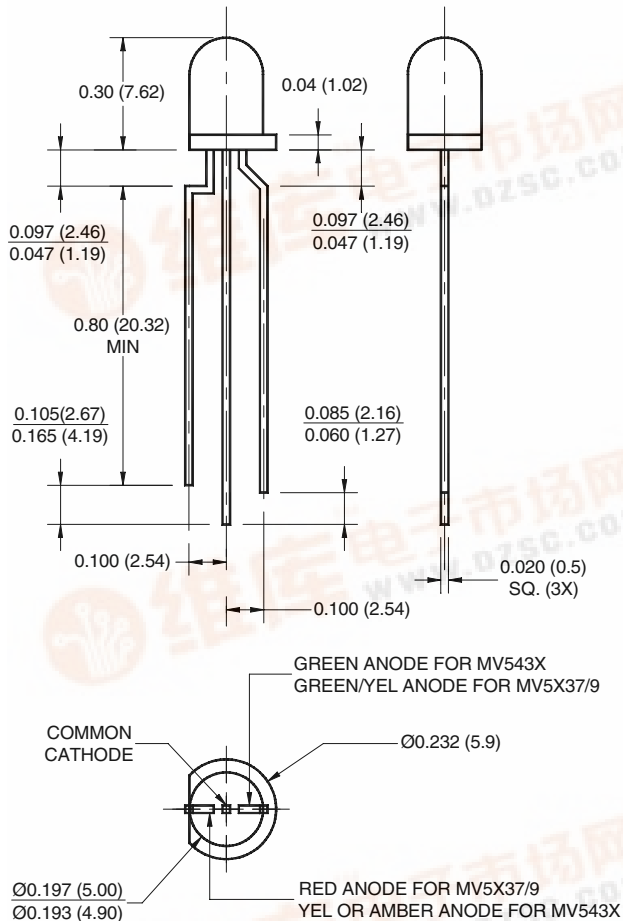


FAIRCHILD
SEMICONDUCTOR®

3 LEAD BICOLOR T-1 3/4 (5 mm) SOLID STATE LAMPS

PACKAGE DIMENSIONS



NOTES:

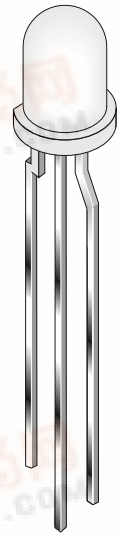
1. Dimensions for all drawings are in inches (mm).
2. Tolerance is ± 0.12 " unless otherwise specified.

GREEN / YELLOW
GREEN / ORANGE
YELLOW / HER
GREEN / HER
GREEN / AlGaAs RED

MV5433
MV5438
MV5337
MV5437
MV5439

FEATURES

- Popular T-1 3/4 package
- Wide viewing angle
- Solid state reliability
- TTL compatible



DESCRIPTION

The MV5X3X T-1 3/4 (5 mm) lamp is a three-lead bicolor light source with a central common cathode lead. Each lamp comes with a white diffused lens and has a 100° viewing angle.

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | AlGaAs RED | HER | Green | Yellow | Orange | Units |
|--|---------------|-----|-------|--------|--------|------------------|
| Continuous Forward Current (I_F) | 30 | 30 | 30 | 20 | 30 | mA |
| Peak Forward Current (I_F) ($f = 1.0$ KHz, Duty Factor = 1/10) | 90 | 90 | 90 | 60 | 90 | mA |
| Power Dissipation (P_D) | 120 | 120 | 120 | 85 | 100 | mW |
| Reverse Voltage (V_R) | 5 | 5 | 5 | 5 | 5 | V |
| Operating Temperature (T_{OPR}) | -55 to +100 | | | | | $^\circ\text{C}$ |
| Storage Temperature (T_{STG}) | -55 to +100 | | | | | $^\circ\text{C}$ |
| Lead Soldering Time (T_{SOL}) | 260 for 5 sec | | | | | $^\circ\text{C}$ |



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| | |
|--------------------|--------|
| GREEN / YELLOW | MV5433 |
| GREEN / ORANGE | MV5438 |
| YELLOW / HER | MV5337 |
| GREEN / HER | MV5437 |
| GREEN / AlGaAs RED | MV5439 |

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

| Part Number | MV5437 Grn/HER | MV5337 Yel/HER | MV5433 Grn/Yel | MV5438 Grn/Orange | MV5439 Grn/AlGaAs Red | Condition |
|-------------------------------|-------------------|-------------------|-------------------|----------------------|--------------------------|------------------------|
| Luminous Intensity (mcd) | | | | | | I _F = 20 mA |
| Minimum | 2/2 | 2/2 | 2/2 | 2/2 | 2/10 | |
| Typical | 6/6 | 6/6 | 6/6 | 6/6 | 6/25 | |
| Forward Voltage (V) | | | | | | I _F = 20 mA |
| Maximum | 3.0/3.0 | 3.0/3.0 | 3.0/3.0 | 3.0/3.0 | 3.0/2.4 | |
| Typical | 2.1/2.1 | 2.1/2.1 | 2.3/2.3 | 2.3/2.3 | 2.3/1.7 | |
| Peak Wavelength (nm) | 565/635 | 585/635 | 565/585 | 565/610 | 565/660 | I _F = 20 mA |
| Spectral Line Half Width (nm) | 30/45 | 35/45 | 30/35 | 30/40 | 30/20 | I _F = 20 mA |
| Viewing Angle (°) | 100° | 100° | 100° | 100° | 100° | I _F = 20 mA |

