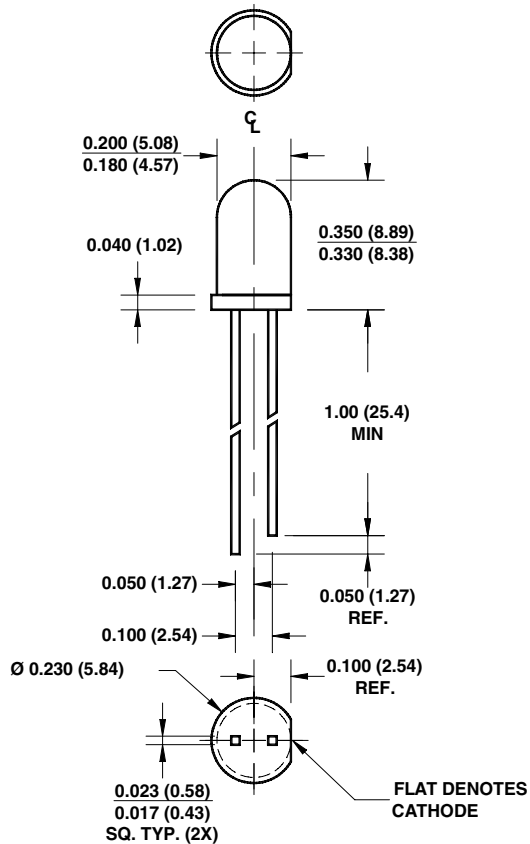


SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

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 GREEN

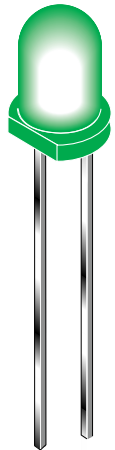
MV8R01

MV8R03

MV8R0X

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. It is made with an InGaN LED that emits green light at 520 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} | -20 to +80 | °C |
| Storage Temperature | T _{STG} | -30 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 | 100 | mA |
| Reverse Voltage | V _R | 5 | V |
| Power Dissipation | P _D | 120 | mW |

SUPER GREEN
MV8R01
MV8R03

MV8R0X

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

| Part Number | MV8R01 | MV8R03 | Condition |
|-------------------------------|--------|--------|------------------------|
| Luminous Intensity (mcd) | | | I _F = 20 mA |
| Minimum | 1500 | 3000 | |
| Typical | 1900 | 3500 | |
| Forward Voltage (V) | | | I _F = 20 mA |
| Maximum | 4.2 | 4.2 | |
| Typical | 3.6 | 3.6 | |
| Wavelength (nm) | | | I _F = 20 mA |
| Peak | | 520 | |
| Dominant | | 525 | |
| Spectral Line Half Width (nm) | | 40 | I _F = 20 mA |
| Viewing Angle (°) | | 20 | I _F = 20 mA |

TYPICAL PERFORMANCE CURVES

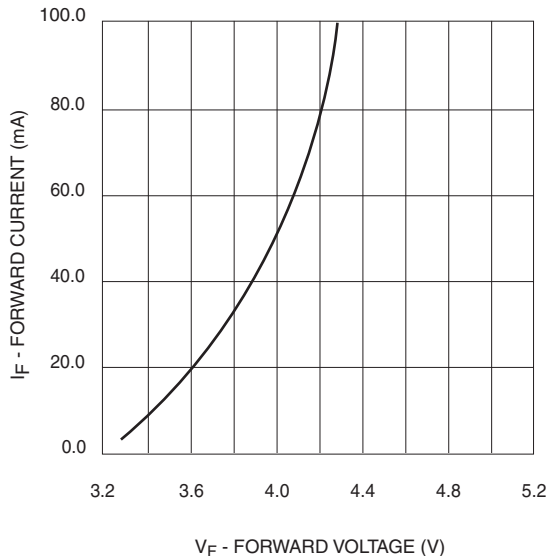


Fig. 1 Forward Current vs. Forward Voltage

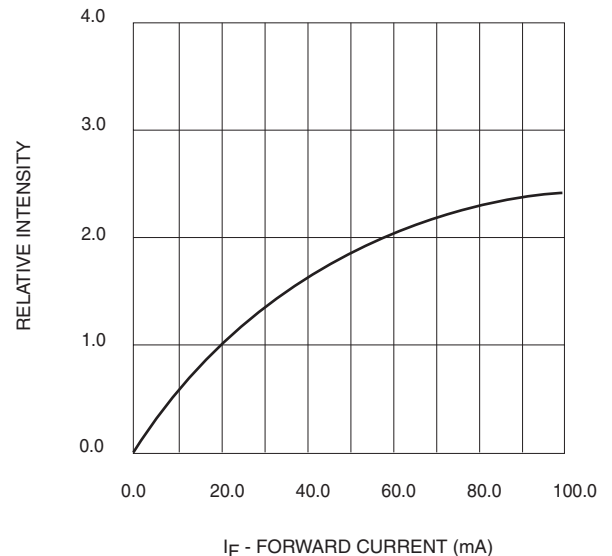


Fig. 2 Relative Luminous Intensity vs. Forward Current

| | |
|--------------------|---------------|
| SUPER GREEN | MV8R0X |
| MV8R01 | |
| MV8R03 | |

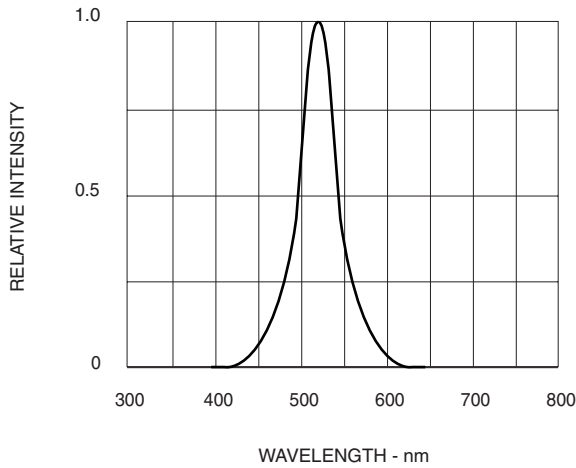


Fig. 3 Relative Luminous Intensity vs. Wavelength

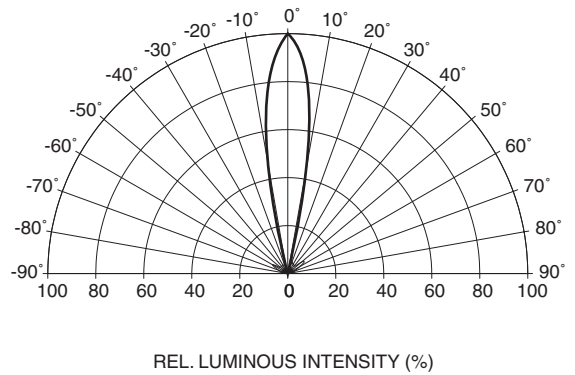


Fig. 4 Radiation Diagram

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.