

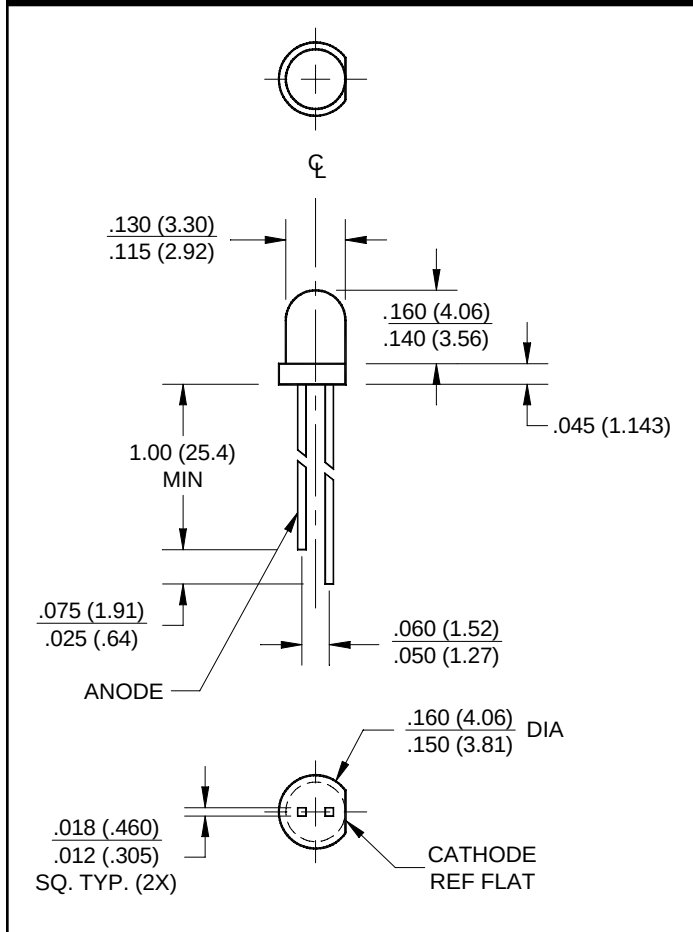
RED DIFFUSED  
GREEN DIFFUSED

MV5077C  
MV5477C

YELLOW DIFFUSED  
HER DIFFUSED

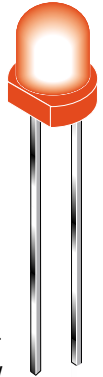
MV5377C  
MV5777C

## 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 $25^\circ\text{C}$                                                            |           | -1.14       | mW/ $^\circ\text{C}$ |
| 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 $260^\circ\text{C}$ (See Note 1)                                            | $T_{SOL}$ | 5           | sec                  |
| Operating Temperature                                                                              | $T_{OPR}$ | -55 to +100 | $^\circ\text{C}$     |
| Storage Temperature                                                                                | $T_{STG}$ | -55 to +100 | $^\circ\text{C}$     |

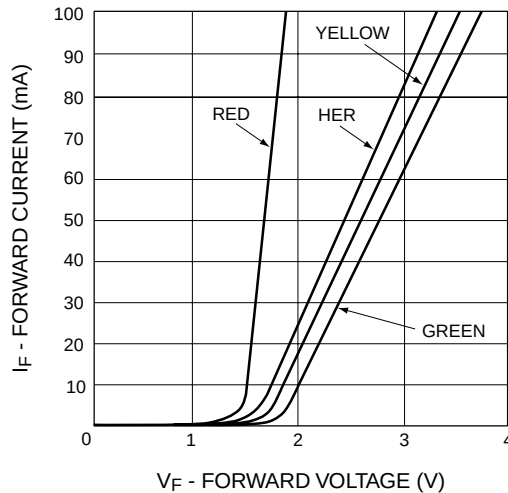
**ELECTRICAL / OPTICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ )

| 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)               | $\lambda_p$   | 660     | 585     | 565     | 635     | $I_F = 20\text{mA}$ |
| Viewing Angle (Total) ( $^\circ$ ) | $2\theta$ 1/2 | 140     | 140     | 140     | 140     | $I_F = 20\text{mA}$ |

