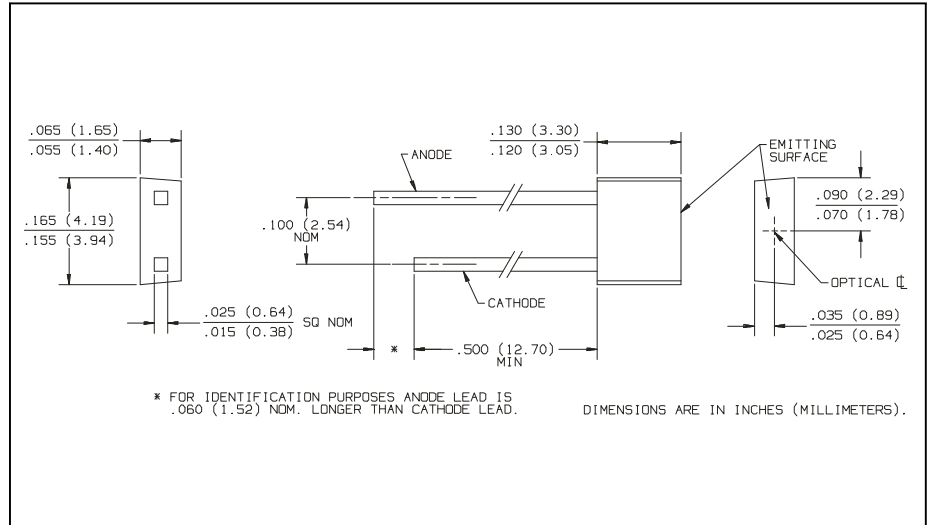
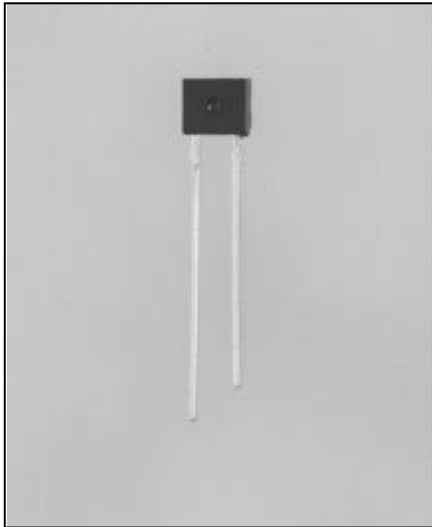


Plastic Point Source Infrared Emitting Diode

Type OP268FPS



Features

- Point source irradiance pattern
- Flat lensed for wide radiation angle
- Easily stackable on 0.100" (2.54 mm) hole centers

Description

The OP268FPS contains an 850 nm gallium aluminum arsenide infrared emitting diode molded in an "end-looking" miniature black package. This device has a wide radiation angle due to its flat emitting surface. The point source GaAlAs IRED emits photons from a 0.004" diameter area centered with the optical centerline. Small size and 0.100" (2.54 mm) lead spacing allow considerable design flexibility.

The stable V_F vs. Temperature characteristic make them ideal for applications where voltage is limited (such as battery operation).

The low t_r/t_f make them ideal for high speed operation.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Reverse Voltage	2.0 V
Continuous Forward Current	50 mA
Peak Forward Current (2 μs pulse width, 0.1% duty cycle)	1.0 A
Storage and Operating Temperature	-40° C to +100° C
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 sec. with soldering iron]	260° C ⁽¹⁾
Power Dissipation	100 mW ⁽²⁾

NOTES:

- (1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering. Maximum 20 grams force may be applied to the leads when soldering.
- (2) Derate linearly 1.33 mW/° C above 25° C.
- (3) $E_{e(\text{APT})}$ is a measurement of the average apertured radiant energy incident upon a sensing area 0.081" (2.06 mm) in diameter, perpendicular to and centered on the mechanical axis of the "emitting surface" and 0.400" (10.16 mm) from the measurement surface. $E_{e(\text{APT})}$ is not necessarily uniform within the measured area.

Type OP268FPS

Electrical Characteristics ($T_A = 25^\circ \text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$E_{e(\text{APT})}$	Apertured Irradiance	.10		.90	mW/cm^2	$I_F = 20 \text{ mA}^{(3)}$
V_F	Forward Voltage			1.80	V	$I_F = 20 \text{ mA}$
I_R	Reverse Current			20	μA	$V_R = 2 \text{ V}$
λ_p	Wavelength at Peak Emission		850		nm	$I_F = 20 \text{ mA}$
B	Spectral Bandwidth Between Half Power Points		50		nm	$I_F = 20 \text{ mA}$
θ_{HP}	Emission Angle at Half Power		$\pm 50^\circ$		Deg.	$I_F = 20 \text{ mA}$
t_r	Rise Time		10		ns	$I_{F(\text{PK})} = 20 \text{ mA}$
t_f	Fall Time		10		ns	$\text{PW} = 10 \mu\text{s}, \text{D.C.} = 10\%$

INFRARED
EMITTING
DIODES