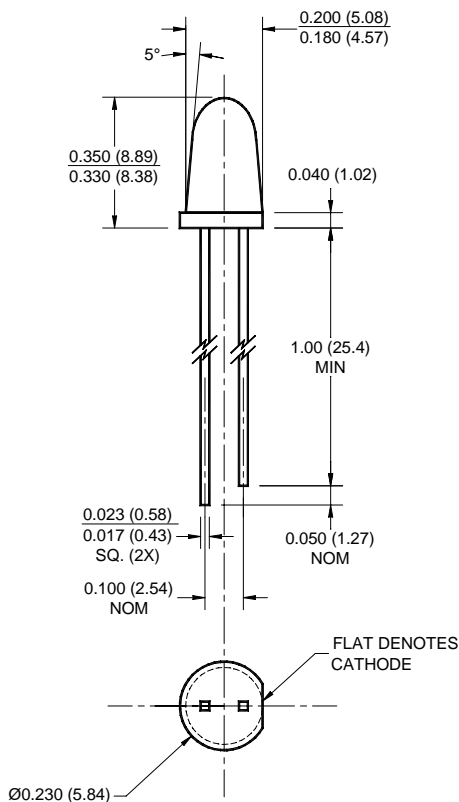


SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

PACKAGE DIMENSIONS



NOTES:

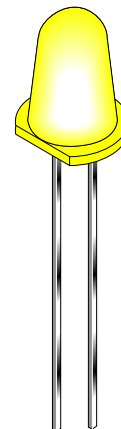
1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 1.5 mm (0.059") max.

SUPER YELLOW
MV8313 MV8314
MV8315 MV8316
MV8317

MV831X

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 narrow viewing angle of 12° for concentrated light output. The MV831X series is made with an AlInGaP LED that emits yellow light at 590 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 BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

SUPER YELLOW **MV831X**
MV8313 MV8314
MV8315 MV8316
MV8317

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

| Part Number | MV8313 | MV8314 | MV8315 | MV8316 | MV8317 | Condition |
|-------------------------------|--------|--------|--------|--------|--------|------------------------|
| Luminous Intensity (mcd) | | | | | | I _F = 20 mA |
| Minimum | 630 | 1000 | 1600 | 2500 | 4500 | |
| Typical | 940 | 1500 | 2400 | 3500 | 5500 | |
| Forward Voltage (V) | | | | | | I _F = 20 mA |
| Maximum | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | |
| Typical | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | |
| Peak Wavelength (nm) | 590 | 590 | 590 | 590 | 590 | I _F = 20 mA |
| Spectral Line Half Width (nm) | 15 | 15 | 15 | 15 | 15 | I _F = 20 mA |
| Viewing Angle (°) | 12 | 12 | 12 | 12 | 12 | I _F = 20 mA |

