Red GaAsP LED Lamps

Optoelectronic Products

FLV110, FLV140 FLV150, FLV160

General Description

The FLV110, FLV140, FLV150 and FLV160 are red light-emitting diodes encapsulated in diffused plastic. These LED devices provide an intense large-area light source with wide-angle viewing. Visual light emission is in the 600 nm to 700 nm range.

Solid State Thus No Replacement Required
No Socket Required
High On/Off Contrast
Flexible Pin On FLV110, FLV140 land FLV150
- **For Good Heat Sinking**
- **For Right-Angle Bending**
- **Fits Standard Sockets and Drilled Holes**

Heavy Copper Leads On FLV160
- **For Wire Wrapping**
- **For Rigid Standoff From PC Board**

Single Molded Body Eliminates
- **Thermal Cycling Problems**

High-Temperature Epoxy Encapsulation Withstands
- **Severe Environmental Temperatures**

Low Power Consumption 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%

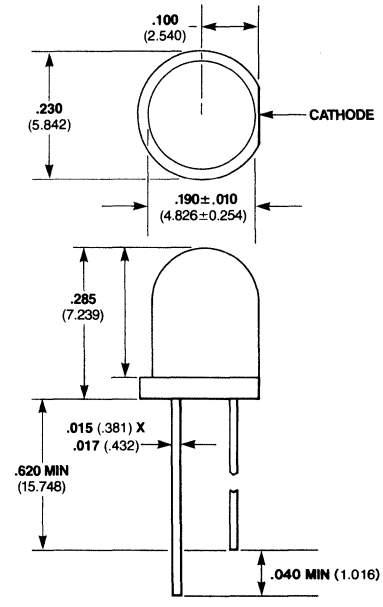
Maximum Power Dissipation

Total Dissipation at T_A = 25°C	120 mW
Derate Linearly from 25°C	1.6 mW/°C

Maximum Voltage and Currents

V_R	Reverse Voltage	3.0 V
I_F	Forward dc Current	50 mA
I_{pk}	Peak Forward Current (1.0 μs pulse width)	1.0 A

Package Outline
FLV110



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

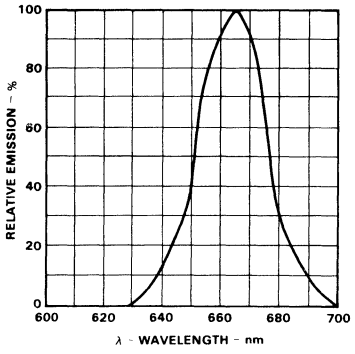
Electrical and Radiant Characteristics T_A = 25°C

Symbol	Characteristic	Min	Typ	Max	Units	Test Conditions
V_F	Forward Voltage		1.7	2.0	V	I_F = 20 mA
BV_R	Reverse Breakdown Voltage	3.0	8.0		V	I_R = 10 μA
I_O	Axial Luminous Intensity	0.8	2.0		mcd	I_F = 20 mA
$\theta_{1/2}$	Angle of Half Intensity		±35		degrees	I_F = 20 mA
λ_{pk}	Peak Wavelength		665		nm	I_F = 20 mA

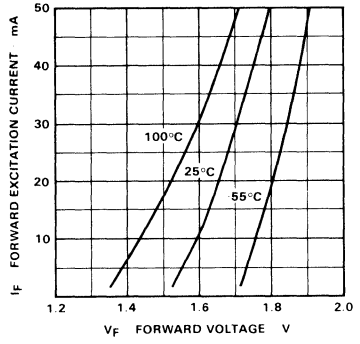
Typical Electrical Characteristic Curves

FLV110, FLV140 FLV150, FLV160

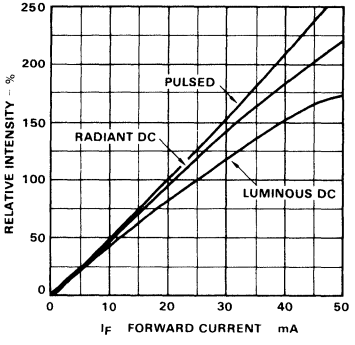
Emission Spectrum



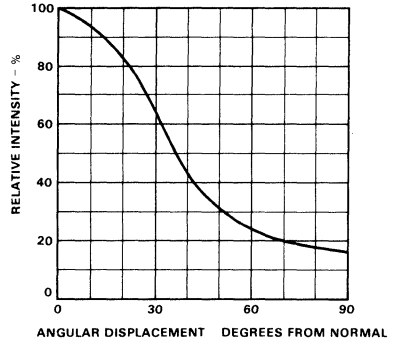
Forward Current vs Forward Voltage



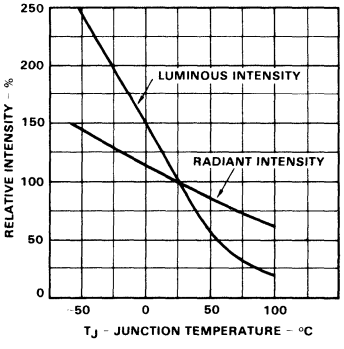
Intensity vs Forward Current



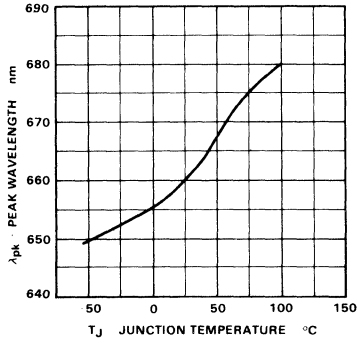
Intensity vs Viewing Angle



Intensity vs Temperature



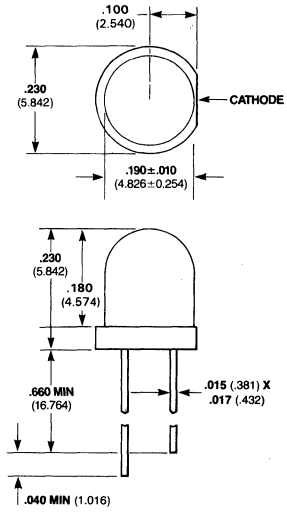
Peak Wavelength vs Temperature



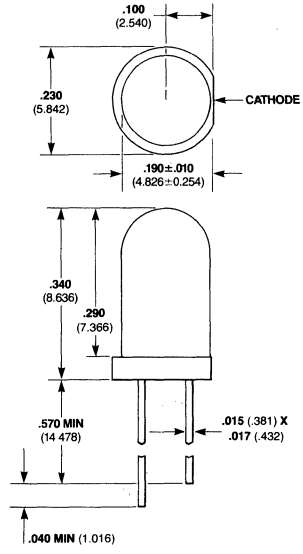
Package Outlines

FLV110, FLV140 FLV150, FLV160

FLV140



FLV150



FLV160