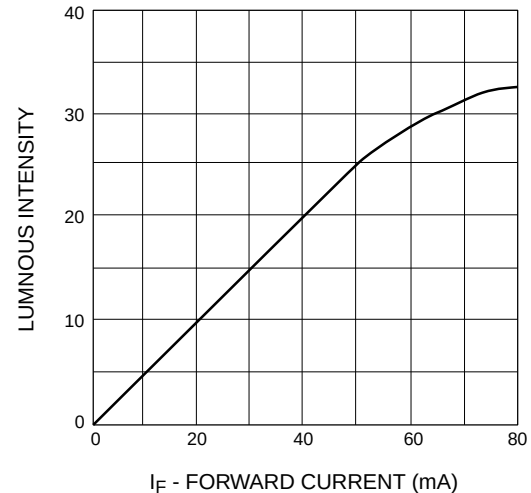
- The leads of the device were immersed in molten solder at  $260^\circ\text{C}$ , to a point 1/16 inch (1.6 mm) from the body of the device per MIL-S-750, with a dwell time of 5 seconds.

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

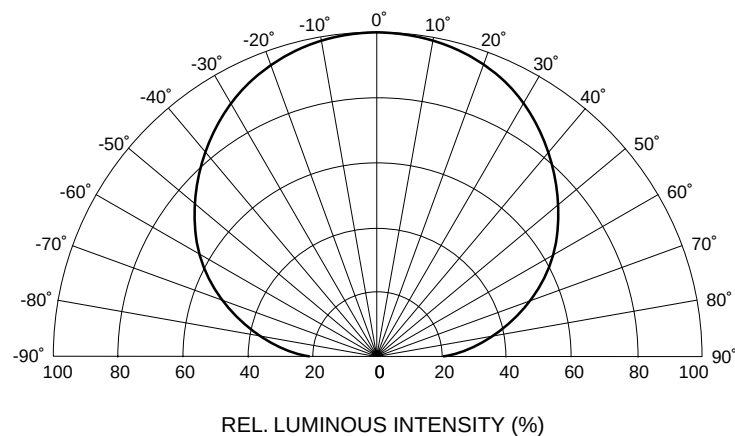
**Fig. 1 Forward Current vs. Forward Voltage**



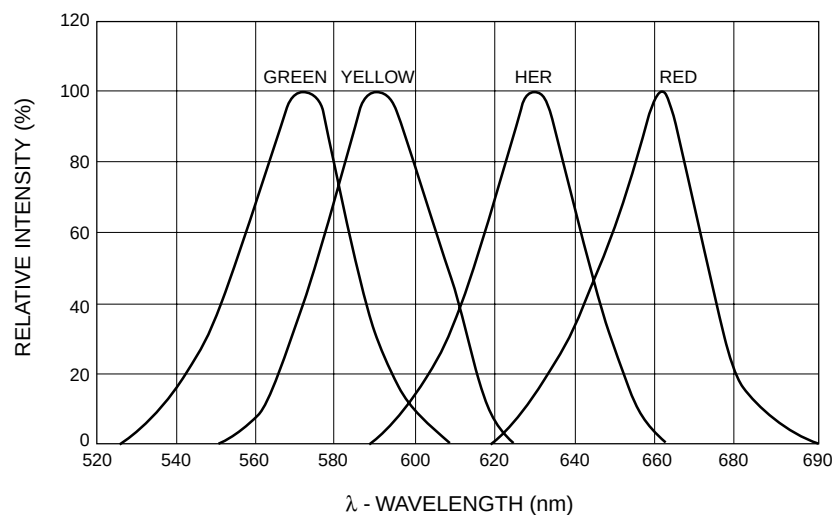
**Fig. 2 Luminous Intensity vs. Forward Current**



**Fig. 3 Spatial Distribution**



**Fig. 4 Relative Intensity vs. Peak Wavelength**



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