SunLED
www.SunLEDusa.com

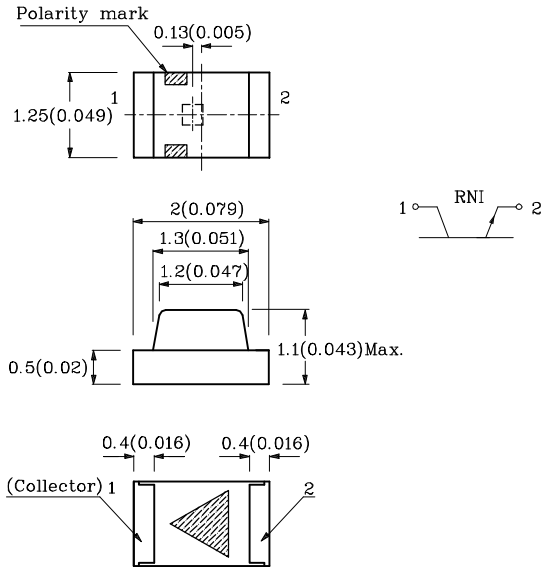
Part Number: XZRNI54W

2.0 x 1.25 mm Phototransistor

Features

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

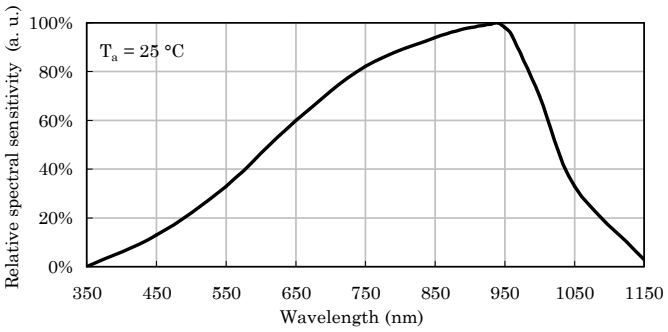
Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condiction
$V_{BR\ CEO}$	Collector-to-Emitter Breakdown Voltage	30	-	-	V	I_C = 100μA E_e = 0mW/cm²
$V_{BR\ ECO}$	Emitter-to-Collector Breakdown Voltage	5	-	-	V	I_E = 100μA E_e =0mW/cm²
$V_{CE(SAT)}$	Collector-to-Emitter Saturation Voltage	-	-	0.8	V	I_C = 2mA E_e = 20mW/cm²
I_{CEO}	Collector Dark Current	-	-	100	nA	V_{CE} =10V E_e =0mW/cm²
T_R	Rise Time (10% to 90%)	-	15	-	μs	V_{CE} = 5V I_C = 1mA R_L = 1KΩ
T_F	Fall Time (90% to 10%)	-	15	-	μs	
$I_{(ON)}$	On State Collector Current	0.2	0.4	-	mA	V_{CE} = 5V E_e = 1mW/cm² λ = 940nm
$\lambda_{0.1}$	Range of spectral bandwidth	420	-	1120	nm	-
λ_p	Wavelength of peak Sensitivity	-	940	-	nm	-
2θ1/2	Angle of half sensitivity	-	160	-	deg	-

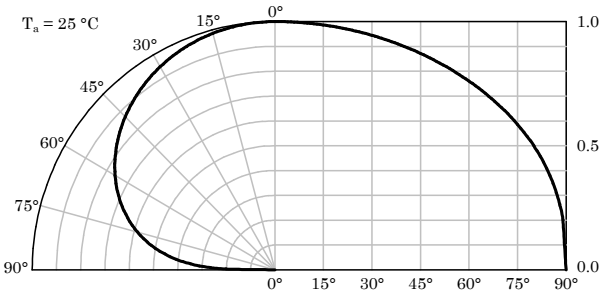
Absolute Maximum Ratings at TA=25°C

Parameter	Maximum Ratings
Collector-to-Emitter Voltage	30V
Emitter-to-Collector Voltage	5V
Power Dissipation at (or below) 25°C Free Air Temperature	100mW
Operating / Storage Temperature Range	-40°C ~ +85°C

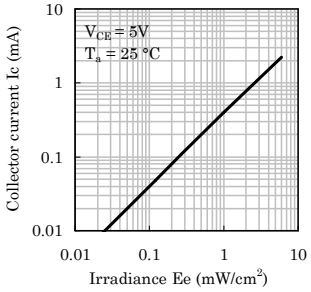
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)



