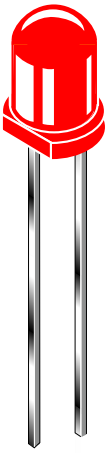
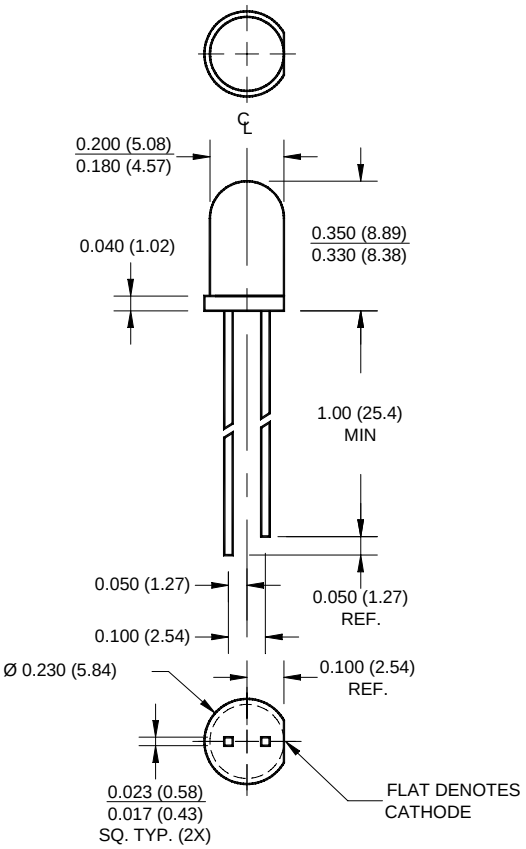
FAIRCHILD
SEMICONDUCTOR™

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

SUPER RED **MV803X**
MV8031 MV8032
MV8033



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.

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 30° for concentrated light output. The MV803X 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 **MV803X**
MV8031 MV8032
MV8033

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	MV8031	MV8032	MV8033	Condition
Luminous Intensity (mcd)				I_F = 20mA
Minimum	400	630	1000	
Typical	600	940	1500	
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 (°)	30	30	30	I_F = 20mA

TYPICAL PERFORMANCE CURVES

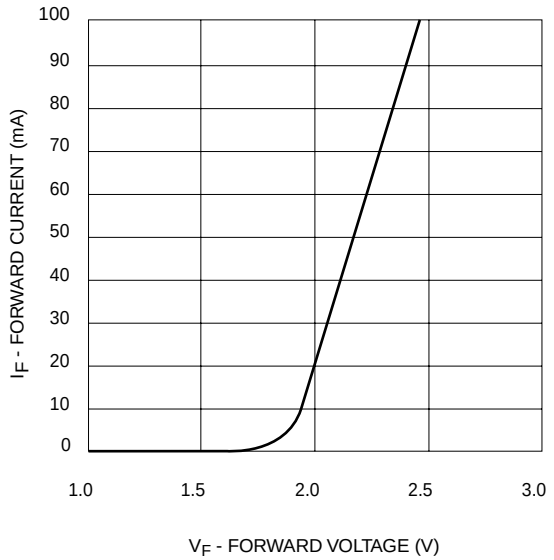


Fig. 1 Forward Current vs. Forward Voltage

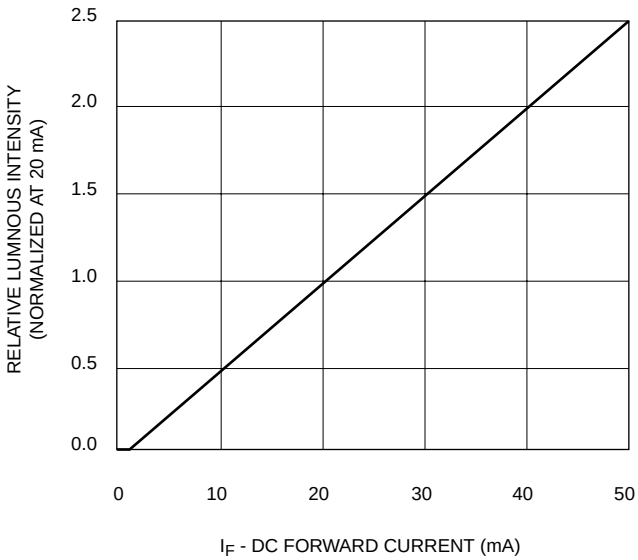


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

SUPER RED **MV803X**
MV8031 MV8032
MV8033

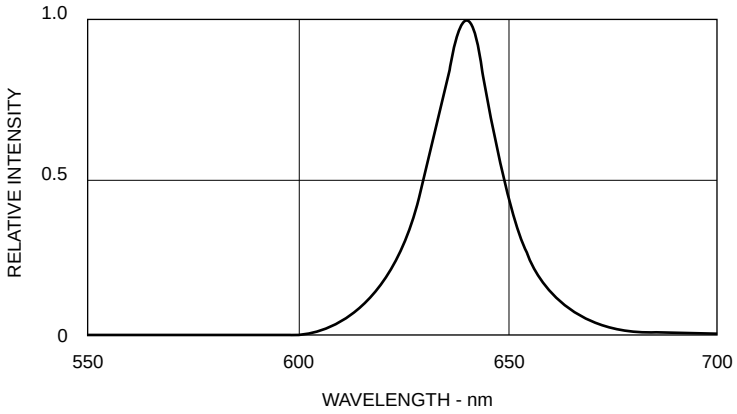


Fig. 3 Relative Intensity vs Peak Wavelength

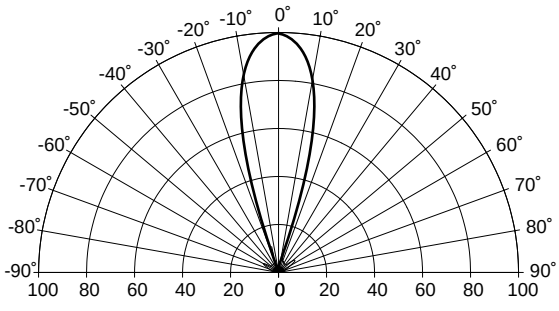


Fig. 4 Radiation Diagram

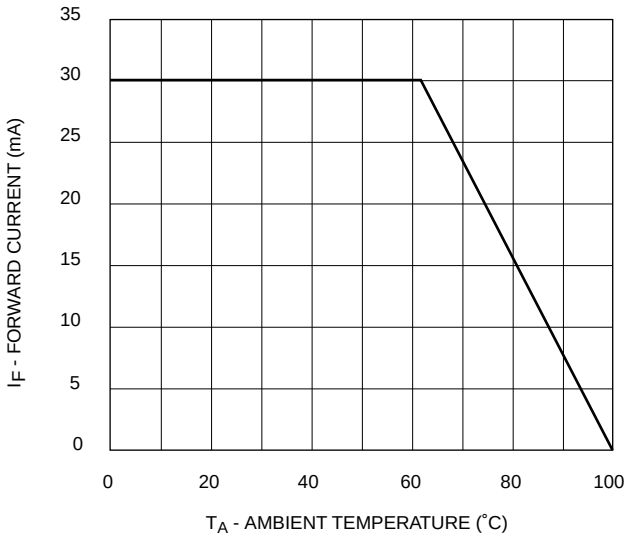


Fig. 5 Current Derating Curve

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.