

## Part Number: XZTNI54W-1

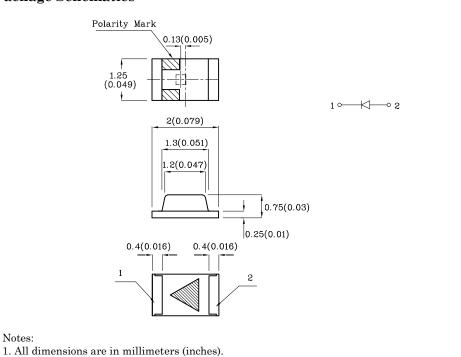
2.0 x 1.25 mm Infrared Emitting Diode

## Features

- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- Halogen-free
- $\bullet$  RoHS compliant



## Package Schematics



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)		TNI (GaAs)	Unit	
Reverse Voltage	$V_{\mathrm{R}}$	5	V	
Forward Current	$I_{\rm F}$	50	mA	
Forward Current (Peak) 1/100 Duty Cycle 10µs Pulse Width	ifs	1200	mA	
Power Dissipation	$\mathbf{P}_{\mathrm{D}}$	90	mW	
Operating Temperature	TA	-40 ~ +85	°C	
Storage Temperature	Tstg	-40 ~ +85		

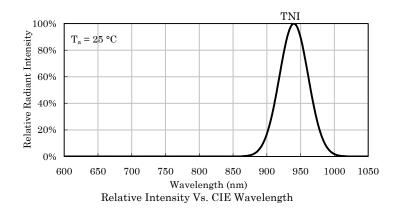
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

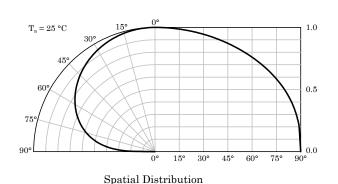
Operating Characteristics (T <sub>A</sub> =25°C)		TNI (GaAs)	Unit
Forward Voltage (Typ.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.2	V
Forward Voltage (Max.) (I <sub>F</sub> =20mA)	$V_{\mathrm{F}}$	1.6	V
Reverse Current (Max.) (V <sub>R</sub> =5V)	$I_R$	10	μΑ
Wavelength of Peak Emission CIE127-2007* (Typ.) (I <sub>F</sub> =20mA)	λP	940*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I <sub>F</sub> =20mA)	$ riangle \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 λΡ	Viewing Angle 20 1/2
			min.	typ.		
XZTNI54W-1	GaAs	Water Clear	1.2 0.8*	2.8 1.8*	940*	160°

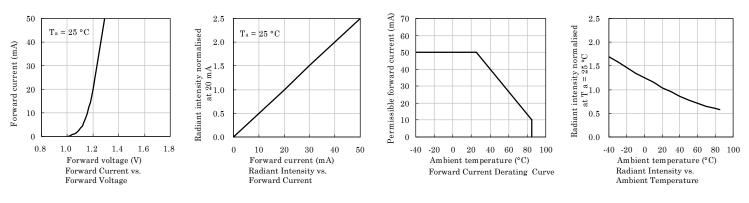
\*Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.



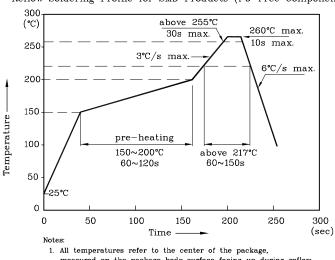








# LED is recommended for reflow soldering and soldering profile is shown below.

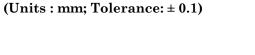


Reflow Soldering Profile for SMD Products (Pb-Free Components)

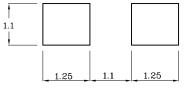
 an temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
Do not apply any stress to the LED during high temperature conditions.
Maximum number of soldering passes: 2



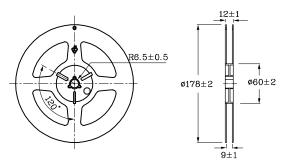
✤ The device has a single mounting surface. The device must be mounted according to the specifications.



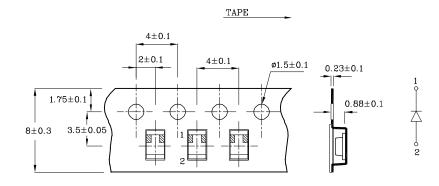
Recommended Soldering Pattern



Reel Dimension (Units : mm)



## 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:

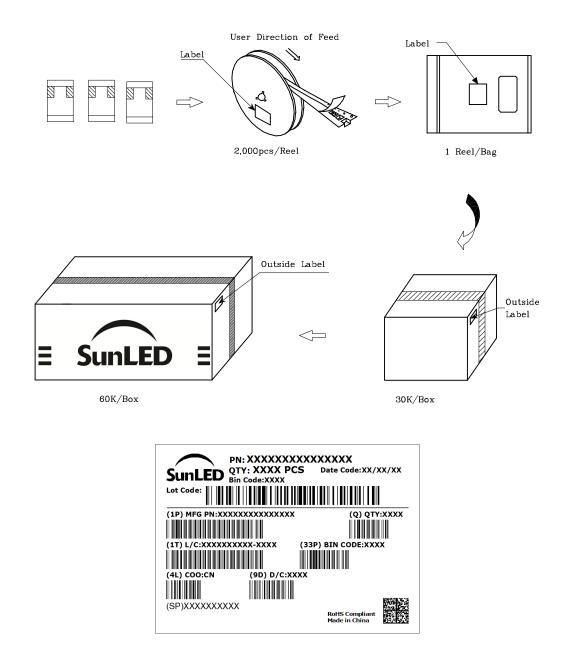
1. Radiant Intensity / Luminous Flux: +/-15%

2. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters



## **PACKING & LABEL SPECIFICATIONS**



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- 1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
- 2. Contents within this document are subject to improvement and enhancement changes without notice.
- 3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet.
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- 4. The product(s) described in this document are intended for electronic applications in which a person's life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person's life.
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