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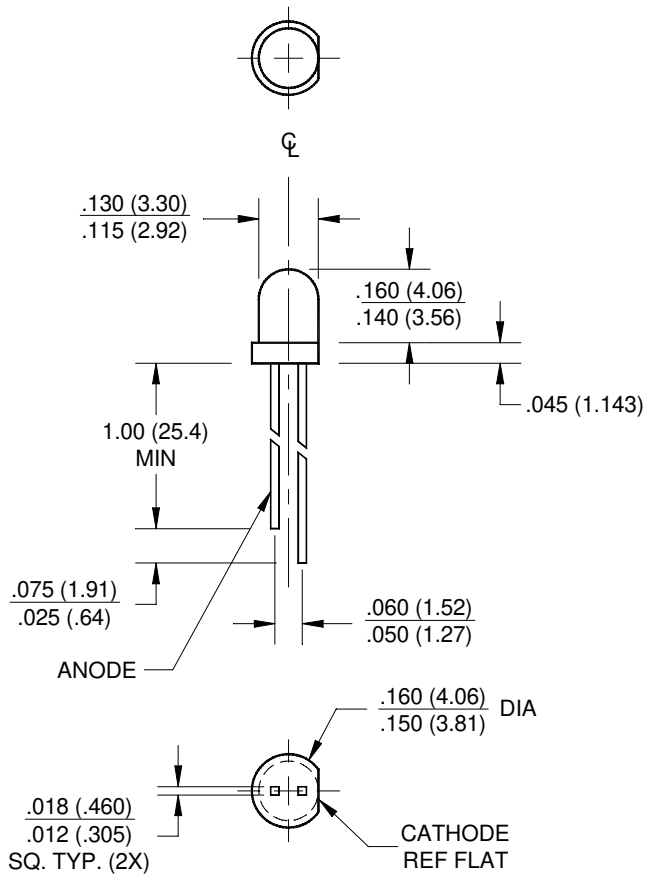
FAIRCHILD
SEMICONDUCTOR®

LOW PROFILE T-1 SOLID STATE LAMPS

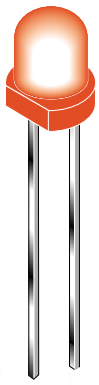
RED DIFFUSED	**MV5077C**	**YELLOW DIFFUSED**	**MV5377C**
GREEN DIFFUSED	**MV5477C**	**HER DIFFUSED**	**MV5777C**

PACKAGE DIMENSIONS



FEATURES

- Copper leads
- Solid-state reliability



DESCRIPTION

These solid state indicators offer a variety of color selection. The High Efficiency Red, Green and Yellow devices are made with a gallium arsenide phosphide LED on gallium phosphide substrate. All are encapsulated in epoxy packages. Their low profile, small size (approximately T-1 size), good viewing angle, and small square leads contribute to their versatility as all purpose indicators.

ABSOLUTE MAXIMUM RATING (T_A =25°C Unless Otherwise Specified)

Parameter	Symbol	Rating	Units
Power Dissipation Derate linearly from 25°C	P_D	105 -1.14	mW mW/°C
Continuous Forward Current (MV5377C)	I_F	35	mA
Peak Forward Current - (μsec pulse 0.3% duty cycle) (MV5477C=90 mA) (MV5377C=60 mA)	I_{FM}	35	mA
Reverse Voltage (I_R = 100 μA)	V_R	5	V
Lead Soldering Time at 260°C (See Note 1)	T_{SOL}	5	sec
Operating Temperature	T_{OPR}	-55 to +100	°C
Storage Temperature	T_{STG}	-55 to +100	°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	Symbol	MV5077C	MV5377C	MV5477C	MV5777C	Condition
Luminous Intensity (mcd)						I_F = 20mA
Minimum	I_V	0.3	1.0	1.0	1.0	
Typical		1.8	7.0	7.0	7.0	
Forward Voltage (V)						I_F = 20mA
Typical	V_F	1.6	2.1	2.2	2.0	
Maximum		2.0	3.0	3.0	3.0	
Spectral Line Half Width (nm)		20	35	35	45	I_F = 20mA
Peak Wavelength (nm)	λp	660	585	565	635	I_F = 20mA
Viewing Angle (Total) (°)	2θ 1/2	140	140	140	140	I_F = 20mA

1. The leads of the device were immersed in molten solder at 260°C, to a point 1/16 inch (1.6 mm) from the body of the device per MIL-S-750, with a dwell time of 5 seconds.

