

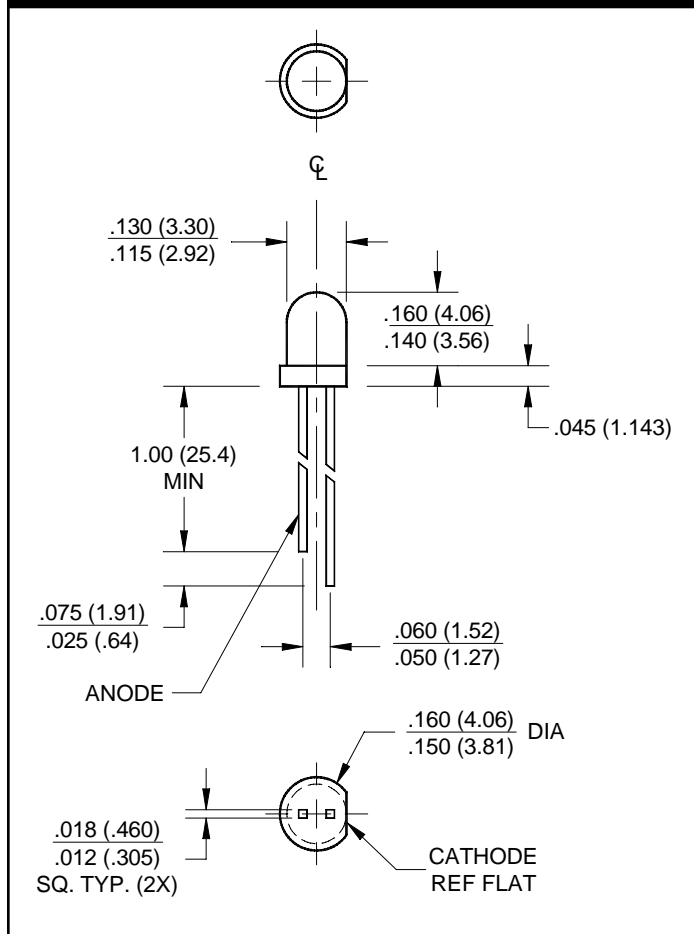
RED DIFFUSED  
GREEN DIFFUSED

MV5077C  
MV5477C

YELLOW DIFFUSED  
HER DIFFUSED

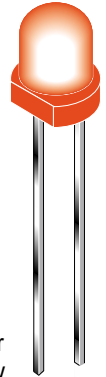
MV5377C  
MV5777C

### 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.

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

| Parameter  | Symbol    | Rating       | Units       |
|--|-----------|--------------|-------------|
| Power Dissipation<br>Derate linearly from 25°C   | $P_D$     | 105<br>-1.14 | mW<br>mW/°C |
| Continuous Forward Current (MV5377C)   | $I_F$     | 35           | mA          |
| Peak Forward Current - ( $\mu\text{sec}$ pulse 0.3% duty cycle)<br>(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  | °C          |
| Storage Temperature  | $T_{STG}$ | -55 to +100  | °C          |

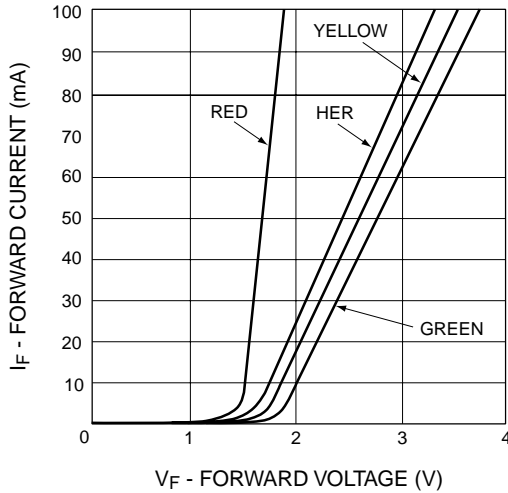
**ELECTRICAL / OPTICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ )

| Part Number                                    | Symbol         | MV5077C    | MV5377C    | MV5477C    | MV5777C    | Condition           |
|--|----------------|------------|------------|------------|------------|---------------------|
| Luminous Intensity (mcd)<br>Minimum<br>Typical | $I_V$          | 0.3<br>1.8 | 1.0<br>7.0 | 1.0<br>7.0 | 1.0<br>7.0 | $I_F = 20\text{mA}$ |
| Forward Voltage (V)<br>Typical<br>Maximum      | $V_F$          | 1.6<br>2.0 | 2.1<br>3.0 | 2.2<br>3.0 | 2.0<br>3.0 | $I_F = 20\text{mA}$ |
| Spectral Line Half Width (nm)                  |                | 20         | 35         | 35         | 45         | $I_F = 20\text{mA}$ |
| Peak Wavelength (nm)                           | $\lambda_p$    | 660        | 585        | 565        | 635        | $I_F = 20\text{mA}$ |
| Viewing Angle (Total) (°)                      | 2 $\theta$ 1/2 | 140        | 140        | 140        | 140        | $I_F = 20\text{mA}$ |

