

# Super Brightness Red LED Lamp

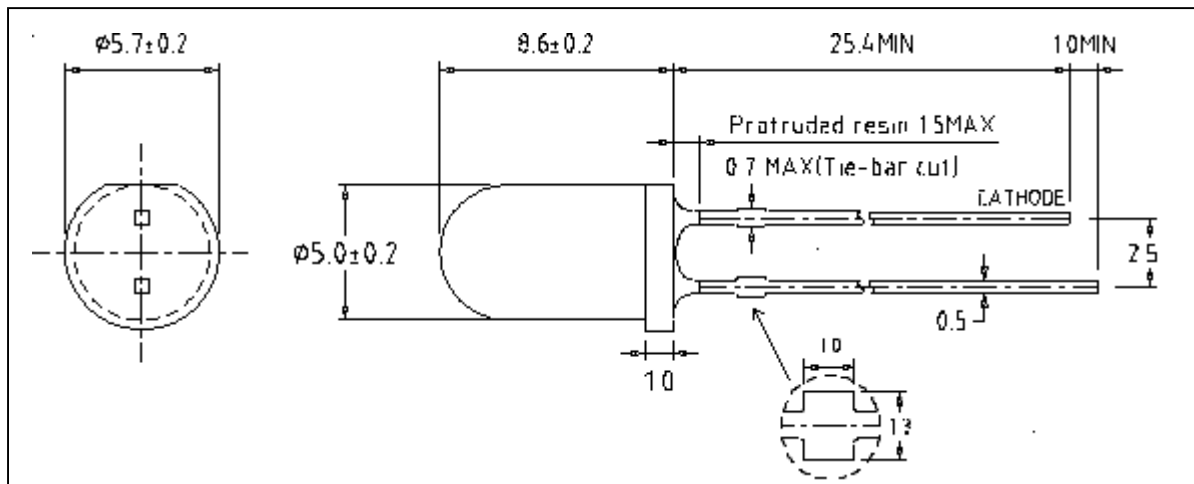


5mm Round Through-Hole Package

## PL-LSRE5N30C series

| FEATURES  | APPLICATIONS  |
|---|---|
| <ul style="list-style-type: none"> <li>• Super luminosity Red 626nm LED</li> <li>• Latest AlInGaP II die.</li> <li>• 5mm round resin mold.</li> <li>• Water Clear Lens.</li> <li>• UV Resistant Epoxy for outdoor use.</li> </ul> | <ul style="list-style-type: none"> <li>• Traffic and Railroad signals.</li> <li>• Outdoor Score/Clock Boards</li> <li>• Full Color RGB Video Displays</li> <li>• Back or Side lighting.</li> <li>• Automotive.</li> </ul> |

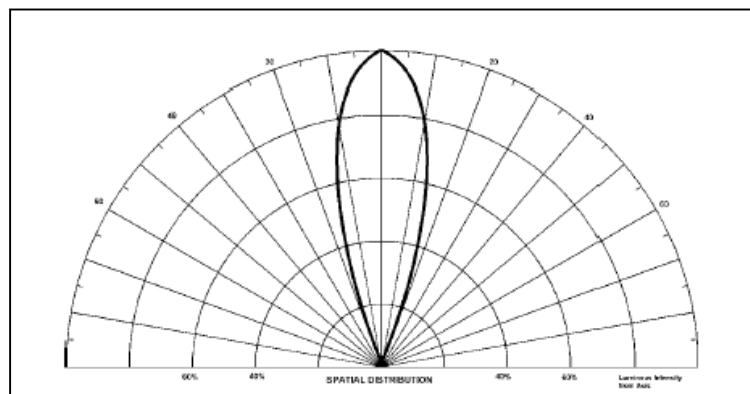
### PACKAGE OUTLINE DIMENSIONS:



#### NOTES:

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$  mm unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

### BEAM RADIATION PATTERN



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### ABSOLUTE MAXIMUM RATING (at $T_A = 25^\circ\text{C}$ )

| Parameter  | Symbol                             | Value       | Unit                  |
|--|------------------------------------|-------------|-----------------------|
| Continuous Forward Current                                     | $I_F$                              | 50          | mA                    |
| Peak Forward Current<br>(1/16 Duty Cycle, 0.1msec Pulse width) | $I_{Fp}$                           | 150         | mA                    |
| Power Dissipation  | $P_d$                              | 130         | mW                    |
| Forward Voltage  | $V_f$                              | 2.6         | V                     |
| Derating Factor  | $D_F$                              | 0.4         | mA / $^\circ\text{C}$ |
| Reverse Voltage  | $V_R$                              | 5.0         | V                     |
| Operating Temperature  | $T_{opr}$                          | -25 to +85  | $^\circ\text{C}$      |
| Storage Temperature  | $T_{stg}$                          | -35 to +100 | $^\circ\text{C}$      |
| Lead Soldering Temperature<br>(1.6mm (0.063") from body)       | 260 $^\circ\text{C}$ for 5 seconds |             |                       |