TYPICAL PERFORMANCE CURVES (T_A =25°C)

Fig. 1 Forward Current vs. Forward Voltage

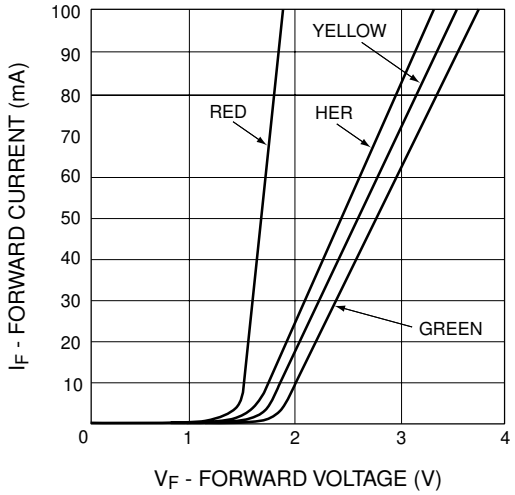


Fig. 2 Luminous Intensity vs. Forward Current

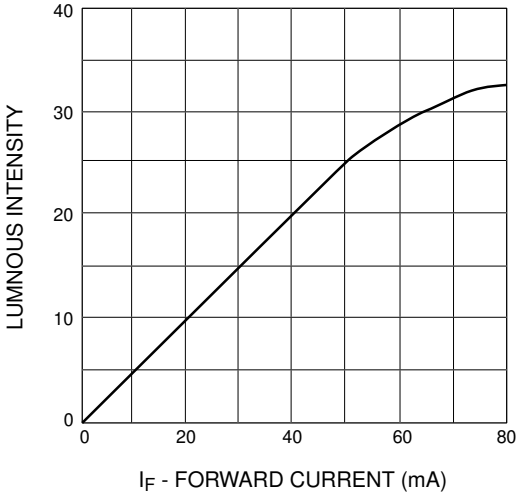


Fig. 3 Spatial Distribution

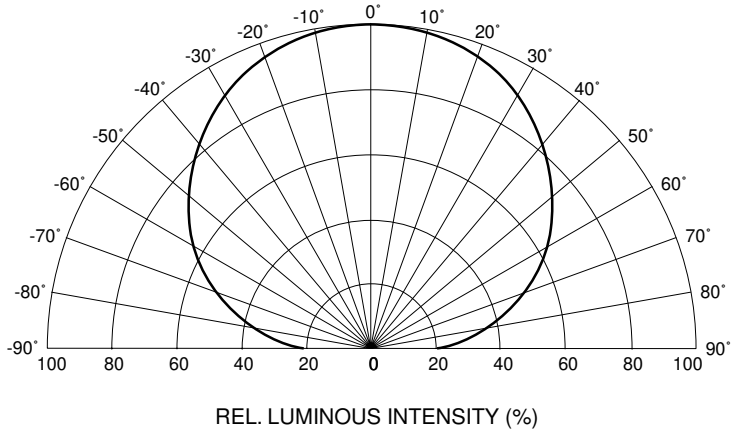
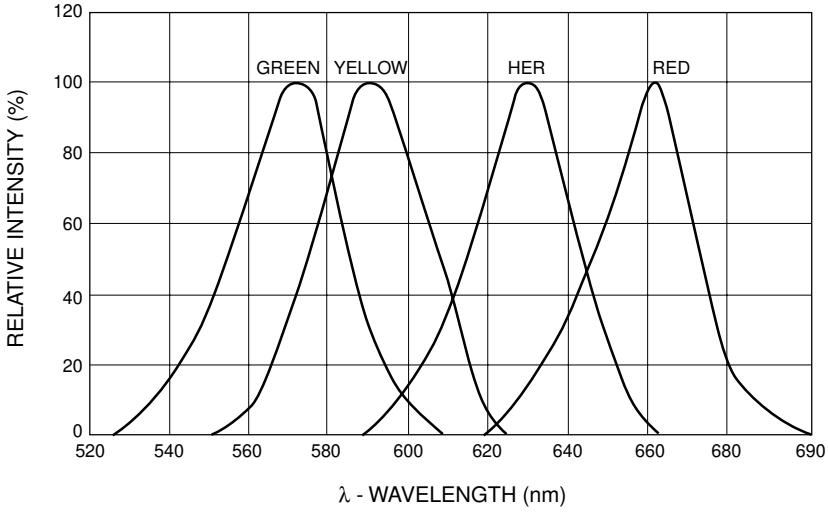


Fig. 4 Relative Intensity vs. Peak Wavelength



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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.