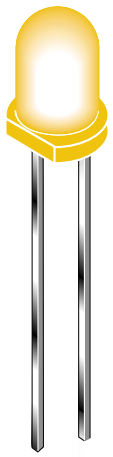
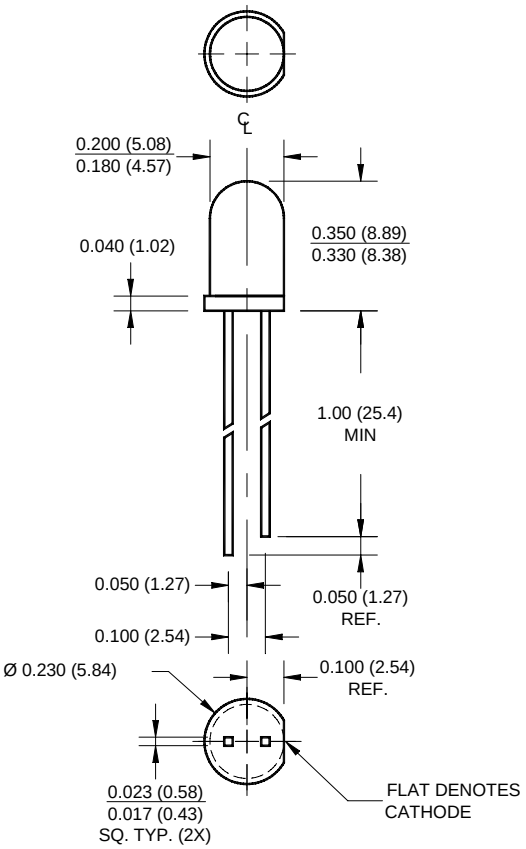
FAIRCHILD
SEMICONDUCTOR™

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

SUPER ORANGE **MV870X**
MV8703 MV8704
MV8705 MV8706



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 20° for concentrated light output. It is made with an AlInGaP LED that emits orange light at 620 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	40	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	100	mW

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ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	MV8703	MV8704	MV8705	MV8706	Condition
Luminous Intensity (mcd)					I_F = 20 mA
Minimum	630	1000	1600	2500	
Typical	940	1500	2400	3500	
Forward Voltage (V)					I_F = 20 mA
Maximum	2.8	2.8	2.8	2.8	
Typical	2.1	2.1	2.1	2.1	
Wavelength (nm)					I_F = 20 mA
Peak		620			
Dominant		615			
Spectral Line Half Width (nm)		20			I_F = 20 mA
Viewing Angle (°)		20			I_F = 20 mA

