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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 ORANGE MV8741 MV8742** 

**MV874X** 

#### **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 45° for concentrated light output. It is made with an AllnGaP LED that emits orange light at 620 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> | -40 to +100   | °C   |  |
| Storage Temperature   | T <sub>STG</sub> | -40 to +100   | °C   |  |
| Lead Soldering Time   | T <sub>SOL</sub> | 260 for 5 sec | °C   |  |
| Continuous Forward Current  | I <sub>F</sub>   | 40            | mA   |  |
| Peak Forward Current  | l <sub>F</sub>   | 160           | mA   |  |
| (f = 1.0 KHz, Duty Factor = 1/10)   |                  |               |      |  |
| Reverse Voltage   | V <sub>R</sub>   | 5             | V    |  |
| Power Dissipation   | P <sub>D</sub>   | 100           | mW   |  |



| SUPER ORANGE  | MV874X |
|---------------|--------|
| MV8741 MV8742 |        |

| Part Number                   | MV8741 | MV8742 | Condition              |
|-------------------------------|--------|--------|------------------------|
| Luminous Intensity (mcd)      |        |        | I <sub>F</sub> = 20 mA |
| Minimum                       | 250    | 400    |                        |
| Typical                       | 370    | 600    |                        |
| Forward Voltage (V)           |        |        | I <sub>F</sub> = 20 mA |
| Maximum                       | 2.8    | 2.8    |                        |
| Typical                       | 2.1    | 2.1    |                        |
| Wavelength (nm)               |        |        | I <sub>F</sub> = 20 mA |
| Peak                          |        | 620    |                        |
| Dominant                      |        | 615    |                        |
| Spectral Line Half Width (nm) |        | 20     | I <sub>F</sub> = 20 mA |
| Viewing Angle (°)             |        | 20     | I <sub>F</sub> = 20 mA |

#### **TYPICAL PERFORMANCE CURVES**

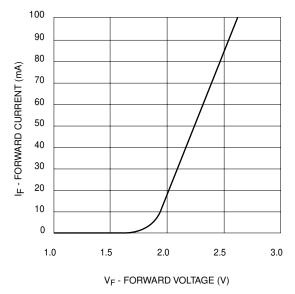


Fig. 1 Forward Current vs. Forward Voltage

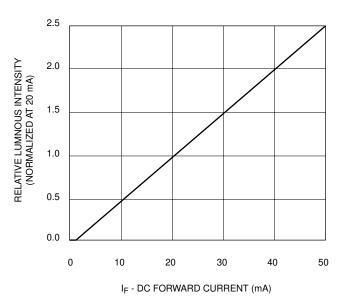


Fig. 2 Relative Luminous Intensity vs. DC Forward Current



**SUPER ORANGE MV8741 MV8742** 

**MV874X** 

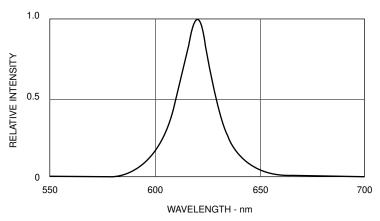
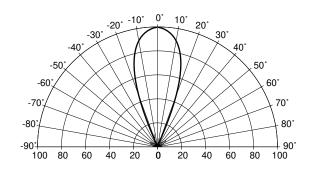


Fig. 3 Relative Intensity vs Peak Wavelength



REL. LUMINOUS INTENSITY (%)

Fig. 4 Radiation Diagram

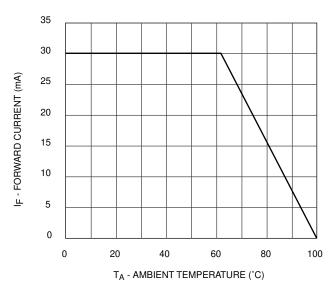


Fig. 5 Current Derating Curve



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