SunLED
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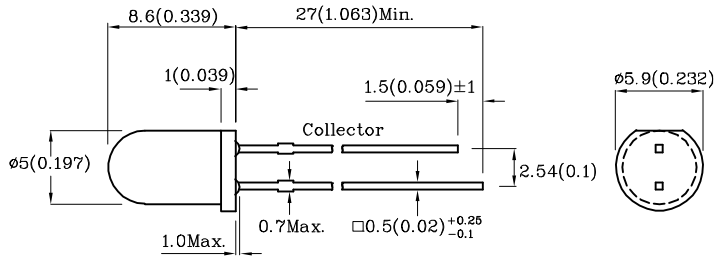
Part Number: XRNI12W

Phototransistor

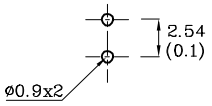
Features

- Radial / Through hole package
- Reliable & robust
- Low power consumption
- Available on tape and reel
- Water clear lens
- RoHS Compliant

Package Schematics



Recommended PCB Layout



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

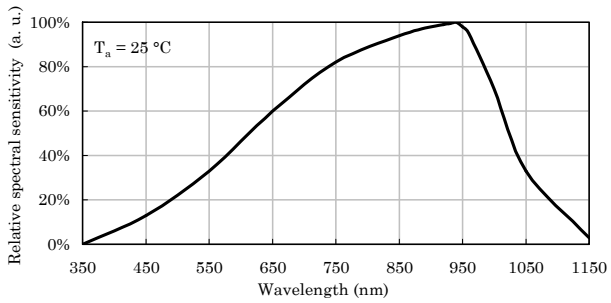
Electrical / Optical Characteristics at TA=25°C

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	0.5	2.5	-	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	-

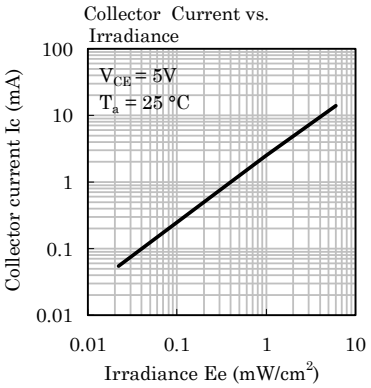
Absolute Maximum Ratings at TA=25°C

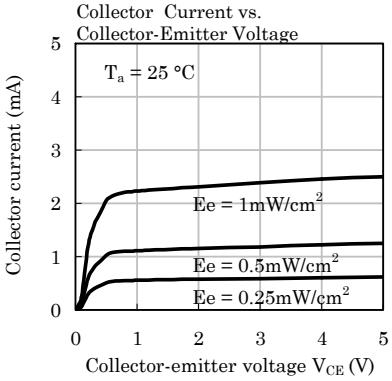
Parameter	Maximum Ratings
Collector-to-Emitter Voltage	30V
Emitter-to-Collector Voltage	5V
Power Dissipation at (or below) 25°C Free Air Temperature	100mW
Operating / Storage Temperature Range	-40 ~ +85°C
Lead Solder Temperature (>5mm for 5sec)	260°C

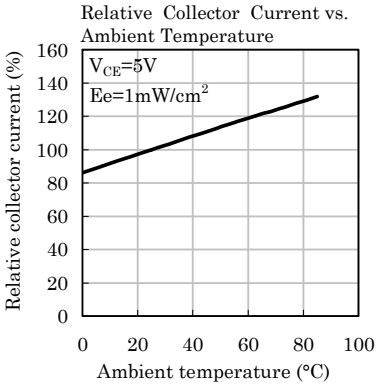
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

