Red Super GaAsP LED Lamps

Optoelectronic Products

FLV510, FLV540 FLV550, FLV560

General Description

The FLV510, FLV540, FLV550 and FLV560 are high-efficiency red light-emitting diodes encapsulated in red diffused plastic. These devices provide an intense large-area light source with wide-angle viewing. Visual light emission is in the 600 to 700 nm range.

High Luminous Intensity For Room Ambient Light Levels
Solid State Thus No Replacement Is Required
High On/Off Contrast
Flexible Pins On FLV510, FLV540 And FLV550
For Good Heat Sinking
For Right-Angle Bending
Fits Standard Sockets And Drilled Holes
Heavy Copper Pins On FLV560 For Wire Wrap Applications and Rigid Standoff From PC Board
Single Molded Body Eliminates Thermal Cycling Problems
High-Temperature Epoxy Encapsulation Withstands Severe Environmental Temperatures
Low Power Means IC Compatibility

Absolute Maximum Ratings

Maximum Temperature and Humidity

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

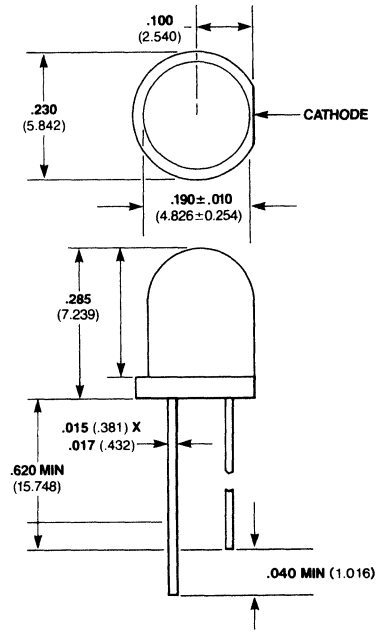
Total Dissipation at T_A = 25°C	200 mW
Derate Linearly from 25°C	2.6 mW/°C

Maximum Voltage and Currents

V_R	Reverse Voltage	5.0 V
I_F	Forward dc Current	35 mA
I_{pk}	Peak Forward Current (1.0 μs pulse width)	1.0 A

Package Outline

FLV510



Notes
All dimensions in inches **bold** and millimeters (parentheses)
Tolerance unless specified = ±.015 (±.381)

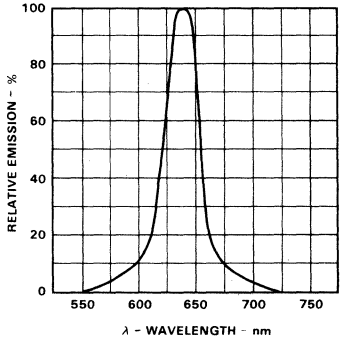
Electrical and Radiant Characteristics T_A = 25°C

Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
V_F	Forward Voltage		2.1	2.8	V	I_F = 10 mA
				3.0	V	I_F = 20 mA
BV_R	Reverse Breakdown Voltage	5.0	8.0		V	I_R = 100 μA
I_O	Axial Luminous Intensity	3.0	10		mcd	I_F = 20 mA
$\theta_{1/2}$	Viewing Angle to Half Intensity		±35		degrees	I_F = 20 mA
λ_{pk}	Peak Wavelength		640		nm	I_F = 10 mA

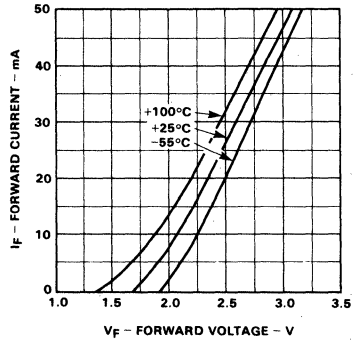
Typical Electrical Characteristic Curves

FLV510, FLV540 FLV550, FLV560

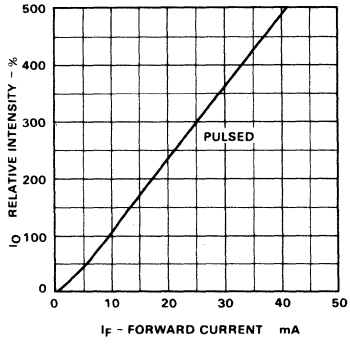
Emission Spectrum



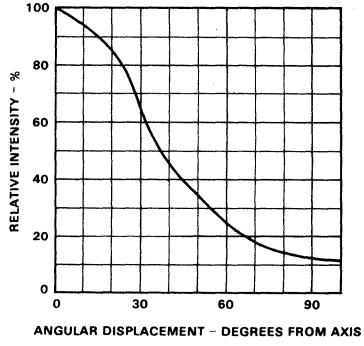
Forward Current vs Forward Voltage



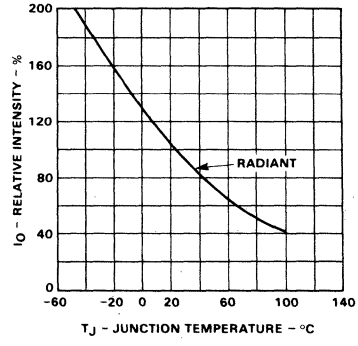
Intensity vs Forward Current



Intensity vs Viewing Angle



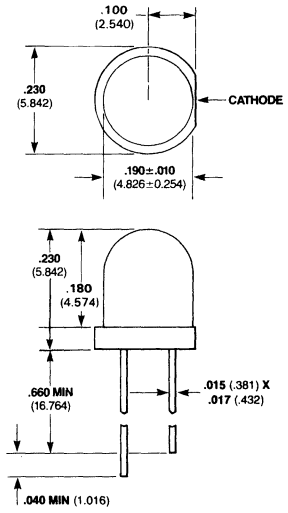
Intensity vs Temperature



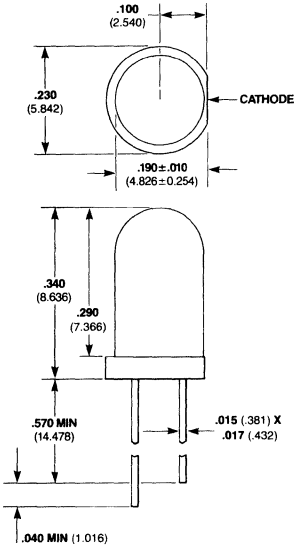
Package Outlines

FLV510, FLV540 FLV550, FLV560

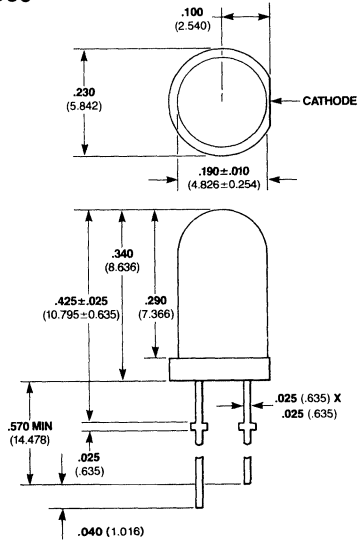
FLV540



FLV550



FLV560



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