

## **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) REF. 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 BLUE MV8U0X MV8U01 MV8U03

## **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 20° for concentrated light output. It is made with an InGaN LED that emits blue light at 465 nm. It is encapsulated in a water clear epoxy lens package.

| ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25°C unless otherwise specified) |                  |               |      |  |
|-----------------------------------------------------------------------------|------------------|---------------|------|--|
| Parameter                                                                   | Symbol           | Rating        | Unit |  |
| Operating Temperature                                                       | T <sub>OPR</sub> | -20 to +80    | °C   |  |
| Storage Temperature                                                         | T <sub>STG</sub> | -30 to +100   | °C   |  |
| Lead Soldering Time                                                         | T <sub>SOL</sub> | 260 for 5 sec | °C   |  |
| Continuous Forward Current                                                  | I <sub>F</sub>   | 30            | mA   |  |
| Peak Forward Current<br>(f = 1.0 KHz, Duty Factor = 1/10)                   | I <sub>F</sub>   | 100           | mA   |  |
| Reverse Voltage                                                             | V <sub>R</sub>   | 5             | V    |  |
| Power Dissipation                                                           | P <sub>D</sub>   | 120           | mW   |  |



| SUPER BLUE | MV8U0X |
|------------|--------|
| MV8U01     |        |
| MV8U03     |        |

| Part Number                   | MV8U01 | MV8U03 | Condition              |
|-------------------------------|--------|--------|------------------------|
| Luminous Intensity (mcd)      |        |        | I <sub>F</sub> = 20 mA |
| Minimum                       | 250    | 550    |                        |
| Typical                       | 340    | 650    |                        |
| Forward Voltage (V)           |        |        | I <sub>F</sub> = 20 mA |
| Maximum                       | 4.2    | 4.2    |                        |
| Typical                       | 3.6    | 3.6    |                        |
| Wavelength (nm)               |        |        | I <sub>F</sub> = 20 mA |
| Peak                          | 2      | 165    |                        |
| Dominant                      | 2      | 170    |                        |
| Spectral Line Half Width (nm) |        | 30     | I <sub>F</sub> = 20 mA |
| Viewing Angle (°)             |        | 20     | I <sub>F</sub> = 20 mA |

## **TYPICAL PERFORMANCE CURVES**

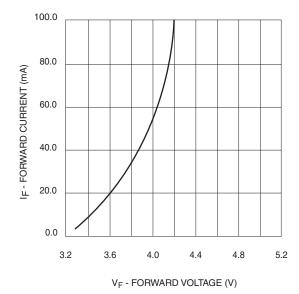


Fig. 1 Forward Current vs. Forward Voltage

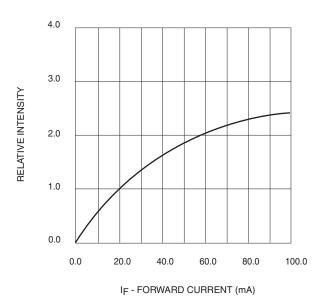


Fig. 2 Relative Luminous Intensity vs.
Forward Current



SUPER BLUE MV8U0X MV8U01 MV8U03

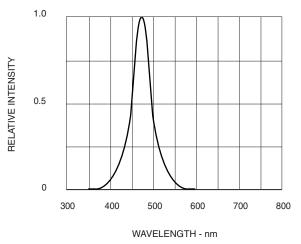
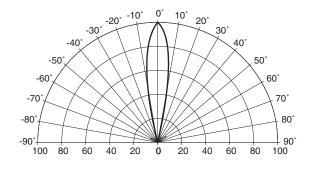


Fig. 3 Relative Luminous Intensity vs. Wavelength



REL. LUMINOUS INTENSITY (%)

Fig. 4 Radiation Diagram



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