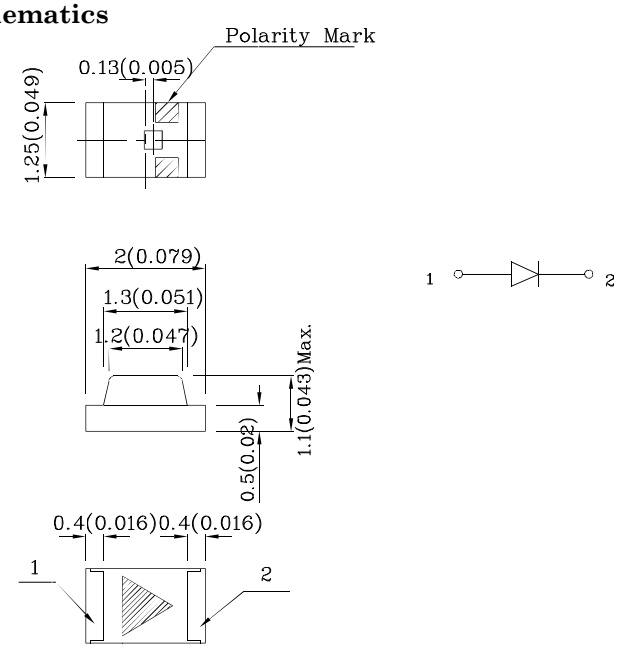
Part Number: XZTNI54W

2.0x1.25mm INFRARED EMITTING DIODE

Features

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

Package Schematics



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.1(0.004") unless otherwise noted.
3. Specifications are subject to change without notice.

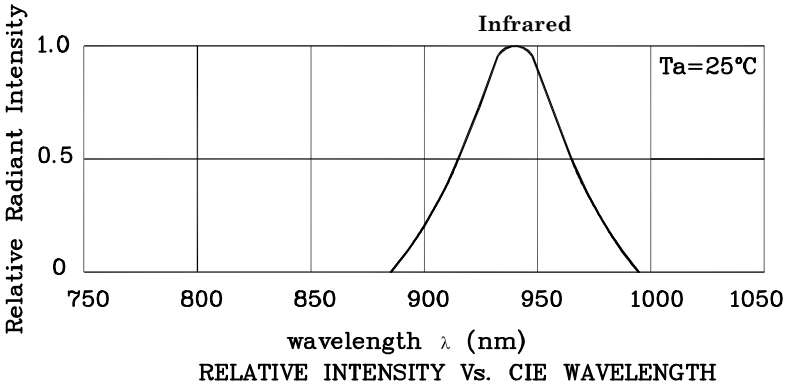
Absolute Maximum Ratings (T_A=25°C)		**Infrared (GaAs)**	**Unit**
Reverse Voltage	V_R	5	V
Forward Current	I_F	50	mA
Forward Current (Peak) 1/100 Duty Cycle 10us Pulse Width	i_{FS}	1200	mA
Power Dissipation	P_D	80	mW
Operating Temperature	T_A	-40 ~ +85	˚C
Storage Temperature	Tstg	-40 ~ +85	

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)

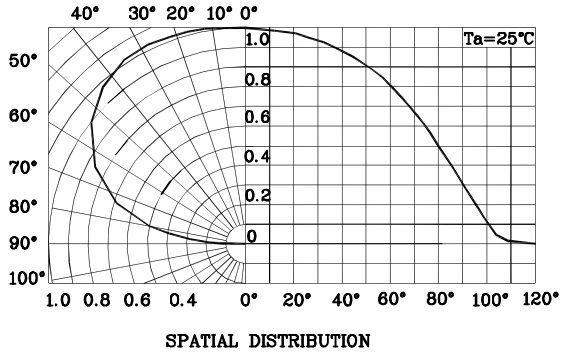
Operating Characteristics (T_A=25°C)		**Infrared (GaAs)**	**Unit**
Forward Voltage (Typ.) (I_F=20mA)	V_F	1.2	V
Forward Voltage (Max.) (I_F=20mA)	V_F	1.6	V
Reverse Current (Max.) (V_R=5V)	I_R	10	uA
Wavelength of Peak Emission CIE127-2007*(Typ.) (I_F=20mA)	λP	940*	nm
Spectral Line Full Width At Half-Maximum (Typ.) (I_F=20mA)	△λ	50	nm
Capacitance (Typ.) (V_F=0V, f=1MHz)	C	90	pF

Part Number	Emitting Material	Lens-color	Radiant Intensity CIE127-2007* (P_O=mW/sr) @20mA		Wavelength CIE127-2007* nm λP	Viewing Angle 2θ 1/2
			min.	typ.		
XZTNI54W	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.

