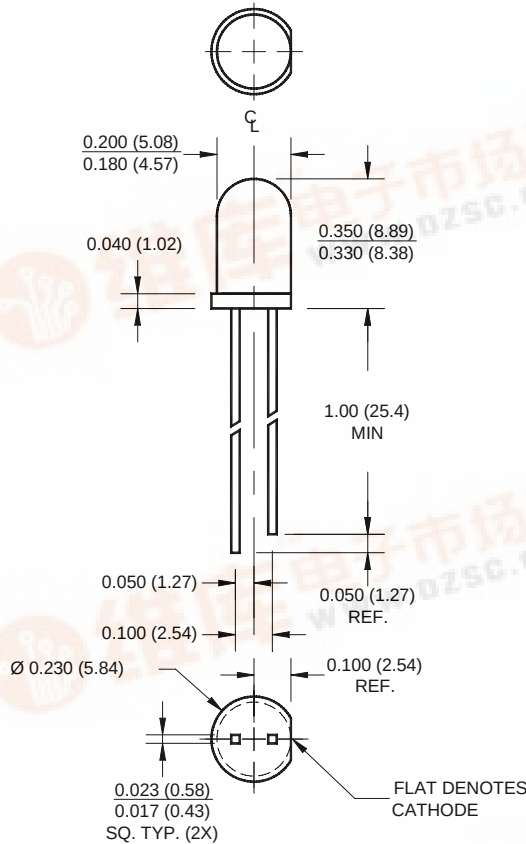


FAIRCHILD
SEMICONDUCTOR™

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 RED

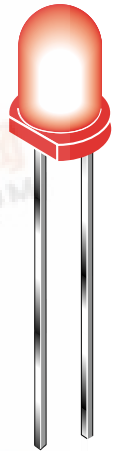
MV800X

MV8003 MV8004

MV8005

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. The MV800X series is made with an AlInGaP 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 BRIGHT T-1 3/4 (5 mm)

LED LAMP - Water Clear

SUPER RED
MV8003 MV8004
MV8005

MV800X

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

Part Number	MV8003	MV8004	MV8005	Condition
Luminous Intensity (mcd)				I _F = 20mA
Minimum	630	1000	1600	
Typical	940	1500	2400	
Forward Voltage (V)				I _F = 20mA
Maximum	2.8	2.8	2.8	
Typical	2.1	2.1	2.1	
Peak Wavelength (nm)	640	640	640	I _F = 20mA
Spectral Line Half Width (nm)	20	20	20	I _F = 20mA
Viewing Angle (°)	20	20	20	I _F = 20mA

