Low-Cost General-Purpose GaAs Infrared Emitter

FPE700

Optoelectronic Products

General Description

The FPE700 is a low-cost, general-purpose, GaAs infrared-emitting diode encapsulated in a clear plastic T1 package.

Absolute Maximum Ratings

Maximum Temperature and Humidity

Operating Temperature	−40°C to +85°C
Storage Temperature	−55°C to +100°C
Pin Temperature (Soldering, 5 s)	230°C
Relative Humidity at 85°C	85%

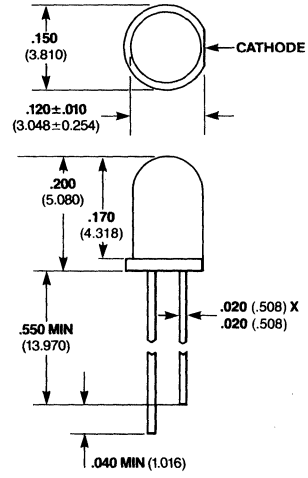
Maximum Power Dissipation

Total Dissipation at T_A = 25°C	70 mW
Derate Linearly from 25°C	1.33 mW/°C

Maximum Voltage and Current

V_R	Reverse Voltage	3.0 V
I_F	Forward dc Current	40 mA

Package Outline



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		1.35	1.7	V	I_F = 40 mA
BV_R	Reverse Breakdown Voltage	3.0	6.0		V	I_R = 100 μA
I_O	Axial Intensity	0.12	0.2		mW/Sr	I_F = 40 mA
P_O	Infrared Total Power Output		0.1		mW	I_F = 40 mA
$\theta_{1/2}$	Viewing Angle to Half Intensity		25		degrees	
t_r, t_f	Emission Rise and Fall Time		200		ns	I_F = 20 mA, 10% to 90%
λ_{pk}	Peak Spectral Wavelength		900		nm	