TYPICAL PERFORMANCE CURVES

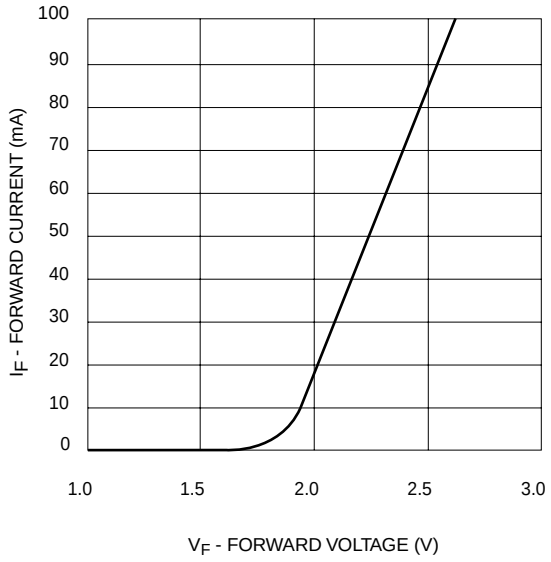

Fig. 1 Forward Current vs. Forward Voltage

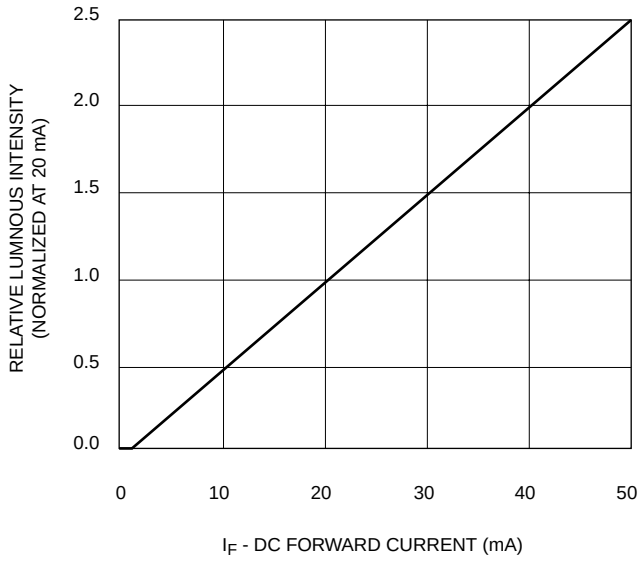

Fig. 2 Relative Luminous Intensity vs. DC Forward Current

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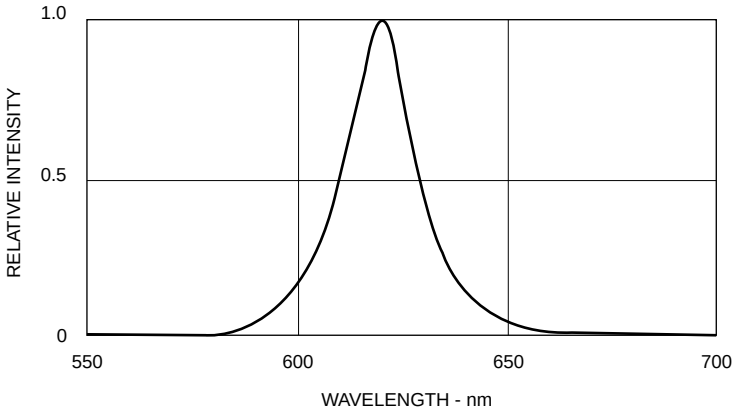

Fig. 3 Relative Intensity vs Peak Wavelength

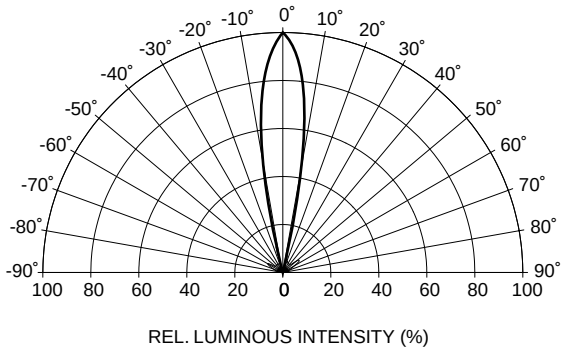

Fig. 4 Radiation Diagram

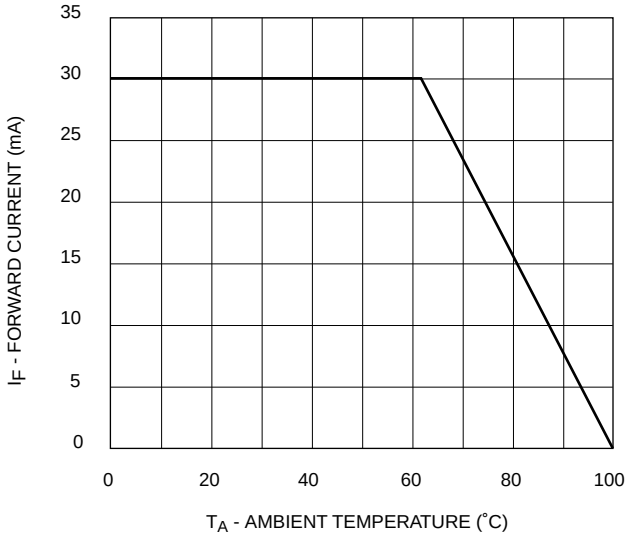

Fig. 5 Current Derating Curve

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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.