

3.0x1.0mm INFRARED EMITTING DIODE





#### **Features**

• Long life and robust package

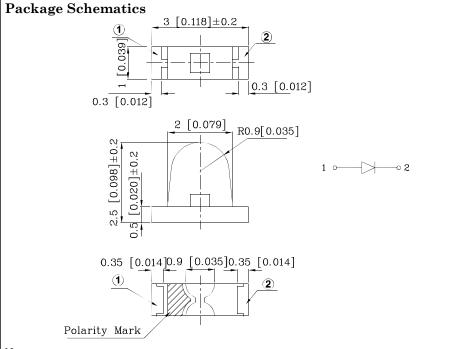
• Standard Package: 2,000pcs/ Reel

 $\bullet$  MSL (Moisture Sensitivity Level): 3

ullet RoHS compliant







#### 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 ( $T_A$ =25°C)		THI (GaAlAs)	Unit	
Reverse Voltage	$V_{\mathrm{R}}$	5	V	
Forward Current	$I_{\mathrm{F}}$	50	mA	
Forward Current (Peak) 1/100 Duty Cycle 10us Pulse Width	$i_{\mathrm{FS}}$	1200	mA	
Power Dissipation	$P_D$	80	mW	
Operating Temperature	$T_{\rm A}$	-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)		THI (GaAlAs)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.3	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.6	V
Reverse Current (Max.) $(V_R=5V)$	${ m I}_{ m R}$	10	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) $(I_F=20\text{mA})$	λΡ	880*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$\triangle \lambda$	50	nm
Capacitance (Typ.) (V <sub>F</sub> =0V, f=1MHz)	С	90	pF

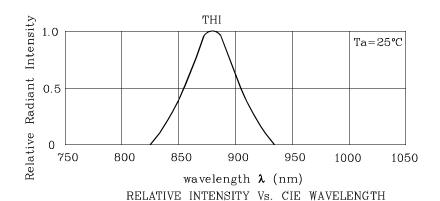
Part Number	Emitting Material	Lens-color	Radiant Intensity CIE127-2007* (Po=mW/sr) @20mA		Wavelength CIE127-2007* nm λP	Viewing Angle 20 1/2
			min.	typ.		
XZTHI56W-1	GaAlAs	Water Clear	1*	2.3*	880*	30°

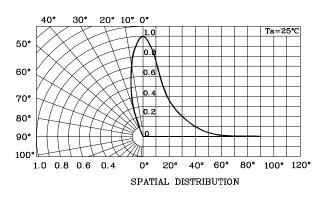
<sup>\*</sup>Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.

XDSA5044 V9-Z Layout: Maggie L.

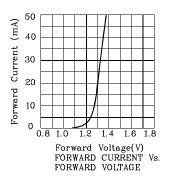


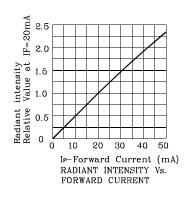


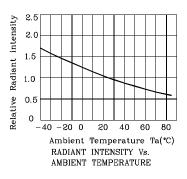




### **♦** THI

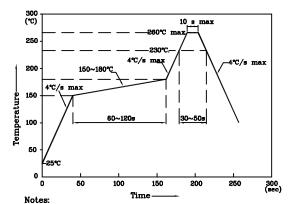






# LED is recommended for reflow soldering and soldering profile is shown below.

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

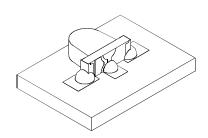


- 1. Maximum soldering temperature should not exceed 260°C
- 2. Recommended reflow temperature: 145°C-260°C
- 3. Do not put stress to the epoxy resin during high temperatures conditions

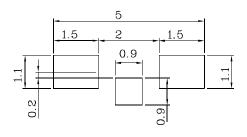




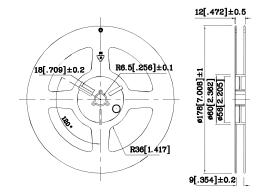
❖ The device has a single mounting surface. The device must be mounted according to the specifications.



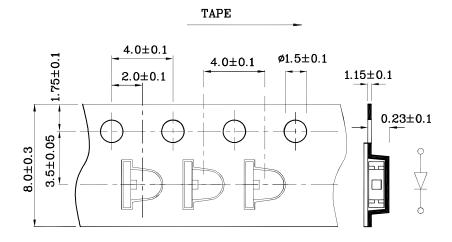
**♦** Recommended Soldering Pattern (Units: mm; Tolerance: ± 0.1)



### **❖** Reel Dimension



## **❖** Tape Specification (Units:mm)



# Remarks:

If special sorting is required (e.g. binning based on forward voltage or radiant intensity / luminous flux), the typical accuracy of the sorting process is as follows:

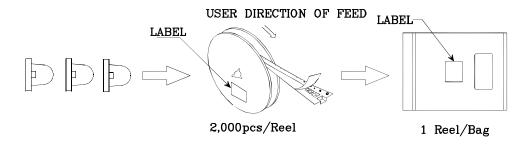
- 1. Radiant Intensity / Luminous Flux: +/-15%
- 2. Forward Voltage: +/-0.1V

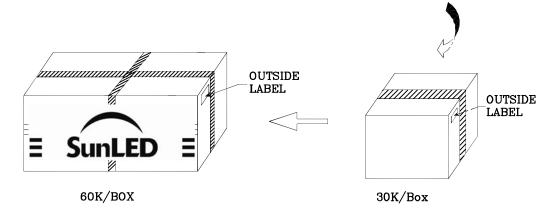
Note: Accuracy may depend on the sorting parameters

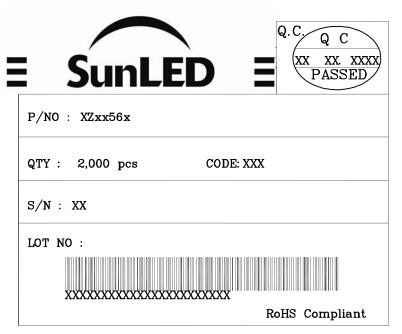




#### PACKING & LABEL SPECIFICATIONS







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