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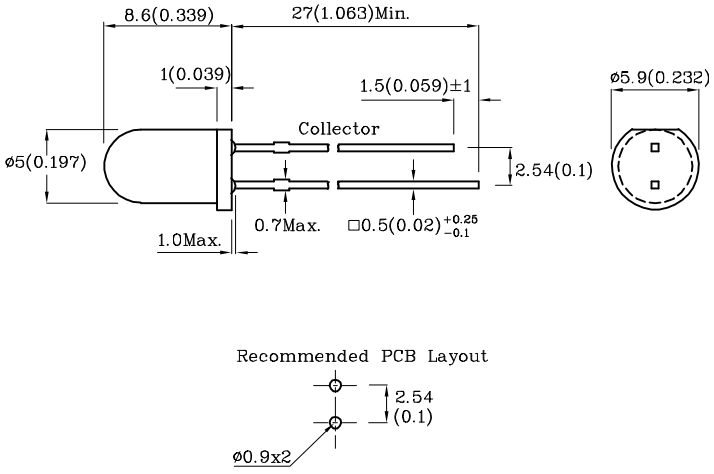
Part Number: XRNI12W

PHOTOTRANSISTOR

Features

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

Package Schematics



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.

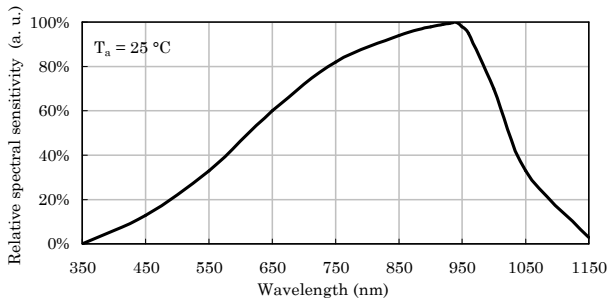
Electrical / Optical Characteristics at TA=25°C

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	-
2θ1/2	Angle of half sensitivity	-	20	-	deg	-

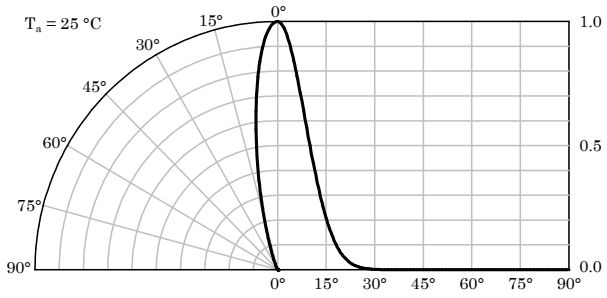
Absolute Maximum Ratings at TA=25°C

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 ~ +85°C
Lead Solder Temperature (>5mm for 5sec)	260°C

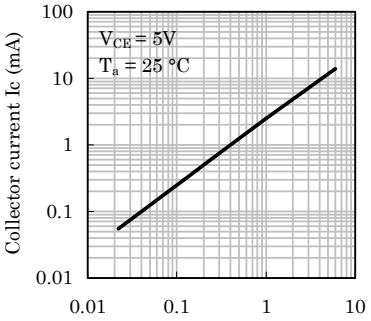
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)



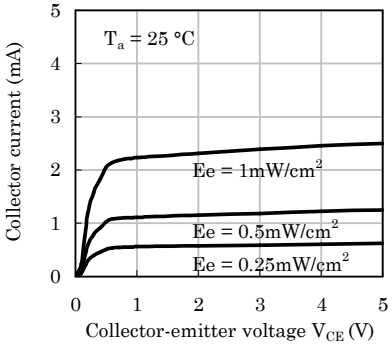
Relative Intensity Vs. CIE Wavelength



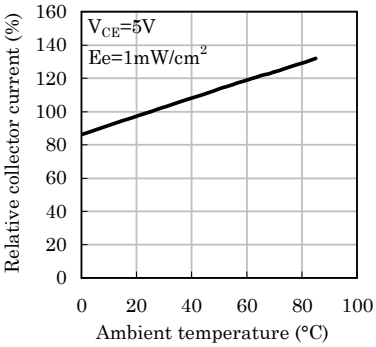
Spatial Distribution



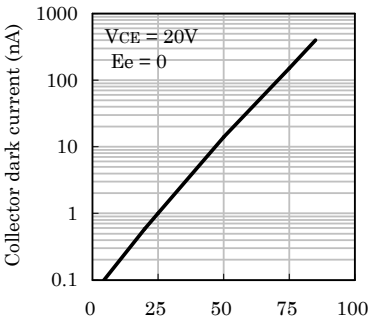
Collector Current vs.
Irradiance



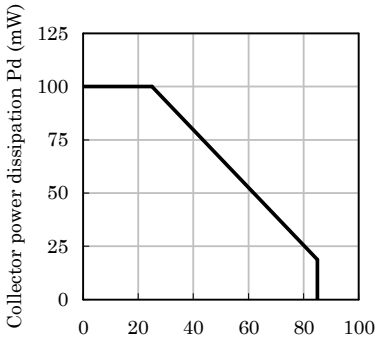
Collector Current vs.
Collector-Emitter Voltage



