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PACKAGE DIMENSIONS 0.200 (5.08) 0.180 (4.57) 0.350 (8.89) 0.040 (1.02) 0.330 (8.38) 1.00 (25.4) MIN 0.050 (1.27) 0.050 (1.27) 0.100 (2.54) -0.100 (2.54) Ø 0.230 (5.84) FLAT DENOTES 0.023 (0.58) 0.017 (0.43) SQ. TYP. (2X) CATHODE

SUPER RED MV8031 MV8032 MV8033 MV803X

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



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.

DESCRIPTION

This T-1 3/4 super bright LED has a moderate viewing angle of 30° for concentrated light output. The MV803X series is made with an AllnGaP 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 MV8031 MV8032 MV8033 **MV803X**

| ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C) | | | | | |
|---|--------|--------|--------|-----------------------|--|
| Part Number | MV8031 | MV8032 | MV8033 | Condition | |
| Luminous Intensity (mcd) | | | | $I_F = 20 \text{mA}$ | |
| Minimum | 400 | 630 | 1000 | | |
| Typical | 600 | 940 | 1500 | | |
| Forward Voltage (V) | | | | $I_F = 20 \text{mA}$ | |
| Maximum | 2.8 | 2.8 | 2.8 | | |
| Typical | 2.1 | 2.1 | 2.1 | | |
| Peak Wavelength (nm) | 640 | 640 | 640 | $I_F = 20 \text{mA}$ | |
| Spectral Line Half Width (nm) | 20 | 20 | 20 | I _F = 20mA | |
| Viewing Angle (°) | 30 | 30 | 30 | $I_F = 20 \text{mA}$ | |

TYPICAL PERFORMANCE CURVES

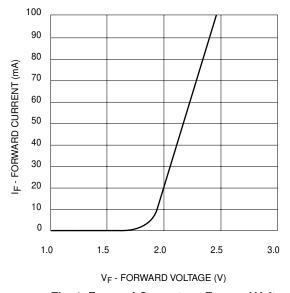


Fig. 1 Forward Current vs. Forward Voltage

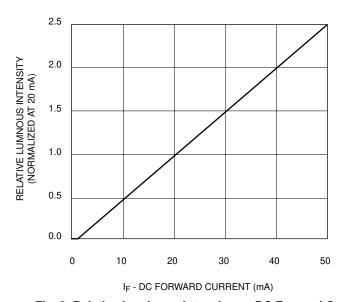


Fig. 2 Relative Luminous Intensity vs. DC Forward Current



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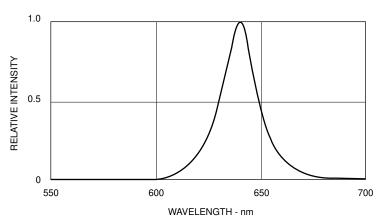
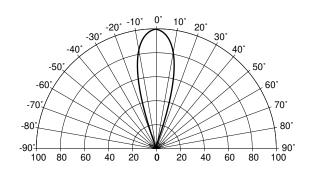


Fig. 3 Relative Intensity vs Peak Wavelength



REL. LUMINOUS INTENSITY (%)

Fig. 4 Radiation Diagram

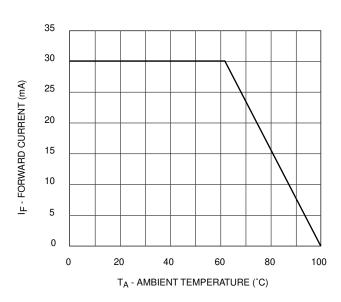


Fig. 5 Current Derating Curve



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