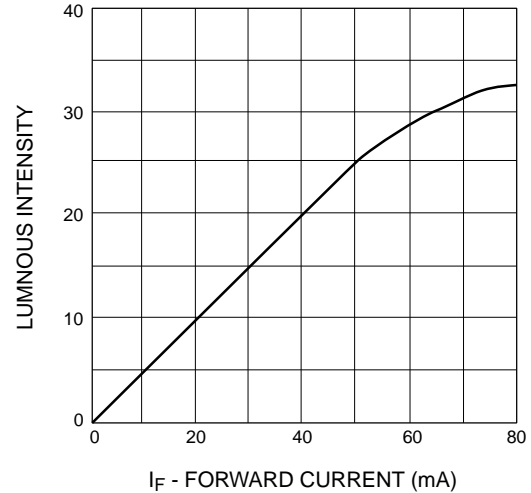
- The leads of the device were immersed in molten solder at 260°C, to a point 1/16 inch (1.6 mm) from the body of the device per MIL-S-750, with a dwell time of 5 seconds.

**TYPICAL PERFORMANCE CURVES** ( $T_A = 25^\circ\text{C}$ )

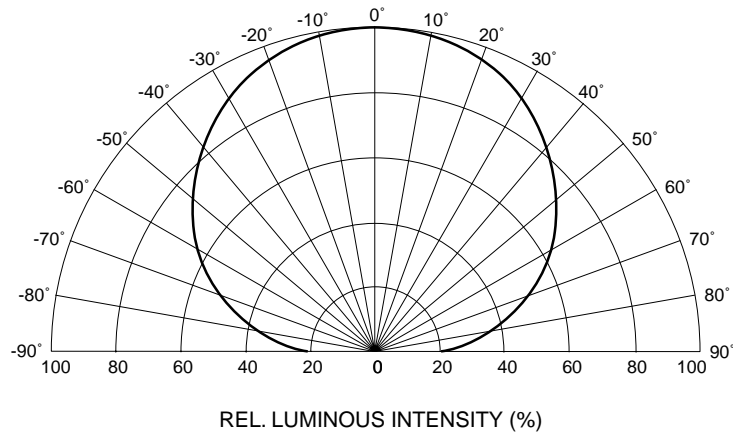
**Fig. 1 Forward Current vs. Forward Voltage**



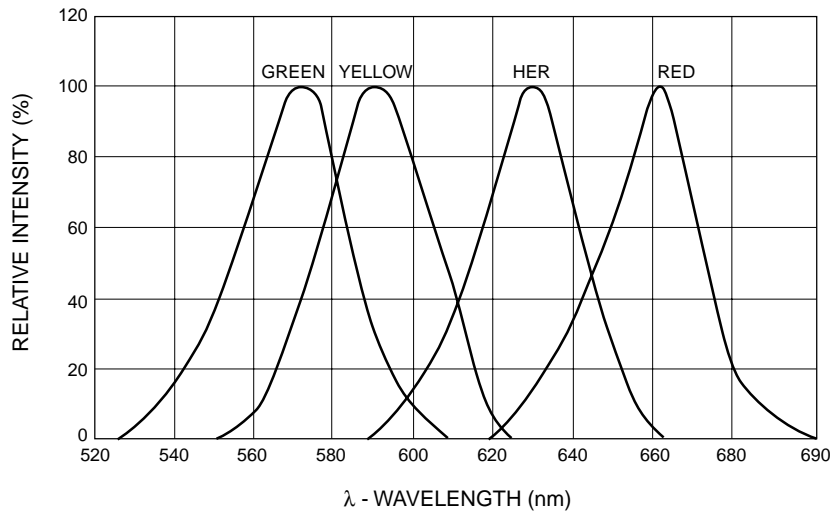
**Fig. 2 Luminous Intensity vs. Forward Current**



**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.