

Amber Super GaAsP LED Lamps

Optoelectronic Products

MV5152
MV5153
MV5154

General Description

The MV5152, MV5153 and MV5154 are red light-emitting diodes encapsulated in amber epoxy. Viewing angle can be selected from point source to wide angle. Visual light emission is in the 590 nm to 660 nm range.

High Luminous Intensity For Ambient Light Levels

Solid State—No Replacement Required

High On/Off Contrast

Flexible Pins On All Lamps

For Good Heat Sinking

For Right-Angle Bending

Fits Standard Sockets Or Drilled Holes

Single Molded Body Eliminates Thermal

Cycling Problems

Low Power For IC Compatibility

MV5152 For Point Source Lamps

MV5153 For Wide Angle Lamps

MV5154 For Intermediate Dispersion Lamps

Absolute Maximum Ratings

Maximum Temperature and Humidity

Storage Temperature -55°C to $+100^{\circ}\text{C}$

Storage Temperature	-55°C to +100°C
Operating Temperature	-55°C to +100°C

Pin Temperature (Soldering, 5 s)	260°C
----------------------------------	-------

Relative Humidity at 85°C	85%
---------------------------	-----

Maximum Power Dissipation

Total Dissipation at $T_A = 25^\circ\text{C}$ 105 mW

Derate Linearly from 25°C 1.14 mW/°C

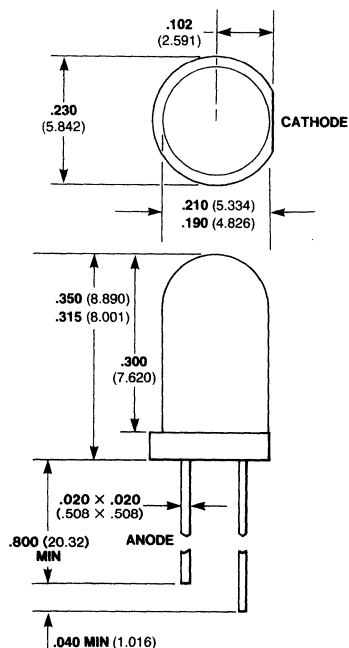
Maximum Voltage and Currents

V_B	Reverse Voltage	5.0 V
-------	-----------------	-------

I_F Forward dc Current at
 $T_A = 25^\circ\text{C}$ 35 mA

I_{pk}	Peak Forward Current (1.0 μs pulse width, 0.1% duty cycle)	1.0 A
----------	---	-------

Package Outline



Notes

Notes:
All dimensions in inches **bold** and millimeters (parentheses)
Tolerance unless specified = **±.015** (0.381)

Typical Electrical Characteristics

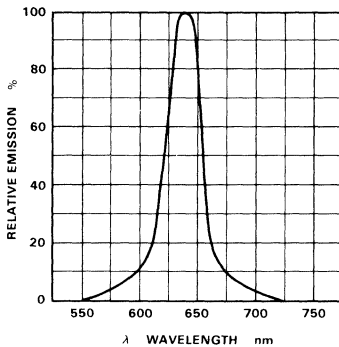
MV5152 MV5153 MV5154

Electrical and Radiant Characteristics $T_A = 25^\circ\text{C}$

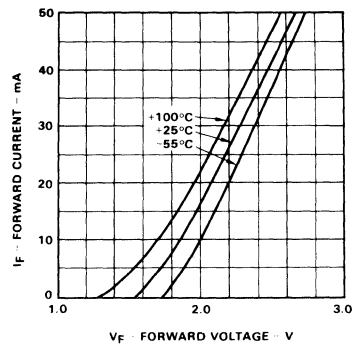
Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
V_F	Forward Voltage		2.0	3.0	V	$I_F = 20\text{ mA}$
BV_R	Reverse Breakdown Voltage	5.0	25		V	$I_R = 100\text{ }\mu\text{A}$
I_O	Axial Luminous Intensity				mcd	$I_F = 20\text{ mA}$
	MV5152	17	40			
	MV5153	3.0	6.0			
	MV5154	3.0	8.0			
θ	Viewing Angle Total				degrees	$I_F = 20\text{ mA}$
	MV5152		28			
	MV5153		65			
	MV5154		24			
λ_{pk}	Peak Wavelength		635		nm	$I_F = 20\text{ mA}$

2

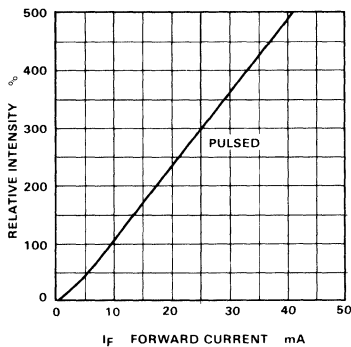
Emission Spectrum



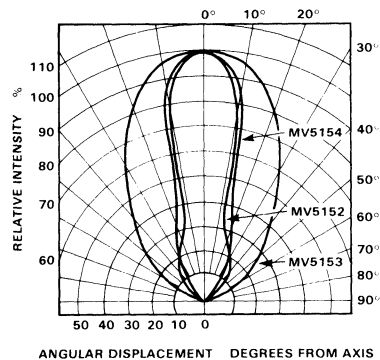
Forward Current vs Forward Voltage



Intensity vs Temperature



Intensity vs Viewing Angle



Typical Electrical Characteristic Curves

MV5152
MV5153
MV5154

Intensity vs Forward Current