TYPICAL PERFORMANCE CURVES

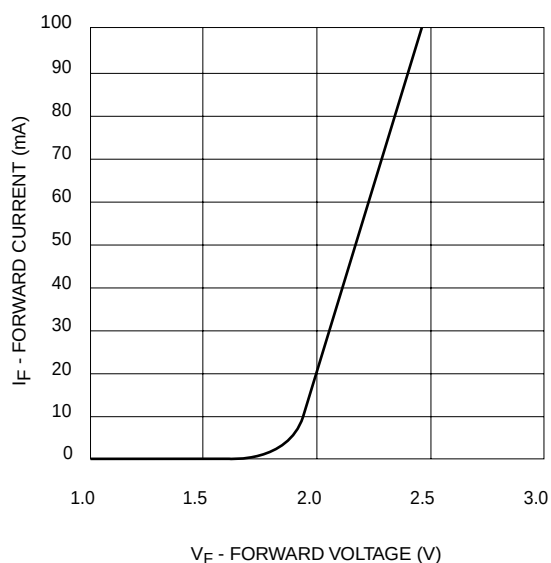


Fig. 1 Forward Current vs. Forward Voltage

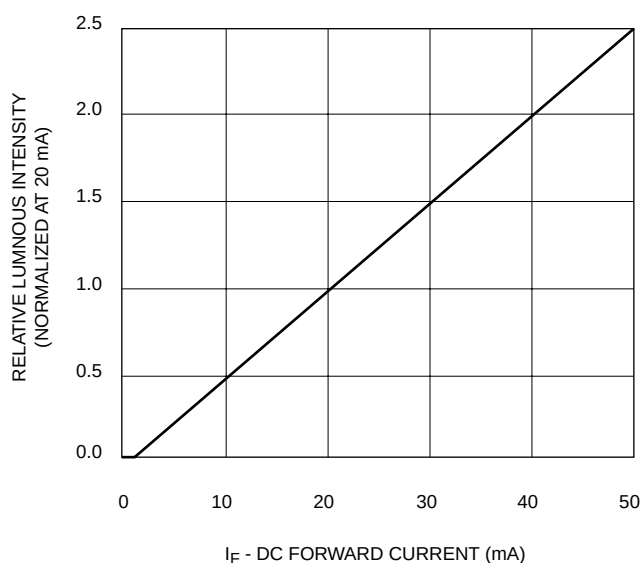


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

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

SUPER RED
MV8003 MV8004
MV8005

MV800X

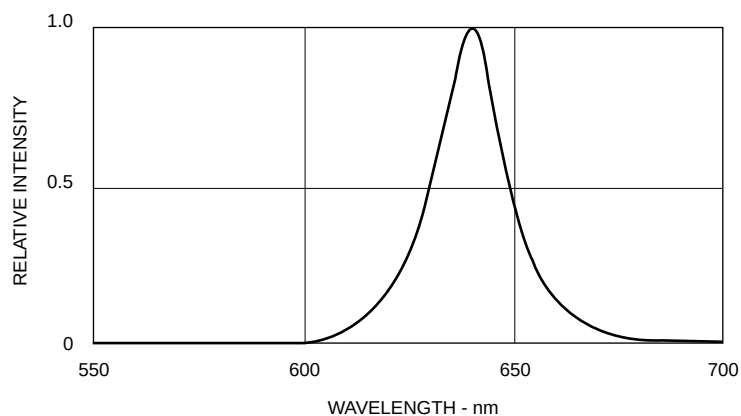


Fig. 3 Relative Intensity vs Peak Wavelength

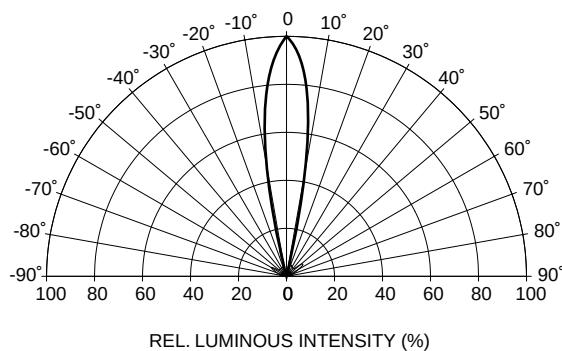


Fig. 4 Radiation Diagram

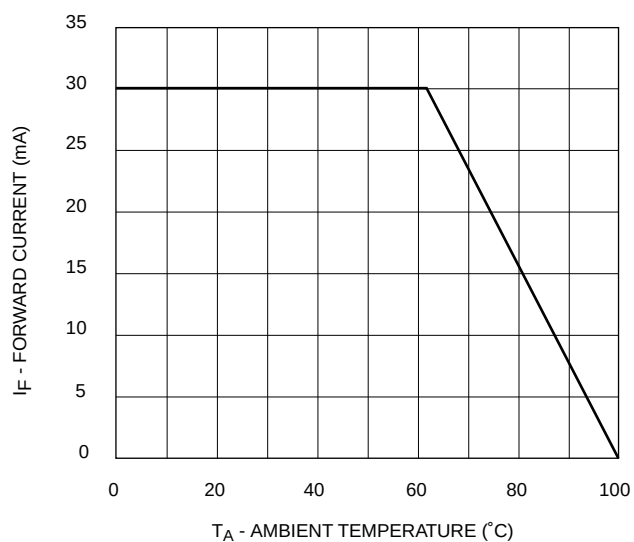


Fig. 5 Current Derating Curve



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

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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.