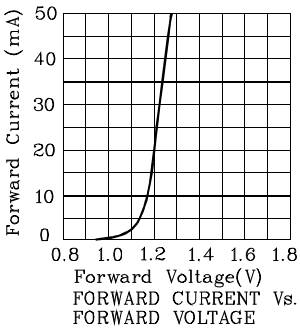


RELATIVE INTENSITY Vs. CIE WAVELENGTH

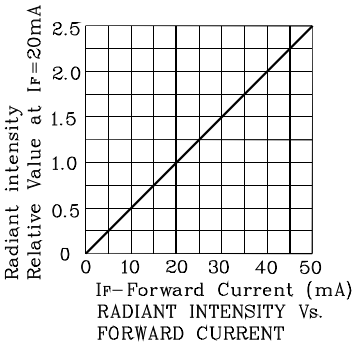


SPATIAL DISTRIBUTION

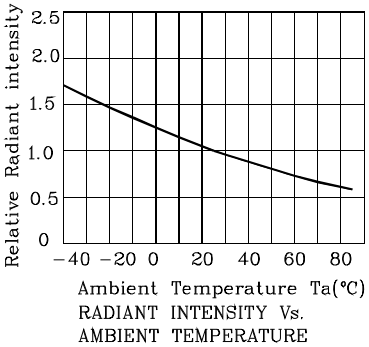
❖ Infrared



FORWARD CURRENT Vs.
FORWARD VOLTAGE



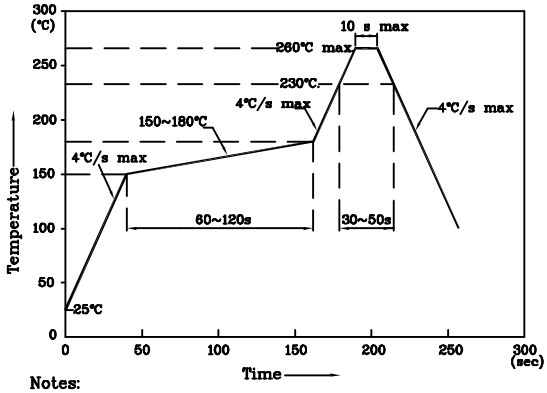
RADIANT INTENSITY Vs.
FORWARD CURRENT



RADIANT INTENSITY Vs.
AMBIENT TEMPERATURE

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

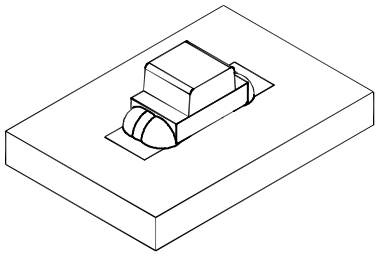
Reflow Soldering Profile for SMD Products (Pb–Free Components)



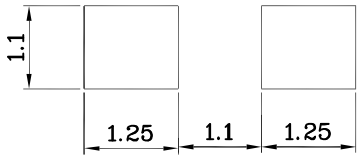
Notes:

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**

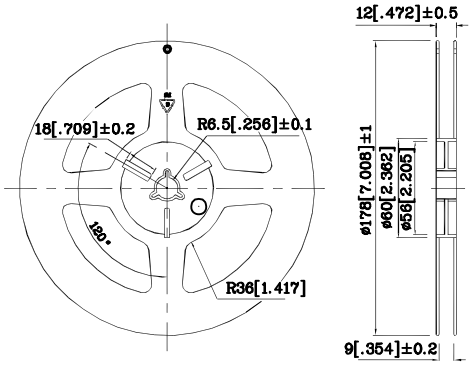
❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



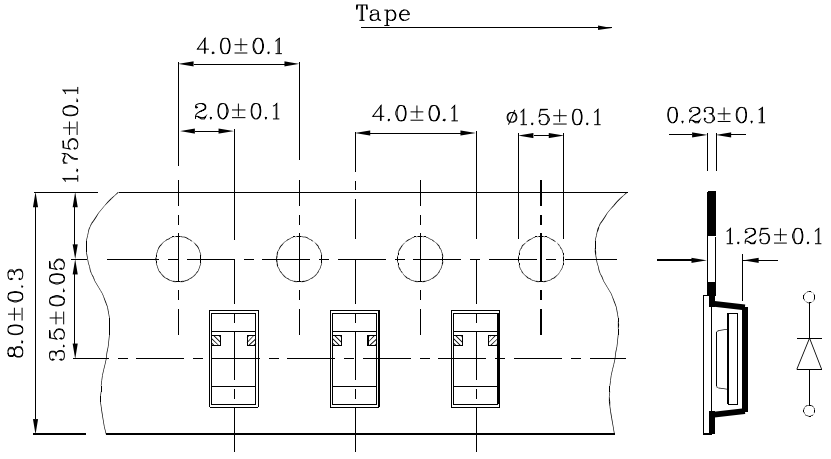
❖ **Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)**



