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

### **PACKAGE DIMENSIONS** 0.04 (1.02) 0.30 (7.62) 0.097 (2.46) 0.097 (2.46) 0.047 (1.19) 0.047 (1.19) 0.80 (20.32) MIN 0.085 (2.16) 0.105(2.67) 0.165 (4.19) 0.060 (1.27) 0.100 (2.54) 0.020 (0.5) SQ. (3X) 0.100 (2.54) **GREEN ANODE FOR MV543X** GREEN/YEL ANODE FOR MV5X37/9 COMMON Ø0.232 (5.9) CATHODE Ø0.197 (5.00) RED ANODE FOR MV5X37/9 YEL OR AMBER ANODE FOR MV543X Ø0.193 (4.90) NOTES:

1. Dimensions for all drawings are in inches (mm).

2. Tolerance is ±0.12" unless otherwise specified.

GREEN / YELLOW	MV5433
GREEN / ORANGE	MV5438
YELLOW / HER	MV5337
GREEN / HER	MV5437
GREEN / AIGaAs RED	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 <sub>A</sub> = 25°C unless otherwise specified)						
Parameter	AlGaAs RED	HER	Green	Yellow	Orange	Units
Continuous Forward Current (I <sub>F</sub> )	30	30	30	20	30	mA
Peak Forward Current (I <sub>F</sub> ) (f = 1.0 KHz, Duty Factor = 1/10)	90	90	90	60	90	mA
Power Dissipation (P <sub>D</sub> )	120	120	120	85	100	mW
Reverse Voltage (V <sub>R</sub> )	5	5	5	5	5	V
Operating Temperature (T <sub>OPR</sub> )		-55 to +100			°C	
Storage Temperature (T <sub>STG</sub> )		-55 to +100			°C	
Lead Soldering Time (T <sub>SOL</sub> )		260 for 5 sec				°C



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ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C)						
Part Number	MV5437	MV5337	MV5433	MV5438	MV5439	
	Grn/HER	Yel/HER	Grn/Yel	Grn/Orange	Grn/AlGaAs Red	Condition
Luminous Intensity (mcd)						I <sub>F</sub> = 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 <sub>F</sub> = 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 <sub>F</sub> = 20 mA
Spectral Line Half Width (nm)	30/45	35/45	30/35	30/40	30/20	$I_F = 20 \text{ mA}$
Viewing Angle (°)	100°	100°	100°	100°	100°	I <sub>F</sub> = 20 mA

#### TYPICAL PERFORMANCE CURVES

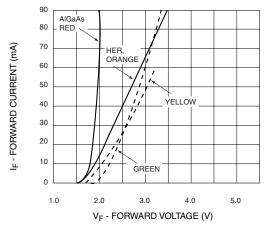


Fig. 1 Forward Current vs. Forward Voltage

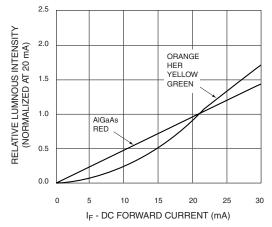


Fig. 2 Relative Luminous Intensity vs. DC Forward Current



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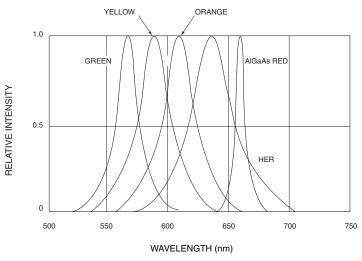


Fig. 3 Relative Intensity vs. Peak Wavelength

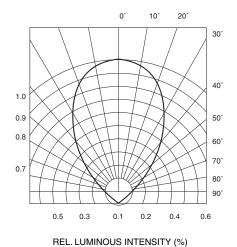


Fig. 4 Radiation Diagram

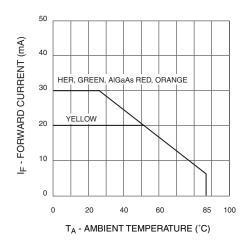


Fig. 5 Current Derating Curve

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- 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.

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