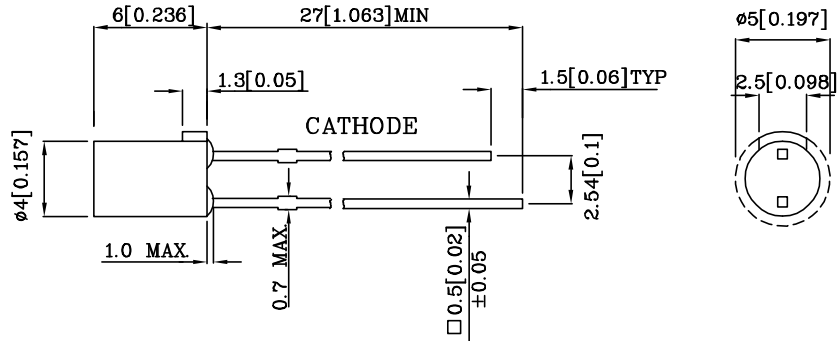


**Features**

- CYLINDRICAL TYPE, FLAT TOP.
- CONVEX CATHODE MARK ON BODY.
- LOW POWER CONSUMPTION.
- I.C. COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.



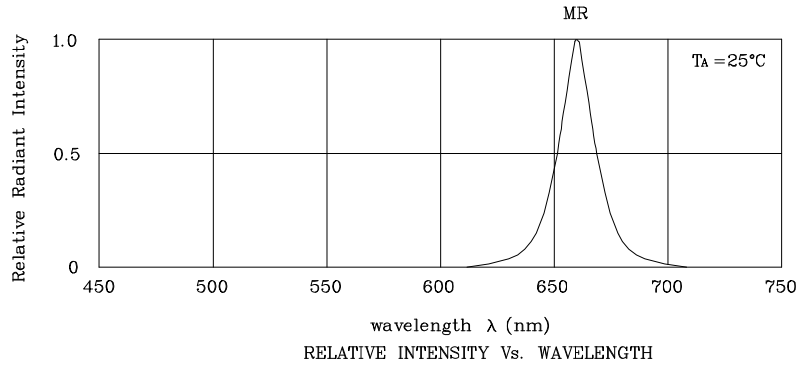
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25 (0.01")$  unless otherwise noted.

