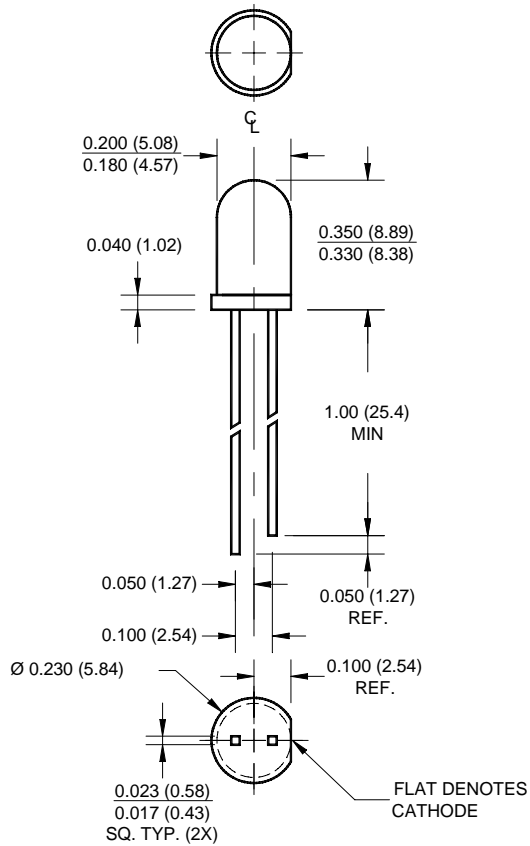


SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

PACKAGE DIMENSIONS



NOTES:

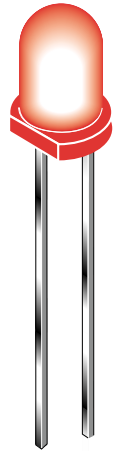
1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 1.5 mm (0.059") max.

SUPER RED
MV8003 MV8004
MV8005

MV800X

FEATURES

- Popular T-1 3/4 package
- Super high brightness suitable for outdoor applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing



DESCRIPTION

This T-1 3/4 super bright LED has a moderate viewing angle of 20° for concentrated light output. The MV800X series is made with an AlInGaP LED that emits red light at 640 nm. It is encapsulated in a water clear epoxy lens package.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | Rating | Unit |
|---|------------------|---------------|------|
| Operating Temperature | T _{OPR} | -40 to +100 | °C |
| Storage Temperature | T _{STG} | -40 to +100 | °C |
| Lead Soldering Time | T _{SOL} | 260 for 5 sec | °C |
| Continuous Forward Current | I _F | 30 | mA |
| Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10) | I _F | 160 | mA |
| Reverse Voltage | V _R | 5 | V |
| Power Dissipation | P _D | 85 | mW |

SUPER RED
MV8003 MV8004
MV8005

MV800X

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

| Part Number | MV8003 | MV8004 | MV8005 | Condition |
|-------------------------------|--------|--------|--------|-----------------------|
| Luminous Intensity (mcd) | | | | I _F = 20mA |
| Minimum | 630 | 1000 | 1600 | |
| Typical | 940 | 1500 | 2400 | |
| Forward Voltage (V) | | | | I _F = 20mA |
| Maximum | 2.8 | 2.8 | 2.8 | |
| Typical | 2.1 | 2.1 | 2.1 | |
| Peak Wavelength (nm) | 640 | 640 | 640 | I _F = 20mA |
| Spectral Line Half Width (nm) | 20 | 20 | 20 | I _F = 20mA |
| Viewing Angle (°) | 20 | 20 | 20 | I _F = 20mA |

