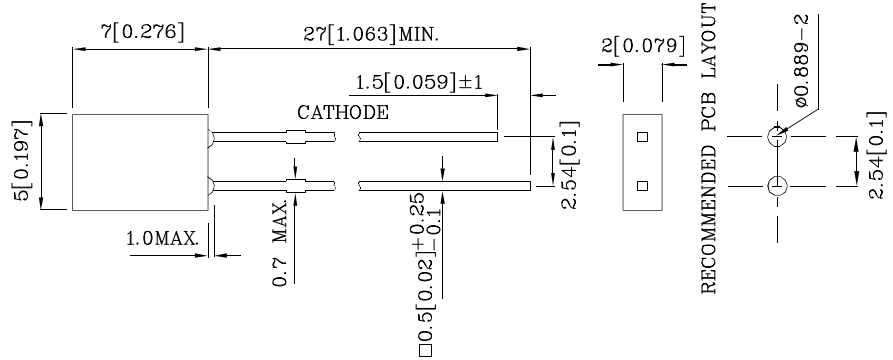


## Features

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



## Package Schematics



### Notes:

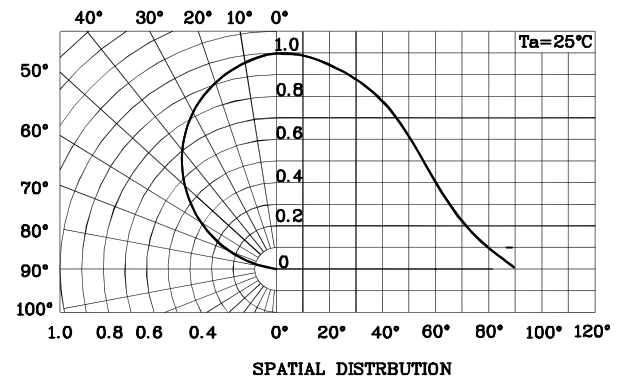
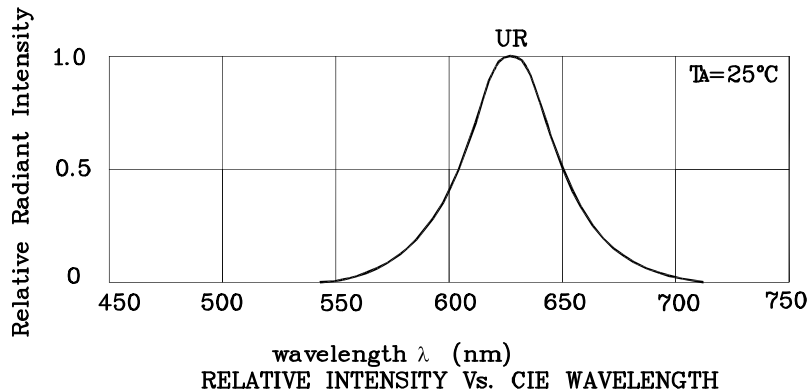
1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25$  (0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

| Absolute Maximum Ratings<br>(T <sub>A</sub> =25°C)             |                     | UR<br>(GaAsP/GaP) | Unit |
|--|---------------------|-------------------|------|
| Reverse Voltage  | V <sub>R</sub>      | 5                 | V    |
| Forward Current  | I <sub>F</sub>      | 30                | mA   |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | i <sub>FS</sub>     | 160               | mA   |
| Power Dissipation  | P <sub>D</sub>      | 75                | mW   |
| Operating Temperature  | T <sub>A</sub>      | -40 ~ +85         | °C   |
| Storage Temperature  | T <sub>stg</sub>    | -40 ~ +85         |      |
| Lead Solder Temperature<br>[2mm Below Package Base]            | 260°C For 3 Seconds |                   |      |
| Lead Solder Temperature<br>[5mm Below Package Base]            | 260°C For 5 Seconds |                   |      |

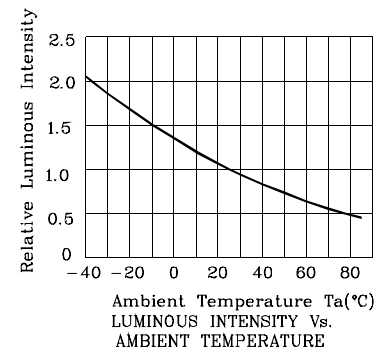
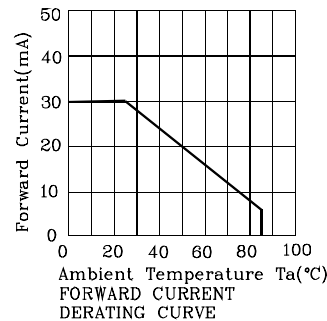
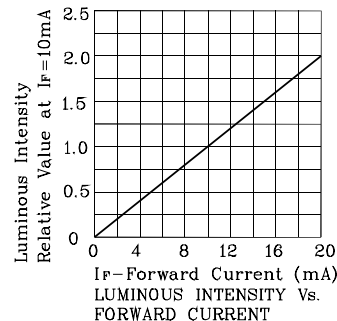
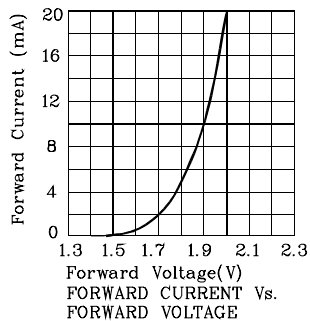
| Operating Characteristics<br>(T <sub>A</sub> =25°C)                             |                | UR<br>(GaAsP/GaP) | Unit |
|---|----------------|-------------------|------|
| Forward Voltage (Typ.)<br>(I <sub>F</sub> =10mA)                                | V <sub>F</sub> | 1.9               | V    |
| Forward Voltage (Max.)<br>(I <sub>F</sub> =10mA)                                | V <sub>F</sub> | 2.5               | V    |
| Reverse Current (Max.)<br>(V <sub>R</sub> =5V)                                  | I <sub>R</sub> | 10                | uA   |
| Wavelength of Peak<br>Emission CIE127-2007*(Typ.)<br>(I <sub>F</sub> =10mA)     | λ <sub>P</sub> | 627*              | nm   |
| Wavelength of Dominant<br>Emission CIE127-2007*(Typ.)<br>(I <sub>F</sub> =10mA) | λ <sub>D</sub> | 617*              | nm   |
| Spectral Line Full Width<br>At Half-Maximum (Typ.)<br>(I <sub>F</sub> =10mA)    | Δλ             | 45                | nm   |
| Capacitance (Typ.)<br>(V <sub>F</sub> =0V, f=1MHz)                              | C              | 15                | pF   |

