Red GaAsP LED Lamps

Optoelectronic Products

FLV100 FLV101 FLV102

General Description

The FLV100, FLV101 and FLV102 are red light-emitting diodes encapsulated in plastic. Each light source is contained in a black case, giving excellent contrast when on, yet appearing black when off.

High Brightness—1500 fL @ 200 mA
Low Power Consumption—IC Compatible
Vibration/Shock Resistant
High On/Off Contrast
FLV100 Is A Highly Intense Point Source
FLV101 Is A Highly Diffused Light Source
Viewable Over A Full 180° Angle
Frosted Surface Eliminates Glare From Ambient Light
FLV102 Is A Large-Area Light Source

Absolute Maximum Ratings

Maximum Temperature and Humidity

Storage Temperature	−40°C to +100°C
Operating Temperature	−40°C to +100°C
Pin Temperature (Soldering 5 s .1-inch from seating plane)	250°C
Relative Humidity at 65°C	98%

Maximum Power Dissipation

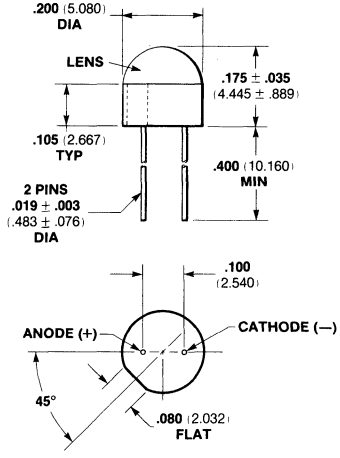
Total Dissipation at T_A = 25°C	100 mW
Derate Linearly from 25°C	1.3 mW/°C

Maximum Voltage and Currents

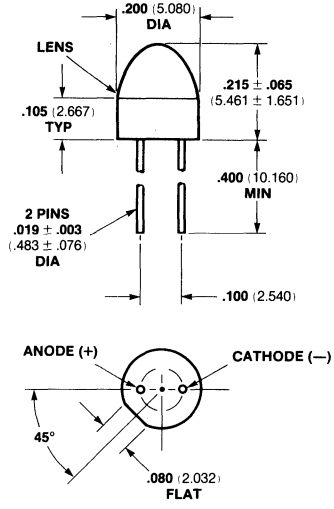
V_R	Reverse Voltage	3.0 V
I_F	Forward dc Current	50 mA

Package Outlines

FLV100/101



FLV102



Notes
*Package height of the FLV102 is **.190–.260** (4.826-6.604)
All dimensions in inches **bold** and millimeters (parentheses)
All pins electrically isolated from case
Tolerance unless specified = **±.015** (±.381)

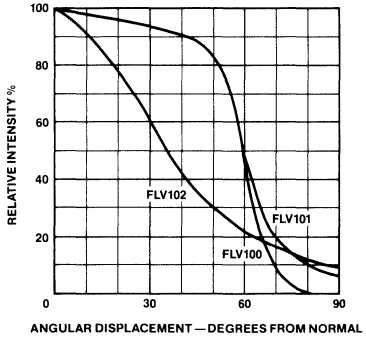
Typical Electrical Characteristic Curves

FLV100 FLV101 FLV102

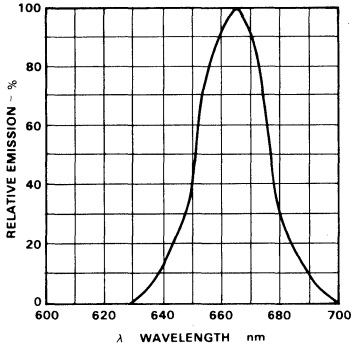
Electrical and Radiant Characteristics $T_A = 25°C$

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					
	FLV100	.15	0.5		mcd	I_F = 20 mA
	FLV101	.10	0.45		mcd	
	FLV102	0.3	1.0		mcd	
λ_{pk}	Peak Wavelength		665			I_F = 20 mA
$\theta_{1/2}$	Angle of Half Intensity					
	FLV100		80		degrees	I_F = 20 mA
	FLV101		80		degrees	
	FLV102		30		degrees	

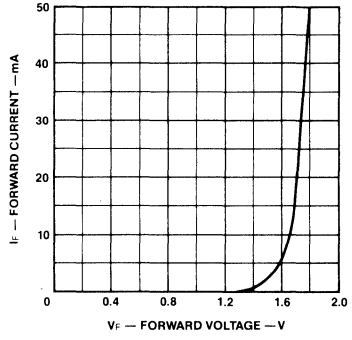
Relative Intensity vs Viewing Angle



Emission Spectrum



Forward Current (I_F) vs Forward Voltage (V_F)



Brightness vs Forward Current (I_F)