TYPICAL PERFORMANCE CURVES

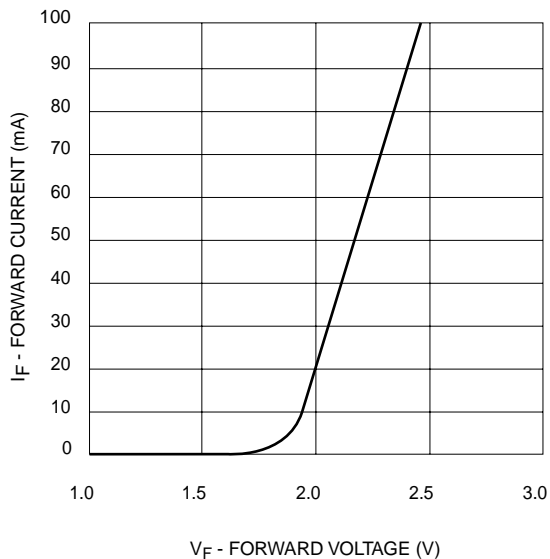


Fig. 1 Forward Current vs. Forward Voltage

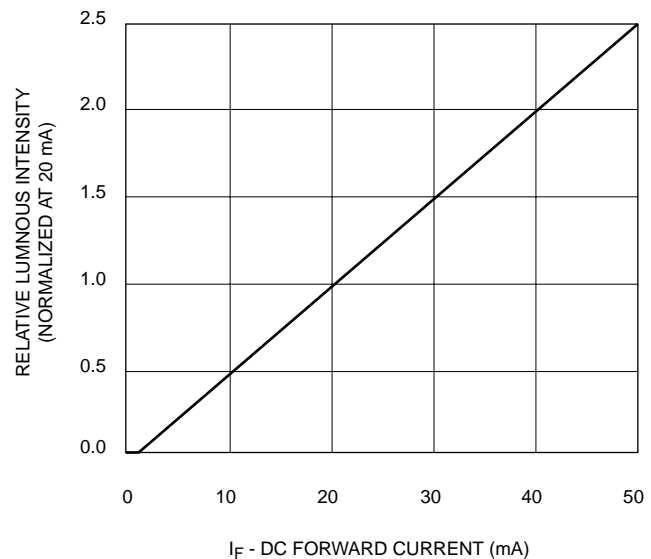


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

SUPER RED **MV800X**
MV8003 MV8004
MV8005

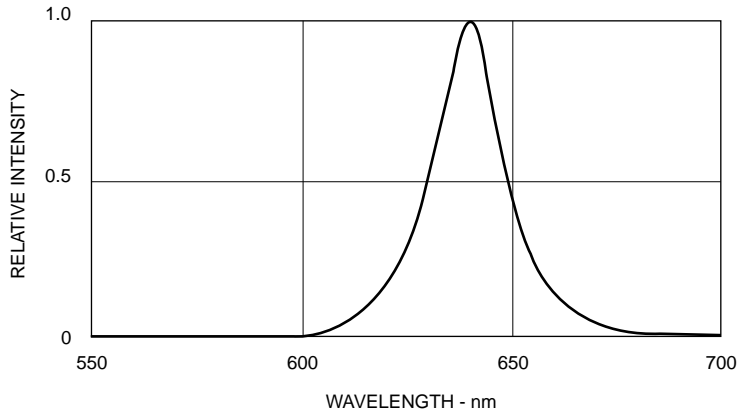


Fig. 3 Relative Intensity vs Peak Wavelength

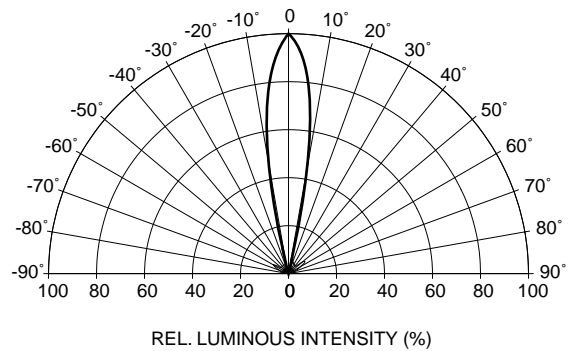


Fig. 4 Radiation Diagram

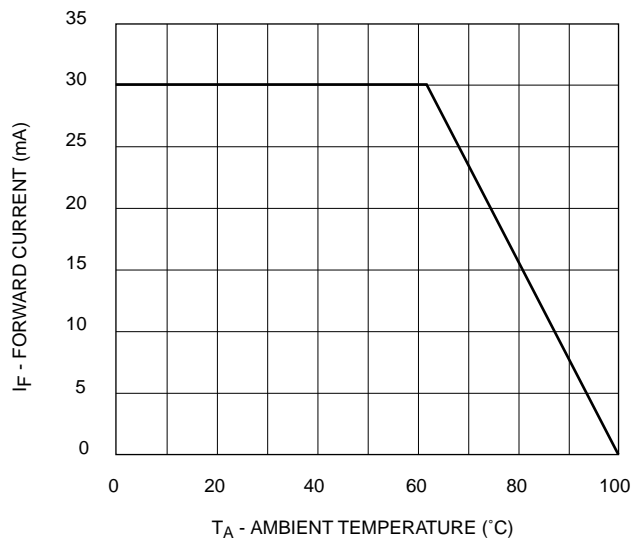


Fig. 5 Current Derating Curve

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.