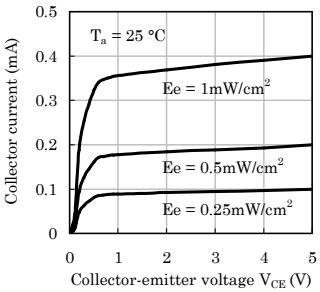
Relative Intensity Vs. CIE Wavelength



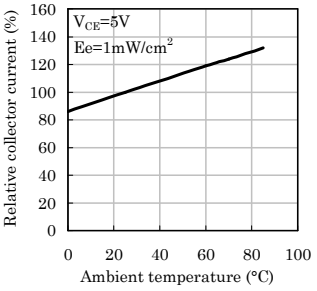
Spatial Distribution



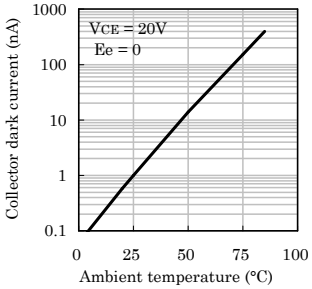
Collector Current vs.
Irradiance



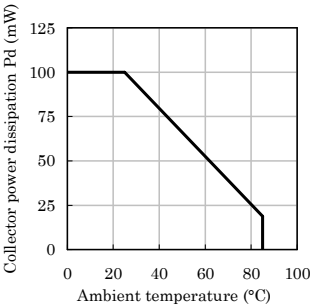
Collector Current vs.
Collector-Emitter Voltage



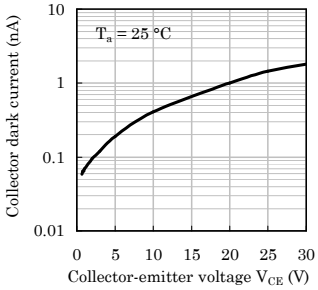
Relative Collector Current vs.
Ambient Temperature



Collector Dark Current vs.
Ambient Temperature

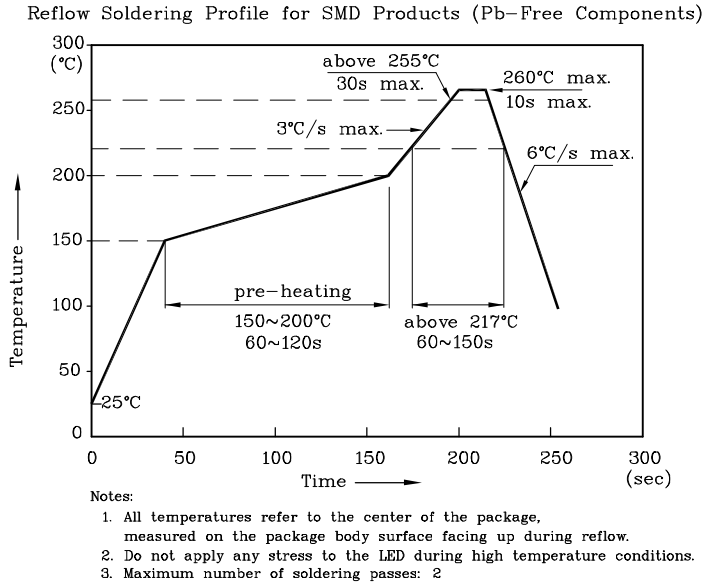


Collector Power Dissipation vs.
Ambient Temperature



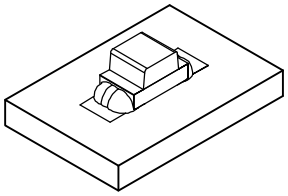
Collector Dark Current vs.
Collector-Emitter Voltage

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

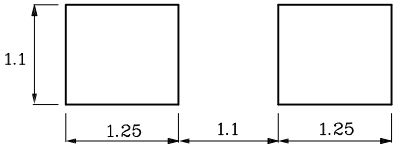


Notes:
1. All temperatures refer to the center of the package, measured on the package body surface facing up during reflow.
2. Do not apply any stress to the LED during high temperature conditions.
3. Maximum number of soldering passes: 2

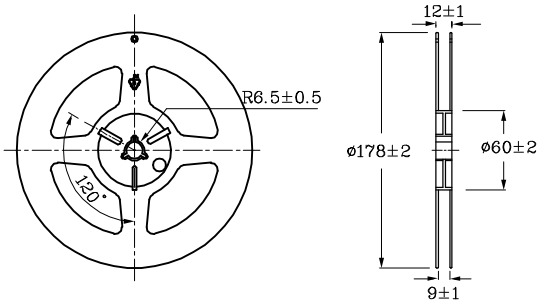
❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



