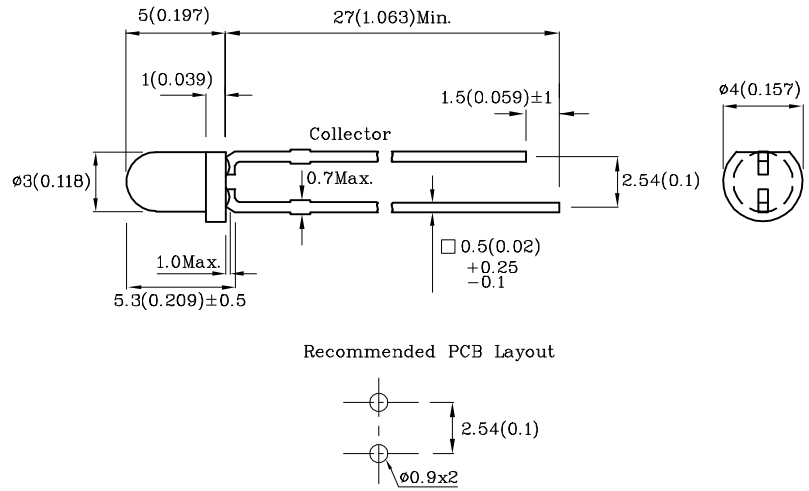


### Features

- Radial / Through hole package
- Reliable & robust
- Low power consumption
- RoHS Compliant



### Package Schematics



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.

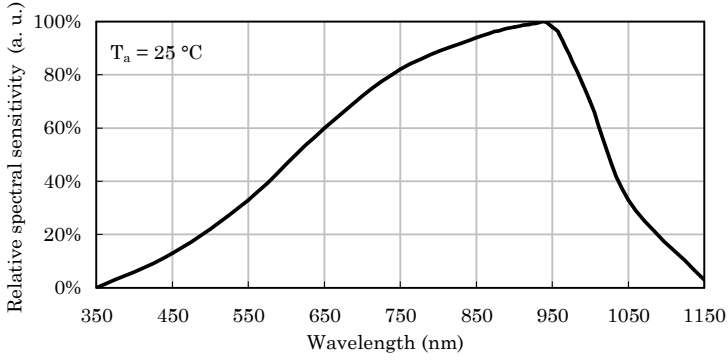
### Electrical / Optical Characteristics at TA=25°C

| Symbol          | Parameter                               | Min. | Typ. | Max. | Unit    | Test Condition   |
|-----------------|---|------|------|------|---------|--|
| VBR CEO         | Collector-to-Emitter Breakdown Voltage  | 30   | -    | -    | V       | $I_C = 100\mu A$<br>$E_e = 0mW/cm^2$                   |
| VBR ECO         | Emitter-to-Collector Breakdown Voltage  | 5    | -    | -    | V       | $I_E = 100\mu A$<br>$E_e = 0mW/cm^2$                   |
| VCE(SAT)        | Collector-to-Emitter Saturation Voltage | -    | -    | 0.8  | V       | $I_C = 2mA$<br>$E_e = 20mW/cm^2$                       |
| ICEO            | Collector Dark Current                  | -    | -    | 100  | nA      | $V_{CE} = 10V$<br>$E_e = 0mW/cm^2$                     |
| T <sub>R</sub>  | Rise Time (10% to 90%)                  | -    | 15   | -    | $\mu s$ | $V_{CE} = 5V$<br>$I_C = 1mA$<br>$R_L = 1K\Omega$       |
| T <sub>F</sub>  | Fall Time (90% to 10%)                  | -    | 15   | -    | $\mu s$ |  |
| I(ON)           | On State Collector Current              | 0.3  | 0.8  | -    | mA      | $V_{CE} = 5V$<br>$E_e = 1mW/cm^2$<br>$\lambda = 940nm$ |
| $\lambda_{0.1}$ | Range of spectral bandwidth             | 420  | -    | 1120 | nm      | -  |
| $\lambda_p$     | Wavelength of peak sensitivity          | -    | 940  | -    | nm      | -  |
| 201/2           | Angle of half sensitivity               | -    | 50   | -    | deg     | -  |

