

FLV110•FLV140•FLV150•FLV160

RED GaAsP LED LAMPS OPTOELECTRONICS PRODUCT GROUP

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 PINS ON FLV110, FLV140 AND 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%

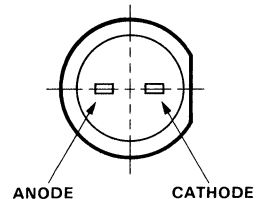
Maximum Power Dissipation

Total Dissipation at $T_A = 25^\circ\text{C}$	120 mW
Derate Linearly from 25°C	1.6 mW/°C

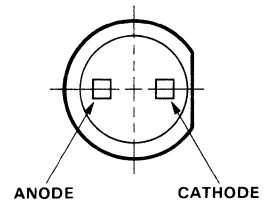
Maximum Voltage and Currents

V_R	Reverse Voltage	3.0 V
I_F	Forward dc Current	50 mA
i_f	Peak Forward Current (1.0 μs pulse width)	1.0 A

PIN CONNECTIONS



FLV110
FLV140
FLV150

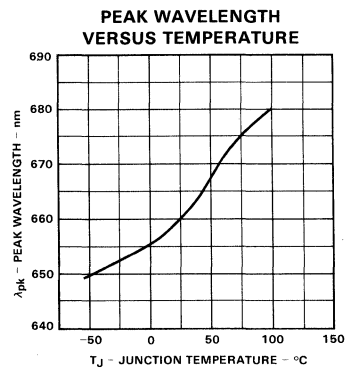
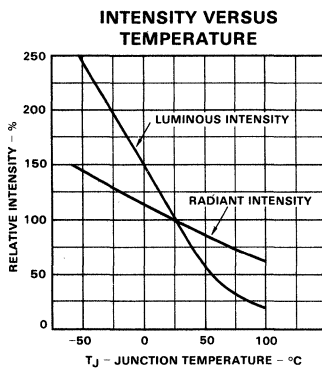
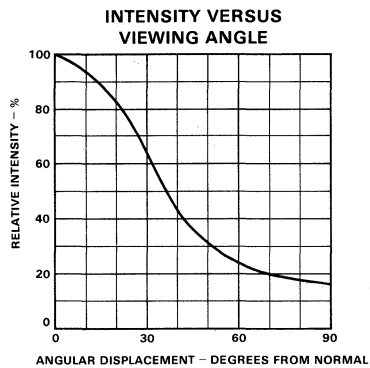
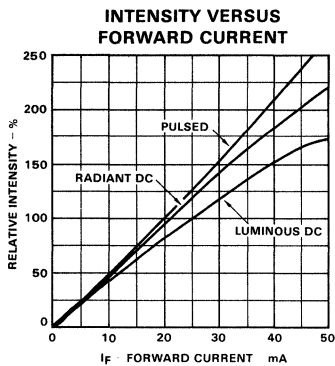
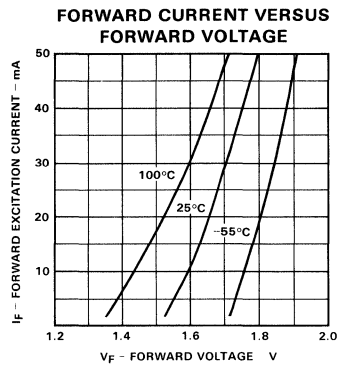
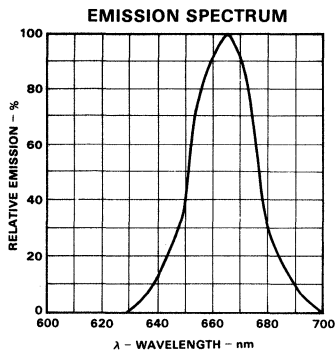