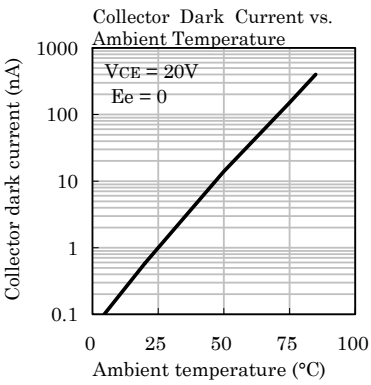


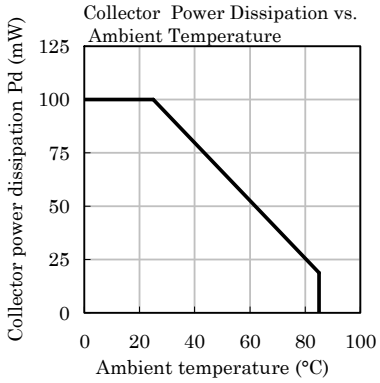
Relative Intensity Vs. CIE Wavelength

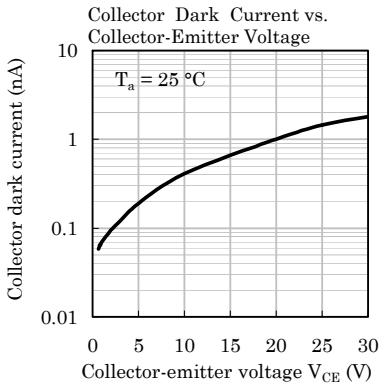




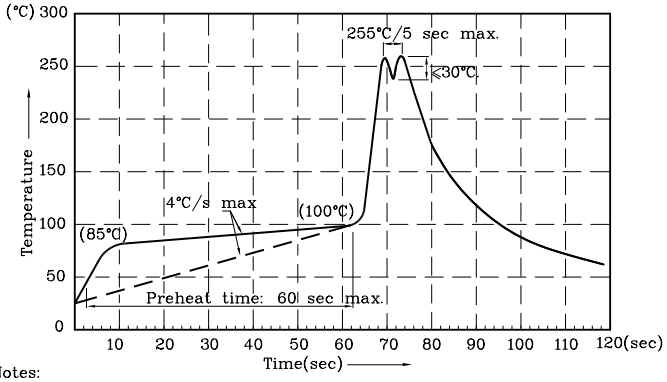






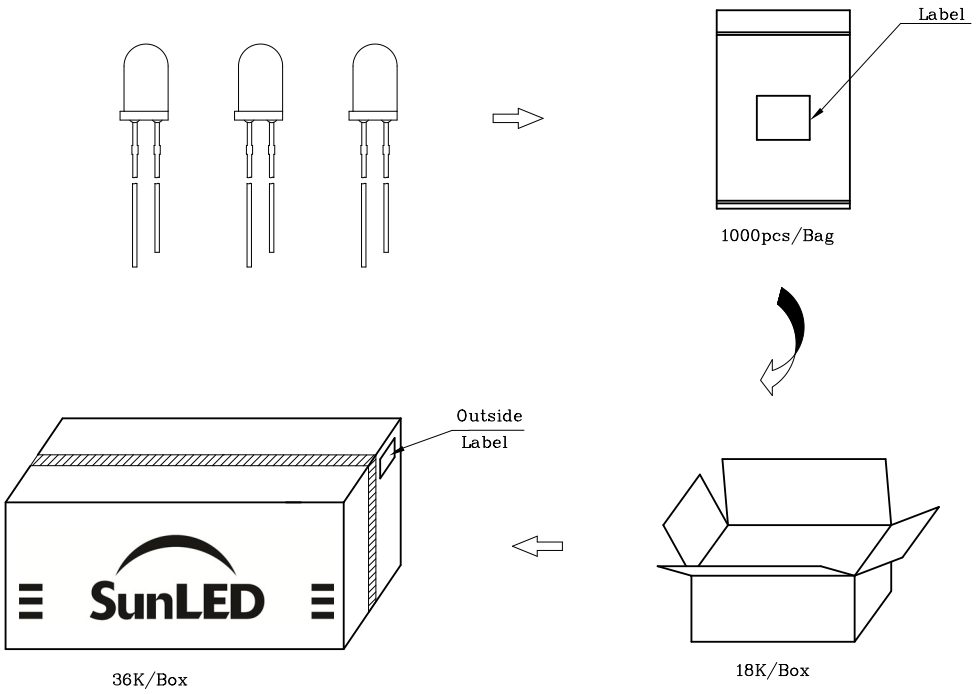


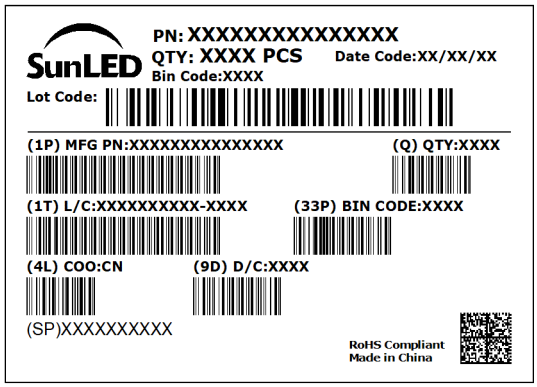
Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)



Notes:
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress to the epoxy resin while the temperature is above 85°C.
4. Fixtures should not incur stress on the component when mounting and during soldering process.
5. SAC 305 solder alloy is recommended.
6. No more than one wave soldering pass.

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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