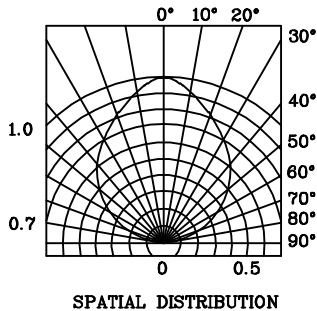
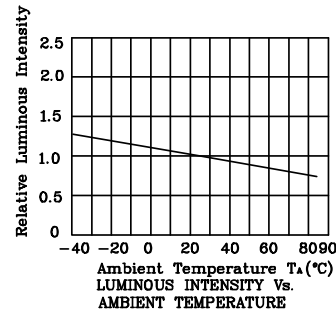
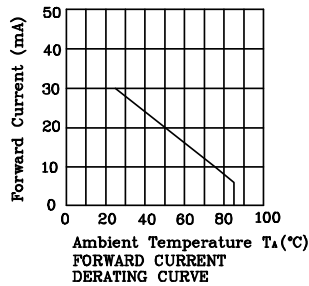
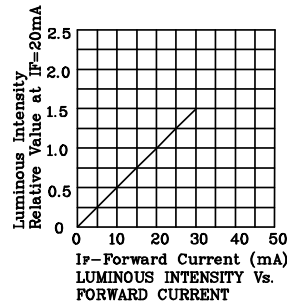
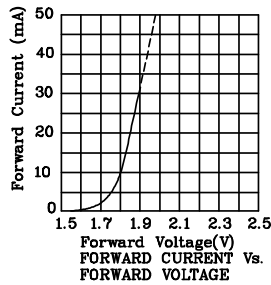
| Absolute maximum ratings<br>( $T_A=25^\circ\text{C}$ )         |                     | MR<br>(GaAlAs) | Unit |
|--|---------------------|----------------|------|
| Reverse Voltage  | $V_R$               | 5              | V    |
| Forward Current  | $I_F$               | 30             | mA   |
| Forward Current (Peak)<br>1/10 Duty Cycle<br>0.1ms Pulse Width | $i_{FS}$            | 155            | mA   |
| Power Dissipation  | $P_T$               | 100            | mW   |
| Operating Temperature  | $T_A$               | -40 ~ +85      | °C   |
| Storage Temperature  | $T_{stg}$           | -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>( $T_A=25^\circ\text{C}$ )           |                 | MR<br>(GaAlAs) | Unit          |
|---|-----------------|----------------|---------------|
| Forward Voltage (Typ.)<br>( $I_F=20\text{mA}$ )                   | $V_F$           | 1.85           | V             |
| Forward Voltage (Max.)<br>( $I_F=20\text{mA}$ )                   | $V_F$           | 2.5            | V             |
| Reverse Current<br>( $V_R=5\text{V}$ )                            | $I_R$           | 10             | $\mu\text{A}$ |
| Wavelength of Peak Emission<br>( $I_F=20\text{mA}$ )              | $\lambda_P$     | 660            | nm            |
| Wavelength of Dominant Emission<br>( $I_F=20\text{mA}$ )          | $\lambda_D$     | 640            | nm            |
| Spectral Line Full Width At Half-Maximum<br>( $I_F=20\text{mA}$ ) | $\Delta\lambda$ | 20             | nm            |
| Capacitance<br>( $V_F=0\text{V}$ , $f=1\text{MHz}$ )              | $C$             | 45             | pF            |

| Part Number                  | Emitting Color | Emitting Material    | Lens-color   | Luminous Intensity<br>( $I_F=20\text{mA}$ )<br>mcd |                   | Wavelength<br>nm<br>$\lambda_P$ | Viewing Angle<br>$2\theta_{1/2}$ |
|------------------------------|----------------|----------------------|--------------|--|-------------------|---------------------------------|----------------------------------|
|                              |                |                      |              | min.   | typ.              |                                 |                                  |
| XSMR28D                      | Red            | GaAlAs               | Red Diffused | 50   | 79                | 660                             | 100°                             |
| Published Date : MAY 22,2005 |                | Drawing No :XDSA2275 |              | V3   | Checked : B.L.LIU | P.1/3                           |                                  |



❖ MR



Remarks:

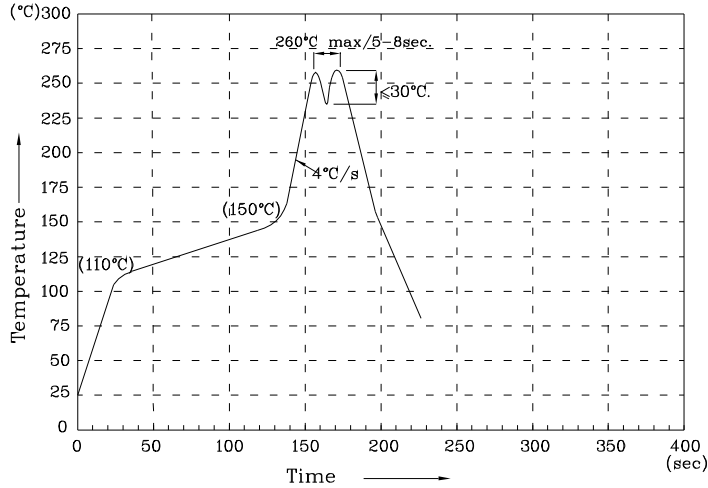
If special sorting is required (e.g. binning based on forward voltage, luminous intensity or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.

XSMR28D

Wave Soldering Profile For Lead-free Through-hole LED.



NOTES:

1. Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85 degree°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. No more than once.