FLV160

ELECTRICAL AND RADIANT CHARACTERISTICS: $T_A = 25^\circ\text{C}$

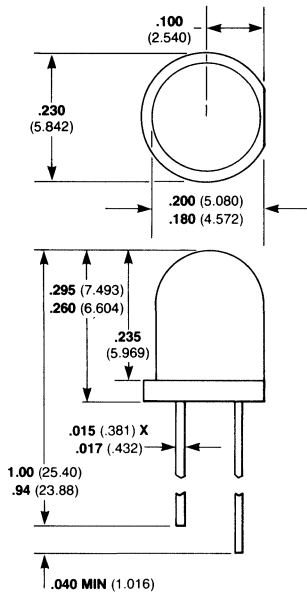
SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage		1.7	2.0	V	$I_F = 20 \text{ mA}$
BV_R	Reverse Breakdown Voltage	3.0	8.0		V	$I_R = 10 \mu\text{A}$
I_O	Axial Luminous Intensity	0.8	2.0		mcd	$I_F = 20 \text{ mA}$
$\theta_{1/2}$	Angle of Half Intensity		± 35		degrees	$I_F = 20 \text{ mA}$
λ_{pk}	Peak Wavelength		665		nm	$I_F = 20 \text{ mA}$

TYPICAL ELECTRICAL CHARACTERISTIC CURVES

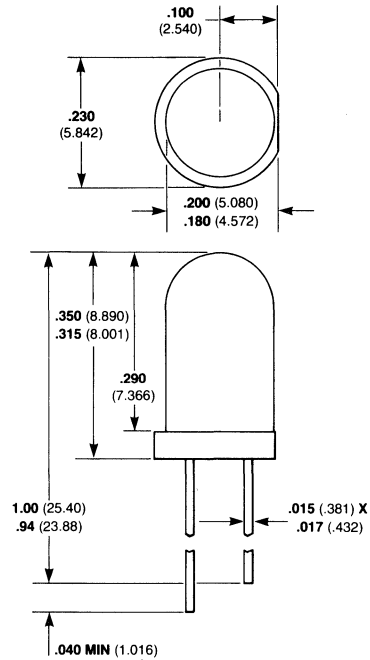


FAIRCHILD PACKAGE OUTLINES

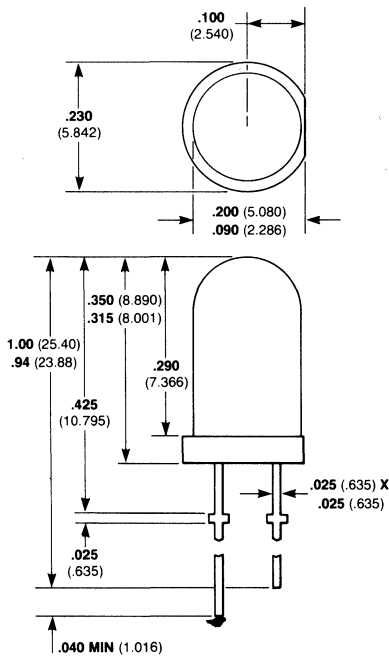
Opto - 5



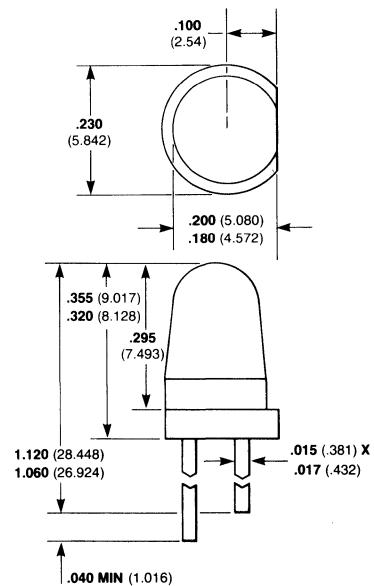
Opto - 6



Opto - 7



Opto - 8



NOTES:

All dimensions in inches (bold) and millimeters (parentheses)
 Tolerance unless specified = $\pm .015$ ($\pm .381$)