| Part<br>Number | Emitting<br>Color | Emitting<br>Material | Lens-color   | Luminous Intensity<br>CIE127-2007*<br>(I <sub>F</sub> =10mA)<br>mcd |           | Wavelength<br>CIE127-2007*<br>nm<br>λ <sub>P</sub> | Viewing<br>Angle<br>2θ 1/2 |
|----------------|-------------------|----------------------|--------------|---|-----------|--|----------------------------|
|                |                   |                      |              | min.  | typ.      |  |                            |
| XSUR18D        | Red               | GaAsP/GaP            | Red Diffused | 4<br>2*   | 6<br>3.8* | 627*   | 110°                       |

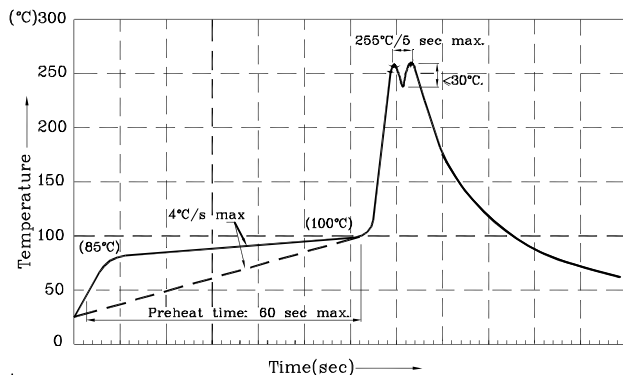
\*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.



## ❖ UR



## 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.

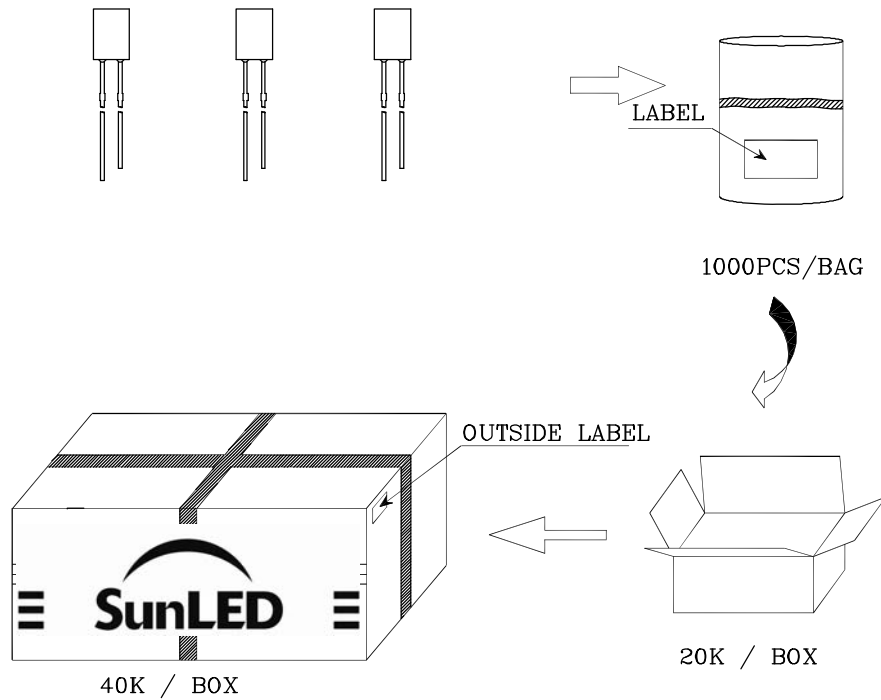
### Remarks:



If special sorting is required (e.g. binning based on forward voltage, luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength:  $\pm 1\text{nm}$
2. Luminous Intensity / Luminous Flux:  $\pm 15\%$
3. Forward Voltage:  $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.

## PACKING & LABEL SPECIFICATIONS



|   |  |                                   |
|---|--|-----------------------------------|
|                                      |  | Q.C.<br>Q C<br>XX XX XX<br>PASSED |
| P/NO : XSxx18x  |  | FQC                               |
| QTY : 1000 pcs  |  | CODE: XXX                         |
| S/N : XX  |  |                                   |
| LOT NO:<br><br>XXXXXXXXXXXXXXXXXXXX |  |                                   |
| RoHS Compliant  |  |                                   |

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