### ELECTRICAL / OPTICAL CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ )

| Parameter                    | Symbol                                  | Min  | Typ  | Max  | Unit          |
|------------------------------|---|------|------|------|---------------|
| Forward Voltage              | $I_F = 20\text{ mA}$<br>$V_F$           | 1.9  | 2.2  | 2.4  | V             |
| Dominant Wavelength          | $I_F = 20\text{ mA}$<br>$\lambda_d$     |      | 626  |      | nm            |
| Peak Wavelength              | $I_F = 20\text{ mA}$<br>$\lambda_p$     |      | 634  |      | nm            |
| Spectrum Radiation Bandwidth | $I_F = 20\text{ mA}$<br>$\Delta\lambda$ |      | 17   |      | nm            |
| Reverse Current              | $V_R = 5\text{ V}$<br>$I_R$             |      |      | 100  | $\mu\text{A}$ |
| Viewing Angle                | $2\theta_{1/2}$                         | 27   | 30   | 33   | deg           |
| Luminous Intensity           | $I_F = 20\text{ mA}$<br>$I_v$           | 2500 | 3400 | 7200 | mcd           |

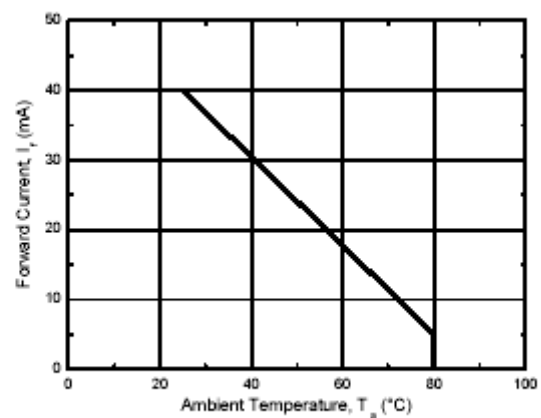
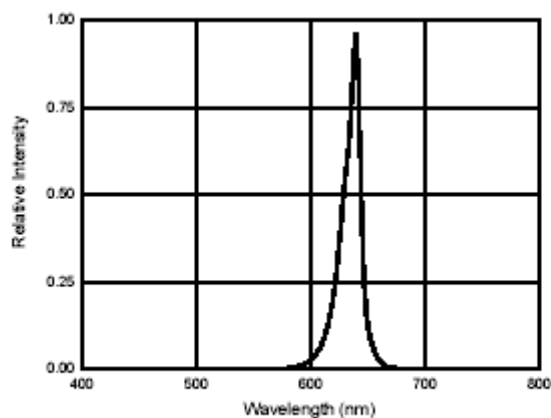
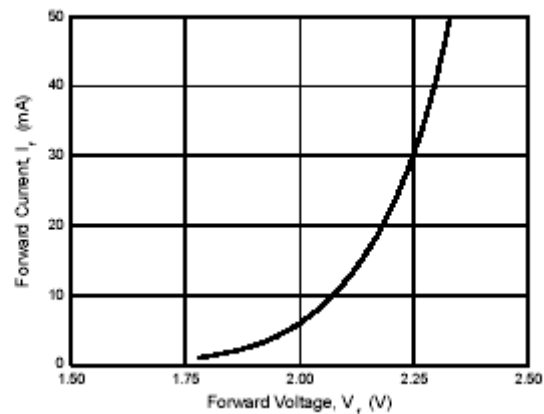
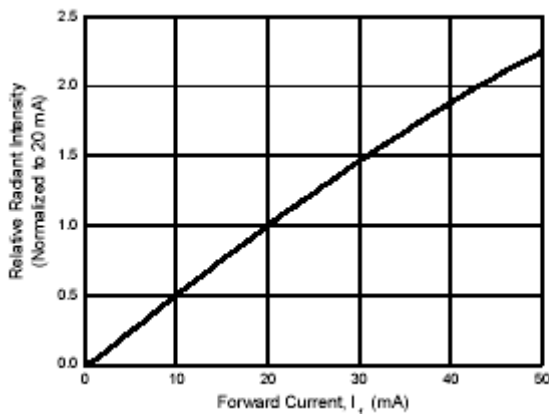
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5mm Round Through-Hole Package

**PL-LSRE5N30C series**



## TYPICAL ELECTRICAL CHARACTERISTICS CURVES (at 20 mA DC / $T_A = 25^\circ\text{C}$ )



### GENERAL NOTES:

1. Luminous Intensity ( $I_v$ ) is measured with a light sensor and filter combination (goniospectroradiometer) and is the Luminous Flux per unit solid angle (steradian) emitted by the LED lamp in the direction of the mechanical axis of the lamp and then weighed by the eye response curve (1931 CIE 2° Observer Chromaticity Diagram).
2. Luminous Intensity measurement uncertainty is  $\pm 15\%$  due to test procedures and equipment variations.
3.  $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity. Tolerance  $\pm 3^\circ$ .
4. Dominant wavelength is derived from the 1931 CIE 2° Observer Chromaticity Diagram.
5. Peak and Dominant wavelength measurement uncertainty is  $\pm 0.05$  due to variations.
6. Caution for ESD: Static Electricity and surges can damage the LED. It is recommended using a wristband or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.
7. Do not apply excess mechanical stress to the leads, especially when heated or while soldering.

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### PRODUCT CODE BREAKDOWN