TYPICAL PERFORMANCE CURVES

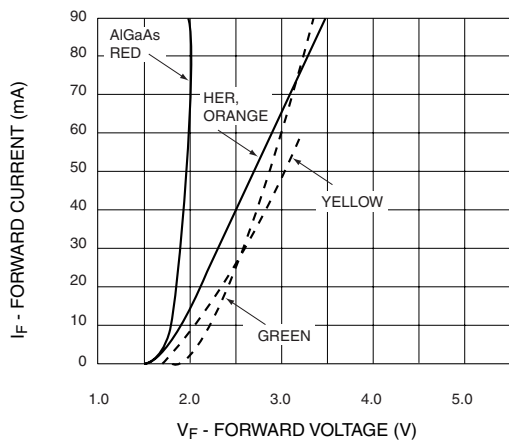


Fig. 1 Forward Current vs. Forward Voltage

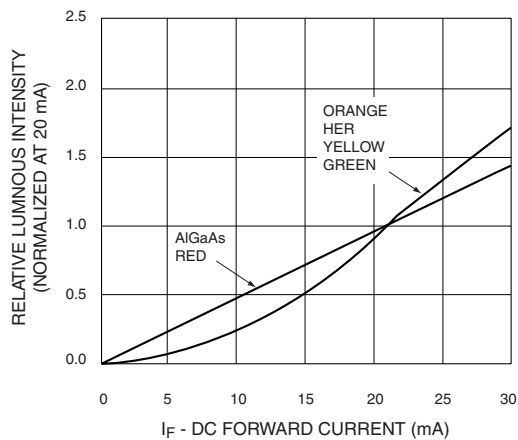


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

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| | |
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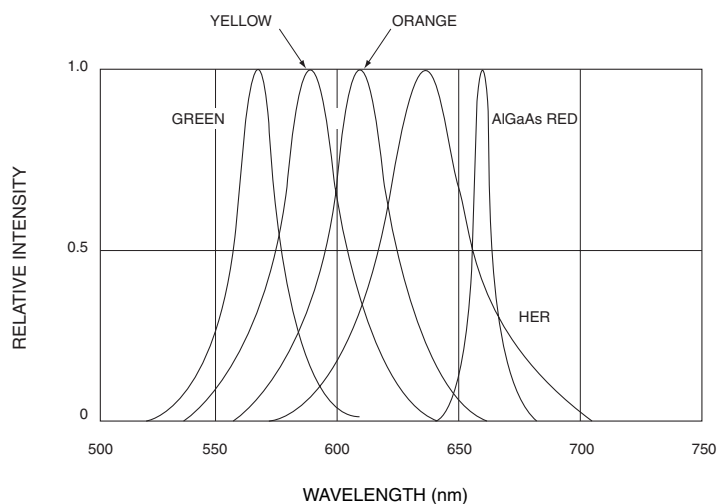


Fig. 3 Relative Intensity vs. Peak Wavelength

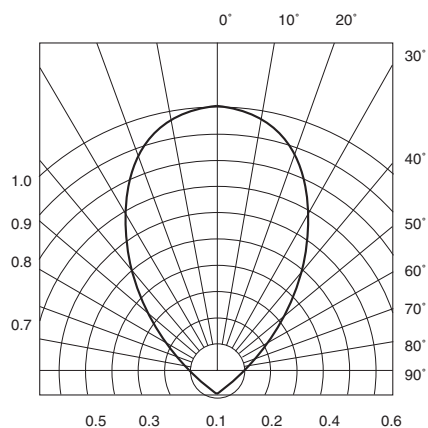


Fig. 4 Radiation Diagram

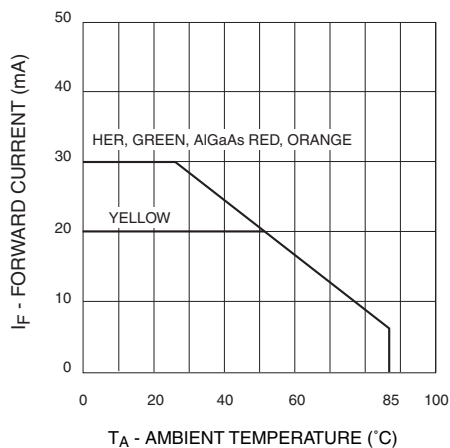


Fig. 5 Current Derating Curve



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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.