



Fiber Optics Red Emitter

AFE2100
AFE3100
AFE5100

Optoelectronics Products

Description

This emitter is a GaAsP, 660nm, light emitting diode designed for use in fiber optic systems. Directly compatible with the Amp, Amphenol, and OFTI connector systems, good EMI/RFI immunity is provided. Available in a TO-18 window can with a microsphere lens, plastic lensed cap, and pig tailed packages.

- FAST RESPONSE TIME — 10 NS. TYP.
- MAY BE USED WITH AFDxxxx DETECTORS
- EASY ALIGNMENT — SPOT SIZE, 1000 MICRONS
- NO PIGTAIL REQUIRED
- LOW NA FOR BETTER COUPLING
- LOW PROFILE IN THE RECOMMENDED CONNECTOR < .300" HIGH
- GOOD OUTPUT POWER FOR SHORT LENGTH LINKS

Absolute Maximum Ratings

(No Derating Required Up to 70°C)

Maximum Temperature

Operating Temperature 0°C to +70°C

Storage Temperature -55°C to +125°C

Pin Temperature (Soldering, 10 s)
(1.6 mm below seating plane) 260°C

Maximum Power Dissipation 200 mW

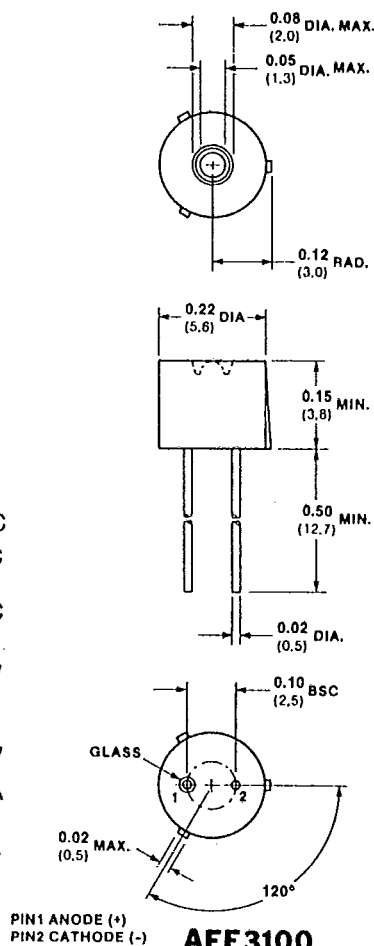
Maximum Voltage and Currents

V_R Reverse Input Voltage 5.0 V

I_F Average Forward Input Current 100 mA

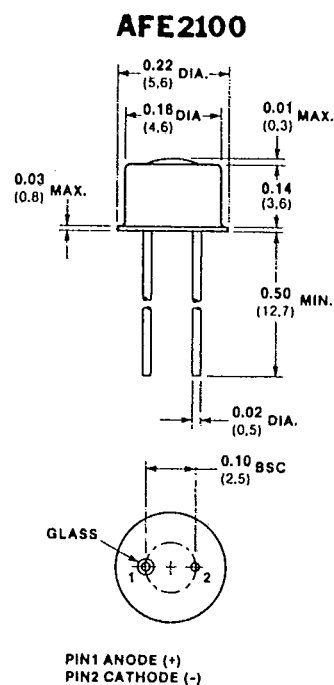
I_{pk} Peak Forward Input Current
(1 μ s duration) 1 A

Package Outline



AFE3100

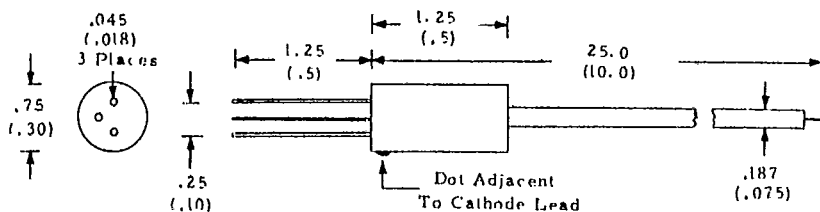
Dimensions: Inches (mm)



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AFE5100

MECHANICAL CHARACTERISTICS Dimensions Are Typical And In cm (Inch)

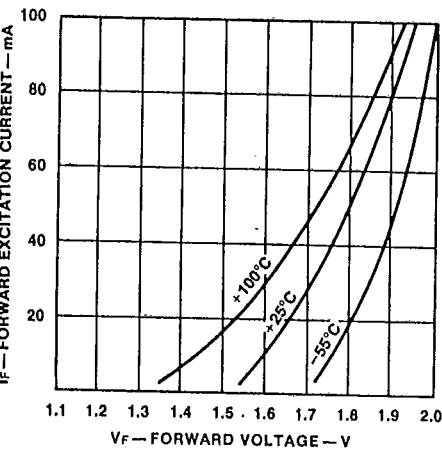


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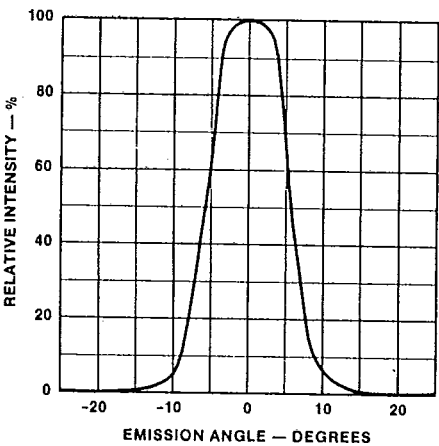
Electrical Characteristics $T_A = 25^\circ\text{C}$, $I_F = 100\text{ mA}$, unless otherwise specified

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage		2.3	2.5	V	$I_R = 100\text{ }\mu\text{A}$ into .040" ESKA fiber. $NA = 0.1$, $I_F = 50\text{ mA}$
V_R	Reverse Voltage	3.0	6.0		V	
P_O	Output Power	25	40		μW	
λ_{pk}	Peak Spectral Wavelength		660		nm	$I_F = 50\text{ mA}$, 10 to 90%
BW	Spectral Bandwidth		50		nm	
NA	Numerical Aperature		0.09	0.11		
S_D AFE3100	Spot Diameter (at pkg top)		1000		μm	
S_D AFE2100	Spot Diameter (at pkg top)		500		μm	
t_r, t_f	Emission Rise and Fall Time		10		ns	

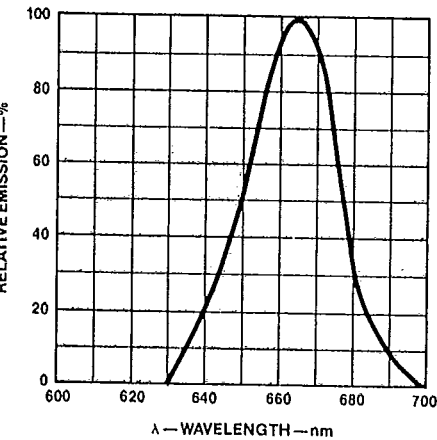
Forward V-I Characteristics



Angular Output



Emission Spectrum



Power Out Versus Current