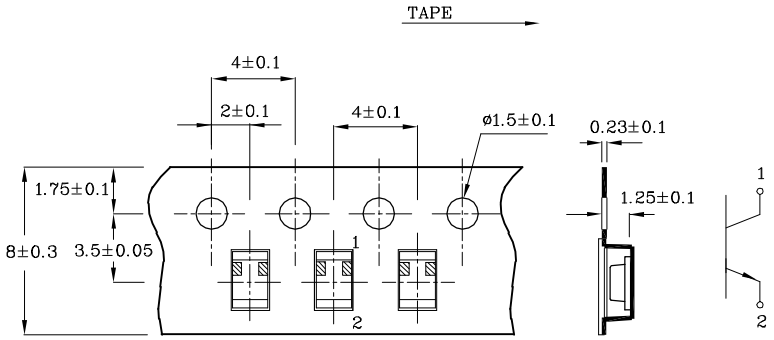
❖ **Recommended Soldering Pattern (Units : mm; Tolerance: ± 0.1)**



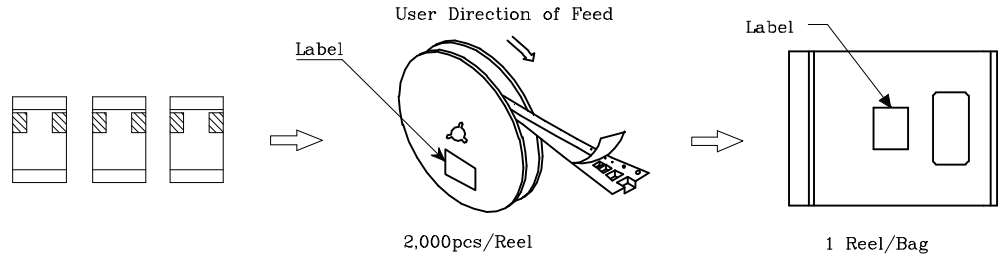
❖ **Reel Dimension (Units : mm)**

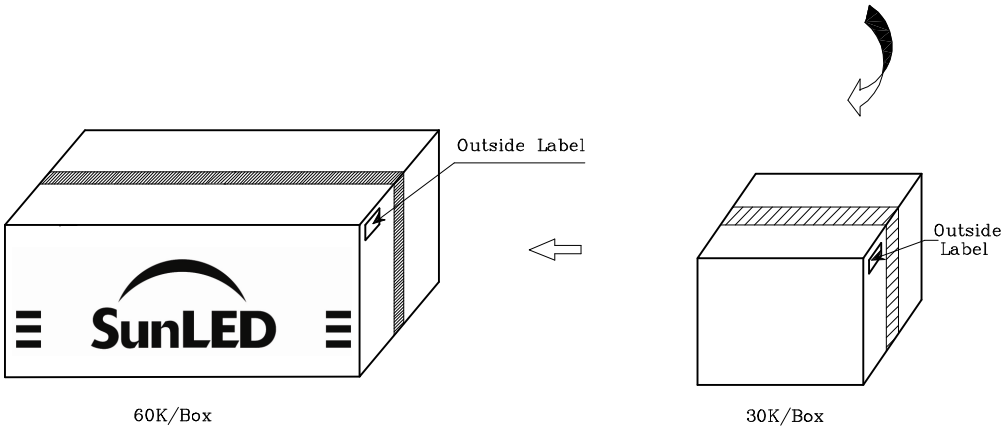


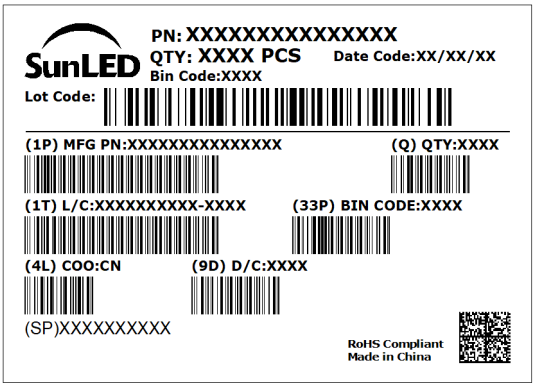
❖ **Tape Specification (Units : mm)**



PACKING & LABEL SPECIFICATIONS







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