TYPICAL PERFORMANCE CURVES

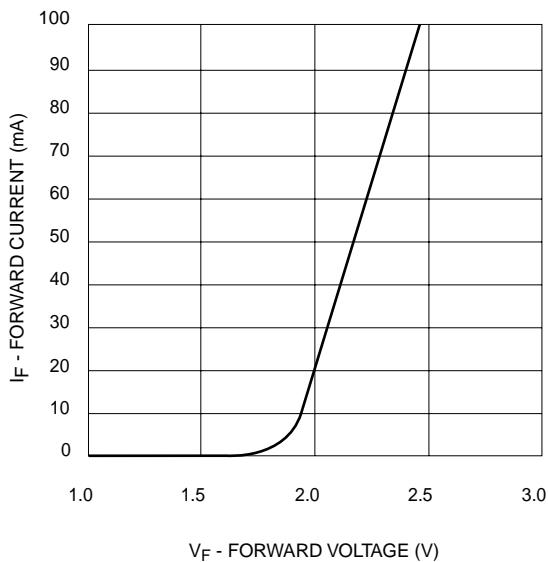


Fig. 1 Forward Current vs. Forward Voltage

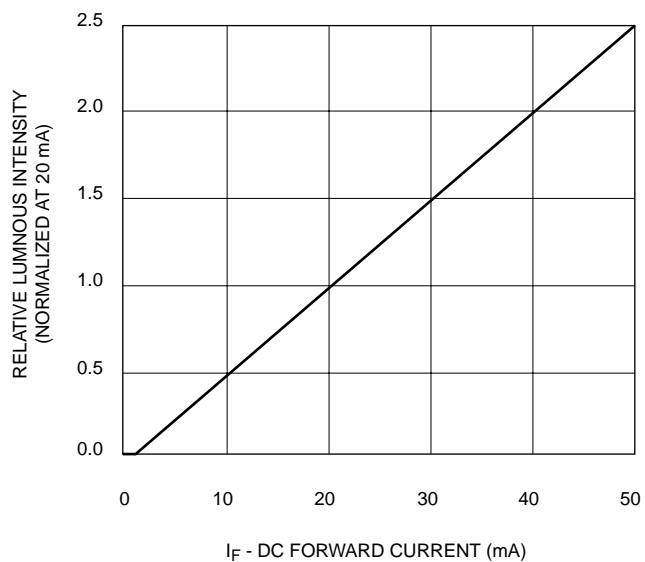


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

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

SUPER YELLOW **MV831X**
MV8313 **MV8314**
MV8315 **MV8316**
MV8317

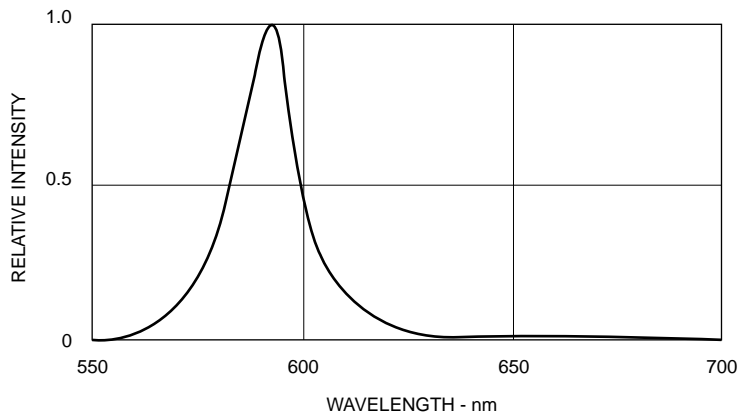
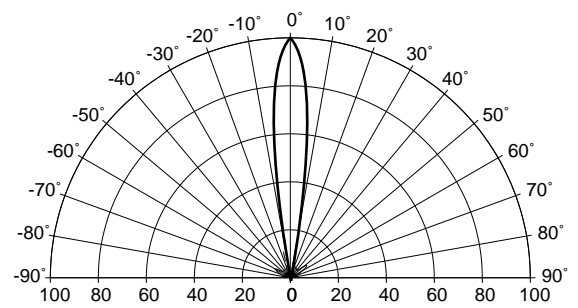


Fig. 3 Relative Intensity vs Peak Wavelength



REL. LUMINOUS INTENSITY (%)

Fig. 4 Radiation Diagram

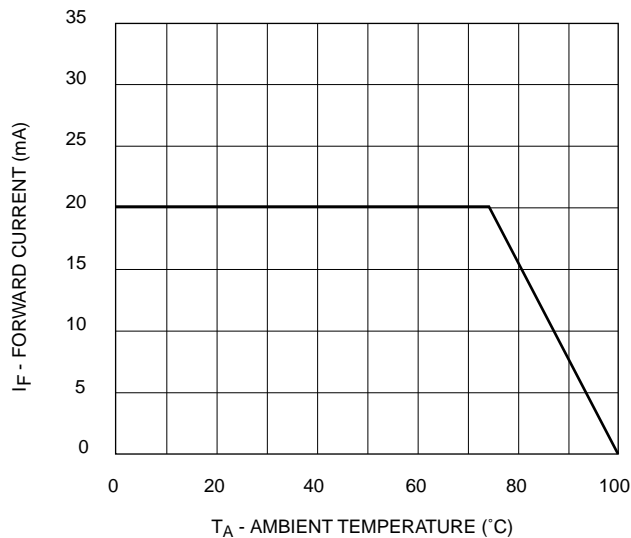


Fig. 5 Current Derating Curve