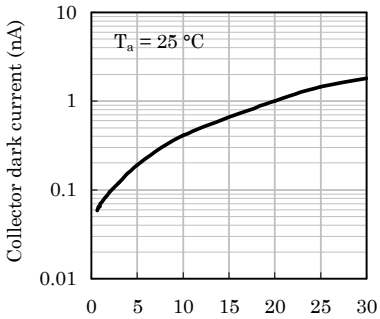
Relative Collector Current vs.
Ambient Temperature



Collector Dark Current vs.
Ambient Temperature

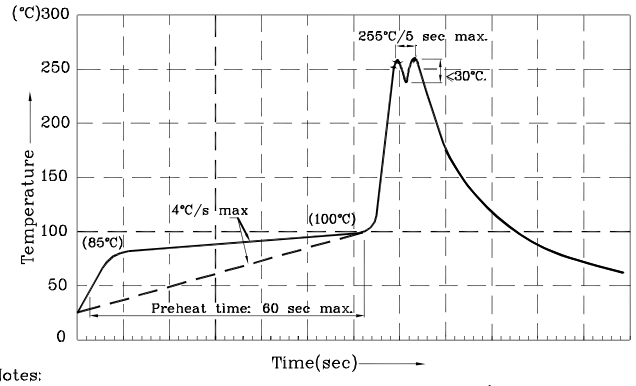


Collector Power Dissipation vs.
Ambient Temperature



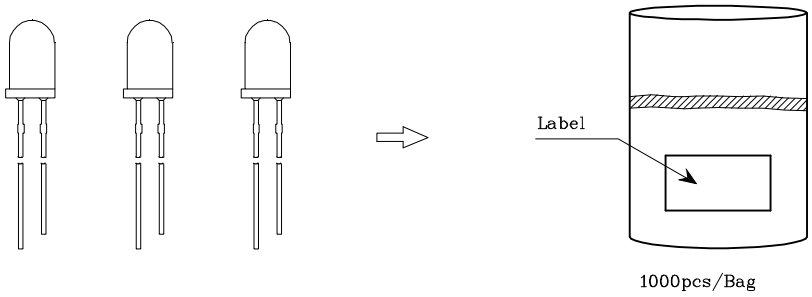
Collector Dark Current vs.
Collector-Emitter Voltage

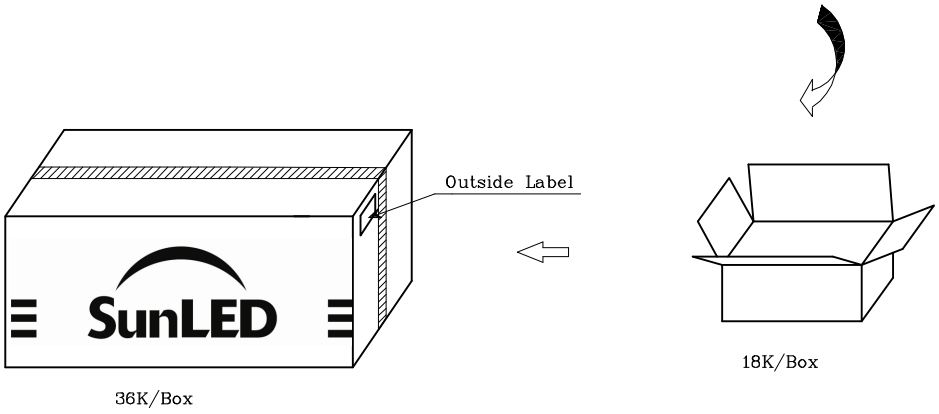
Wave Soldering Profile For Thru-Hole Products (Pb-Free Components)

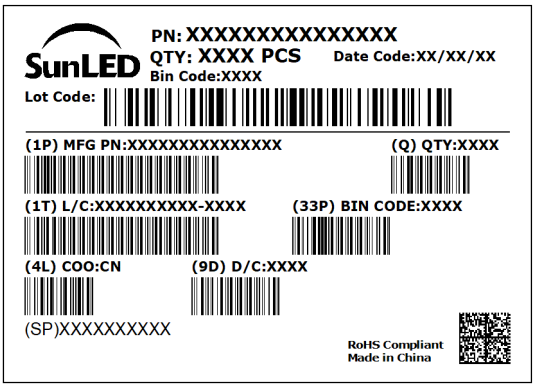


Notes:
1. Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
2. Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
3. Do not apply stress 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







TERMS OF USE

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. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
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.
5. The contents within this document may not be altered without prior consent by SunLED.
6. Additional technical notes are available at https://www.SunLEDusa.com/TechnicalNotes.asp