

LOW PROFILE T-1 SOLID STATE LAMPS

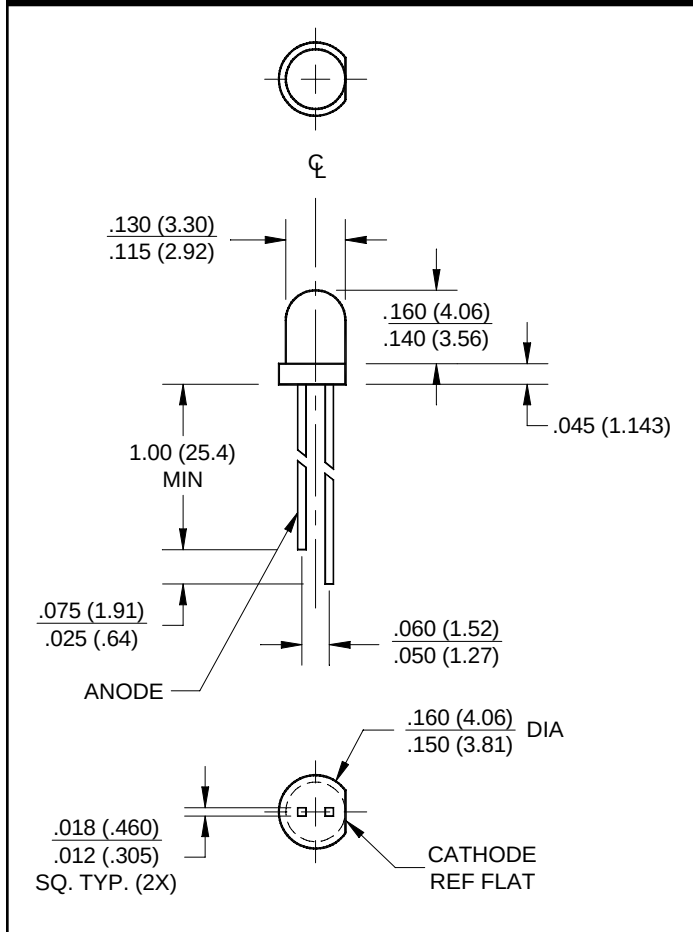
RED DIFFUSED
GREEN DIFFUSED

MV5077C
MV5477C

YELLOW DIFFUSED
HER DIFFUSED

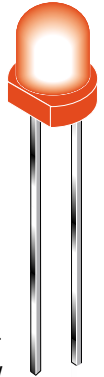
MV5377C
MV5777C

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 ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

Parameter	Symbol	Rating	Units
Power Dissipation	P_D	105	mW
Derate linearly from 25°C		-1.14	mW/ $^\circ\text{C}$
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 ($I_R = 100 \mu\text{A}$)	V_R	5	V
Lead Soldering Time at 260°C (See Note 1)	T_{SOL}	5	sec
Operating Temperature	T_{OPR}	-55 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to +100	$^\circ\text{C}$

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

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

- 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 ($T_A = 25^\circ\text{C}$)

Fig. 1 Forward Current vs. Forward Voltage

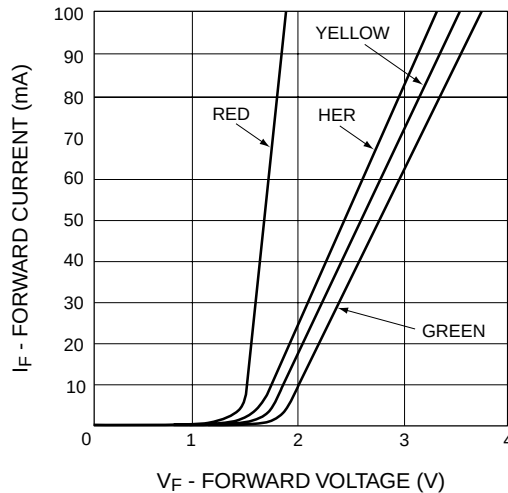


Fig. 2 Luminous Intensity vs. Forward Current

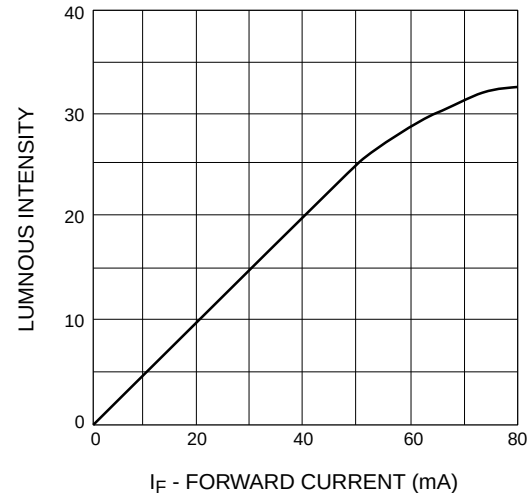


Fig. 3 Spatial Distribution

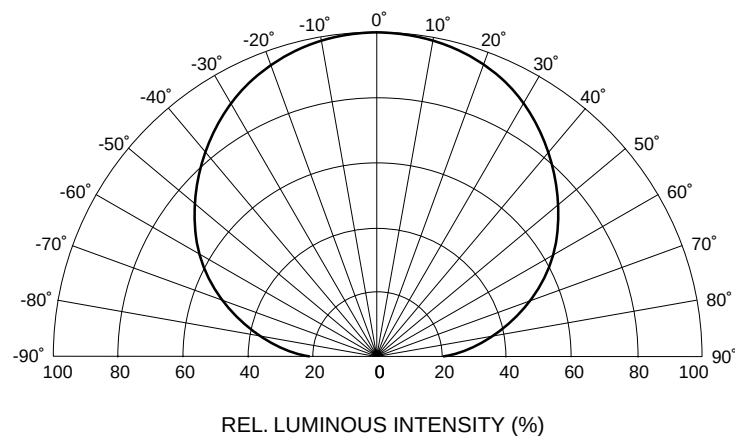
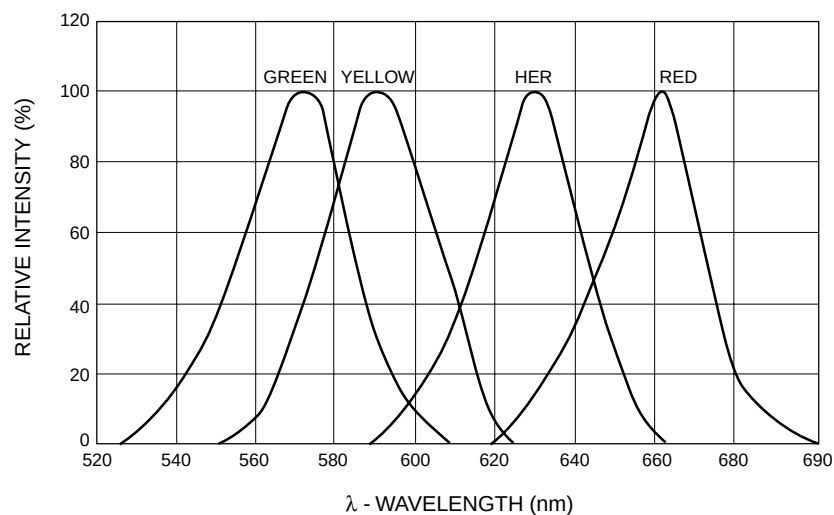


Fig. 4 Relative Intensity vs. Peak Wavelength



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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.