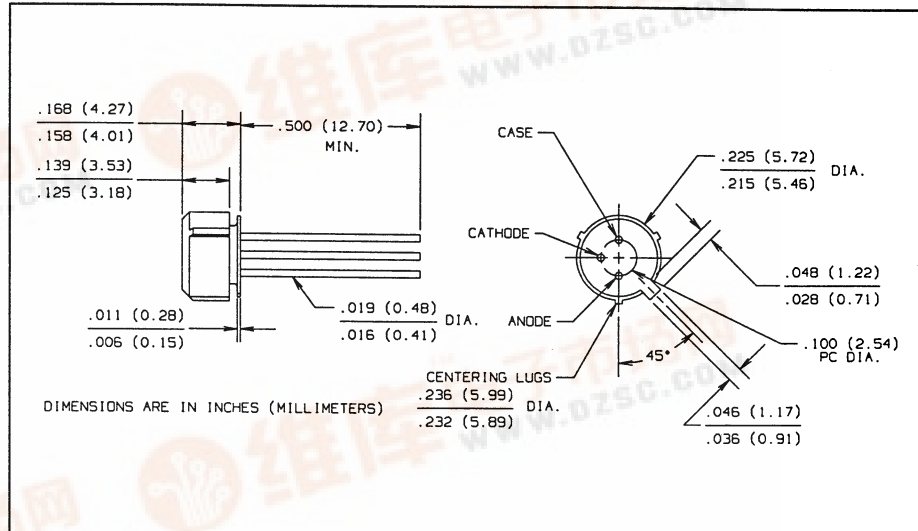
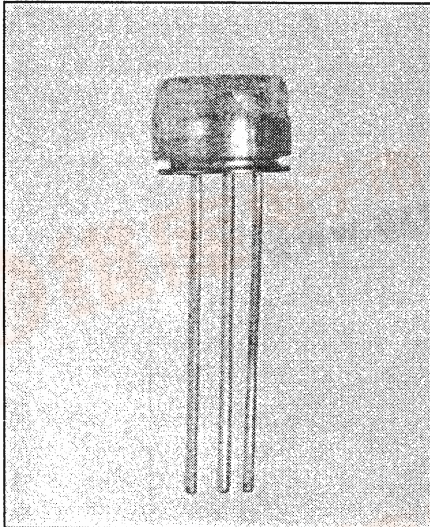


Product Bulletin OPF480
August 1996

Fiber Optic High Speed PIN Photodiode Type OPF480



Features

- Electrically isolated plastic cap package
- High speed, low capacitance
- Designed to self align in the 0.228 diameter bore of standard fiber optic receptacles
- Press fit simplifies component installation
- Optimized for fiber optic applications using 50 to 100 micron fiber

Description

The OPF480 is a low noise silicon PIN photodiode mounted in a low cost package for fiber optic applications. It offers fast response at low bias and is compatible with LED and laser diode sources in the 800-900 nm wavelength region. Low capacitance improves signal to noise performance in typical short haul LAN applications.

The PIN Photodiodes are designed to interface with multimode optical fibers from 50/125 to 100/140 microns.

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

Reverse Voltage	100 VDC
Continuous Power Dissipation	200 mW ⁽¹⁾
Storage Temperature Range	-55°C to +115°C
Operating Temperature Range	-40°C to +100°C
Lead Soldering Temperature [1/16 inch (1.6 mm) from case for 5 sec. with soldering iron]	240°C ⁽²⁾

Notes:

- (1) Derate linearly @ 2.0 mW/°C above 25°C.
- (2) RMA flux is recommended. Duration can be extended to 10 sec. max when flow soldering.
- (3) Test @ $V_R = 5\text{ V}$ with 50/125 micron, 0.20 N.A. fiber, @ 10 μW optical power @ 850 nm. Responsivity levels apply to 50 μm , 62.5 μm and 100 μm core optical fibers.

Type OPF480

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
R	Flux Responsivity	0.45	0.55		A/W	$V_R = 5.0\text{ V}^{(3)}$
I_D	Dark Current		0.1	5.0	nA	$V_R = 5.0\text{ V}$
λ_p	Peak Response Wavelength		860		nm	
t_r	Output Rise Time		0.6		ns	$V_R = 50\text{ V}, R_L = 50\ \Omega, 10\%-90\%$
t_r	Output Rise Time		1.0		ns	$V_R = 15\text{ V}, R_L = 50\ \Omega, 10\%-90\%$
t_r	Output Rise Time		2.0		ns	$V_R = 5.0\text{ V}, R_L = 50\ \Omega, 10\%-90\%$
C_T	Total Capacitance		1.5	2.0	pF	$V_R = 5.0\text{ V}$
FoV	Field of View		80		Deg.	

Typical Performance Curves

