%
- 3. Forward Voltage: +/-0.1V

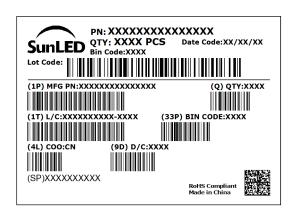
Note: Accuracy may depend on the sorting parameters.





# PACKING & LABEL SPECIFICATIONS





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- $7.\ Additional\ technical\ notes\ are\ available\ at\ \underline{https://www.SunLEDusa.com/TechnicalNotes.asp}$