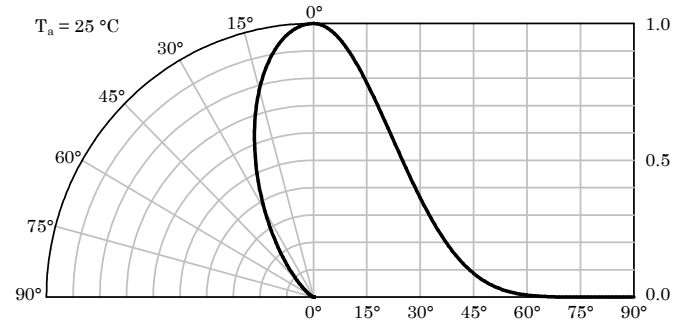
### Absolute Maximum Ratings at TA=25°C

| 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           |

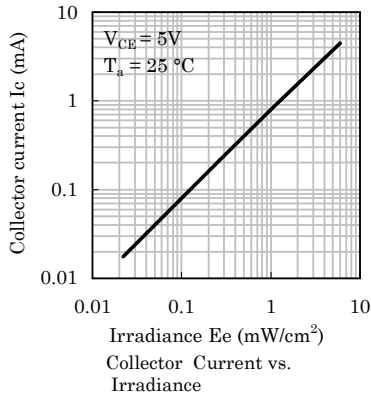
A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)



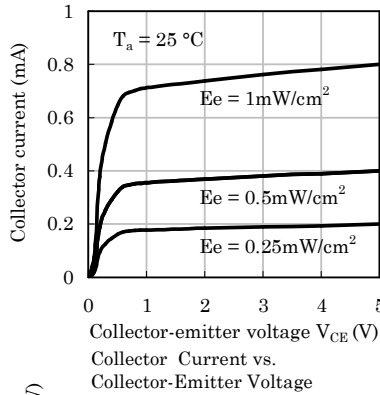
Relative Intensity Vs. CIE Wavelength



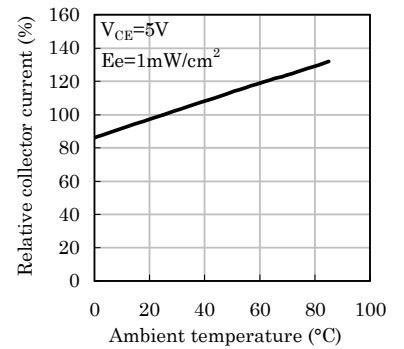
Spatial Distribution



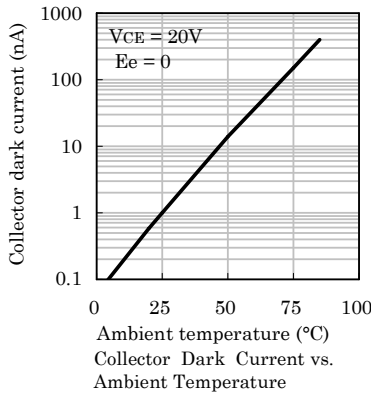
Collector Current vs. Irradiance



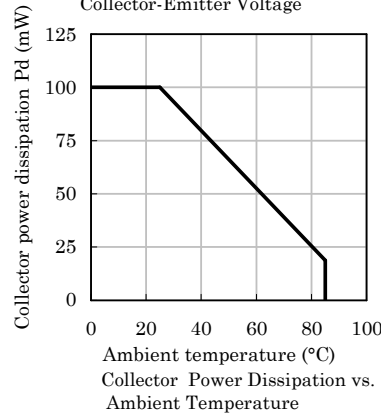
Collector Current vs. Collector-Emitter Voltage



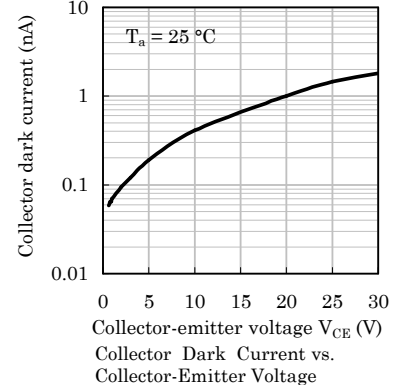
Relative Collector Current vs. Ambient Temperature