❖ **Reel Dimension**

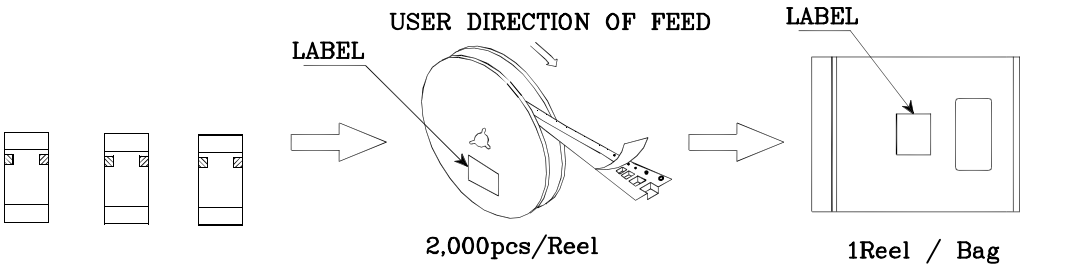


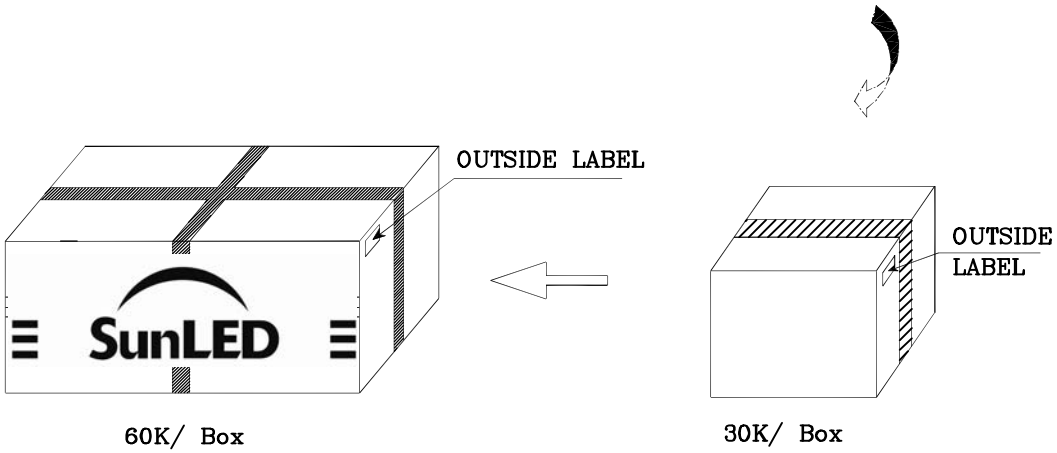
❖ **Tape Specification (Units : mm)**

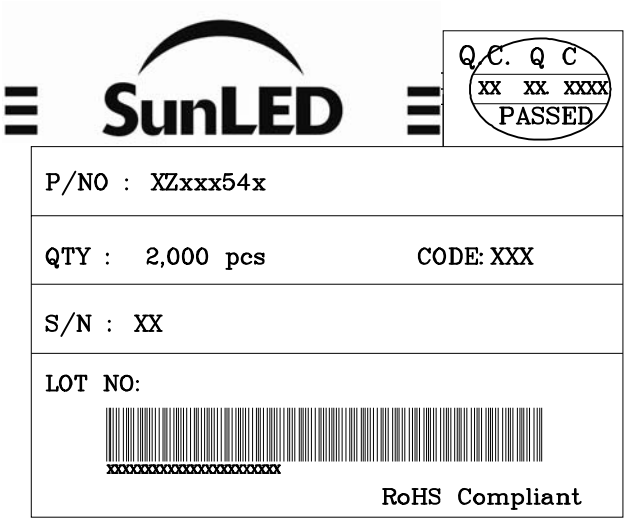


Remarks:
If special sorting is required (e.g. binning based on forward voltage or radiant intensity / luminous flux),
the typical accuracy of the sorting process is as follows:
1. Radiant Intensity / Luminous Flux: +/-15%
2. Forward Voltage: +/-0.1V
Note: Accuracy may depend on the sorting parameters

PACKING & LABEL SPECIFICATIONS







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2. Contents within this document are subject to improvement and enhancement changes without notice.
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