Collector Dark Current vs. Ambient Temperature

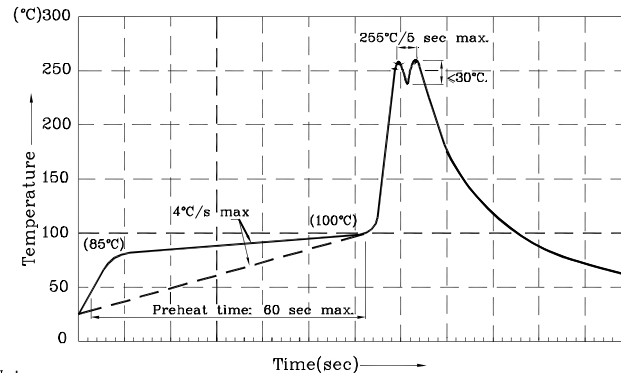


Collector Power Dissipation vs. Ambient Temperature



Collector Dark Current vs. Collector-Emitter Voltage

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

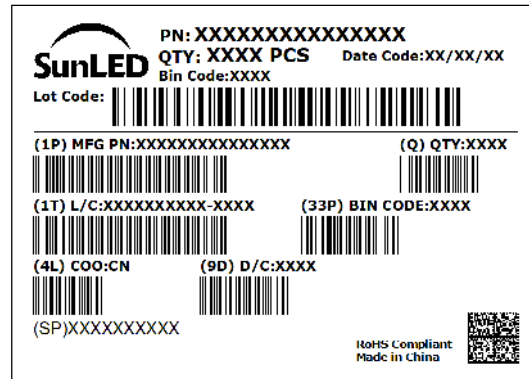
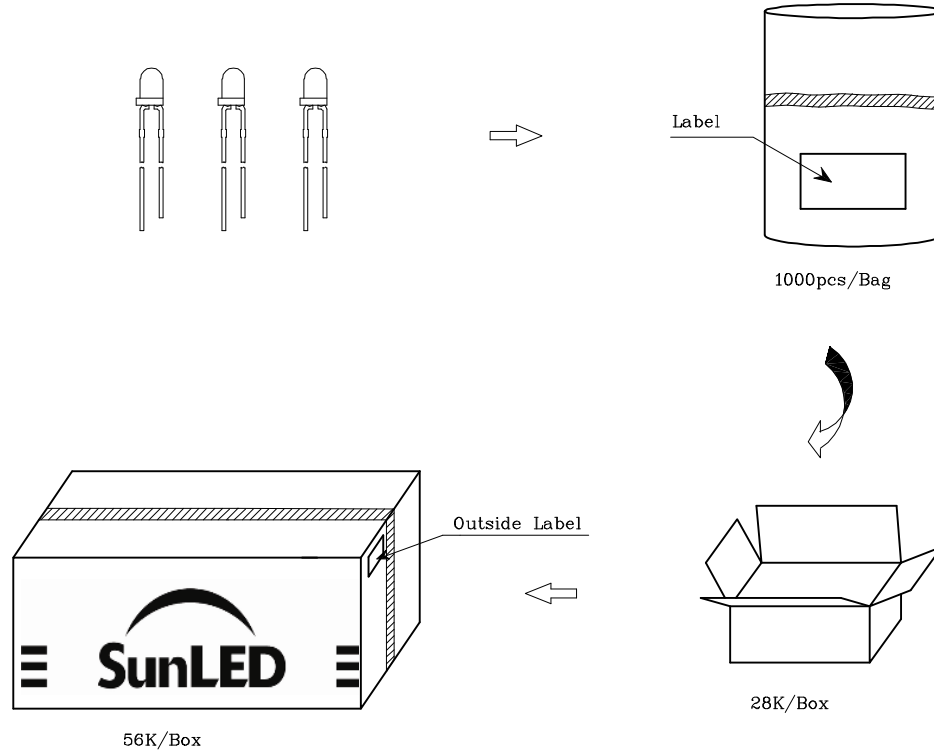


Notes:

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 280°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.
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