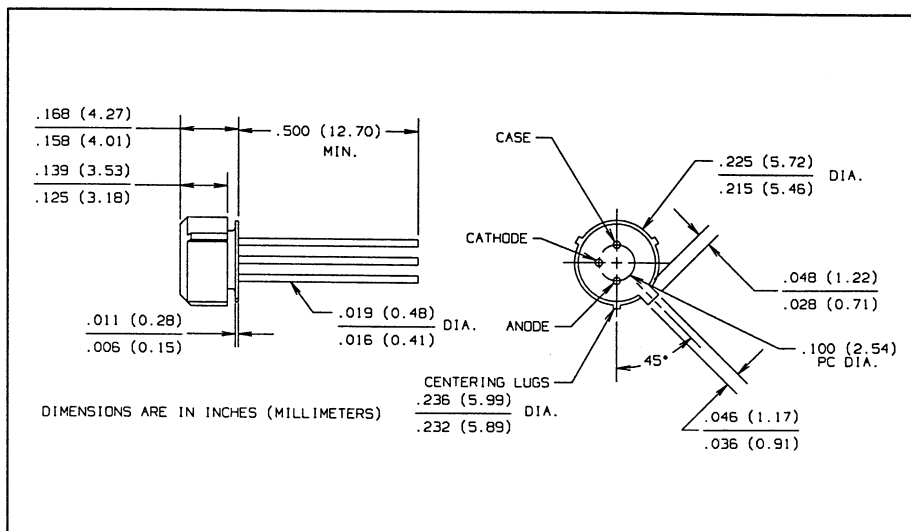
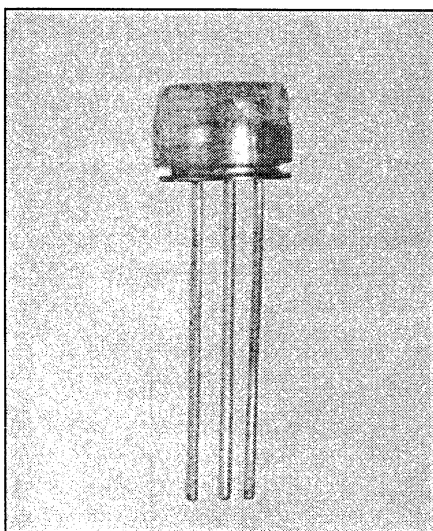


# Fiber Optic High Speed PIN Photodiode Type OPF480



## 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 <sup>(1)</sup>
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 <sup>(2)</sup>

### Notes:

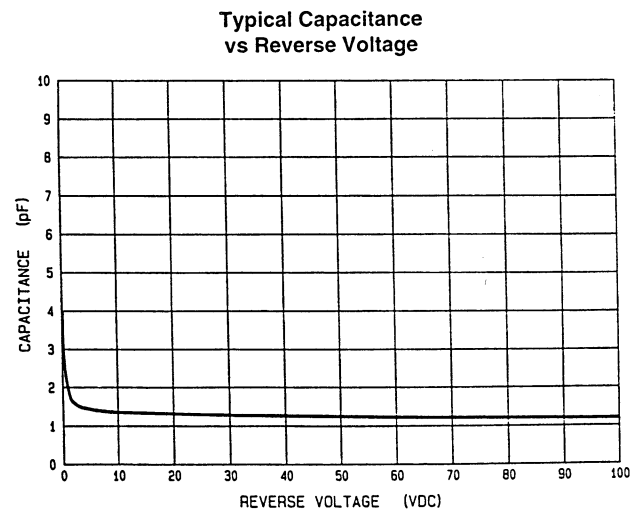
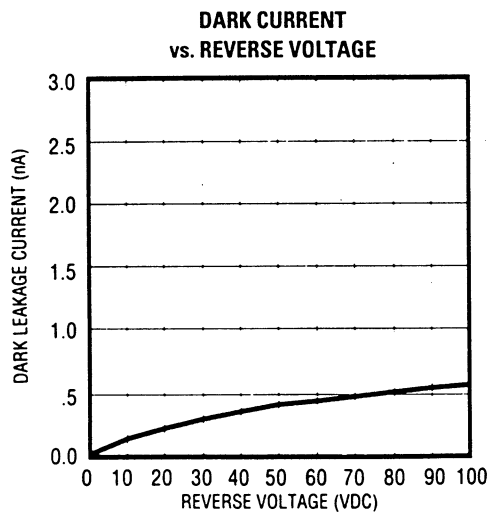
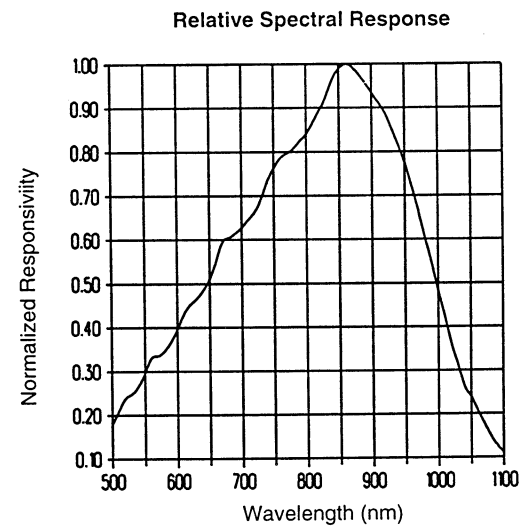
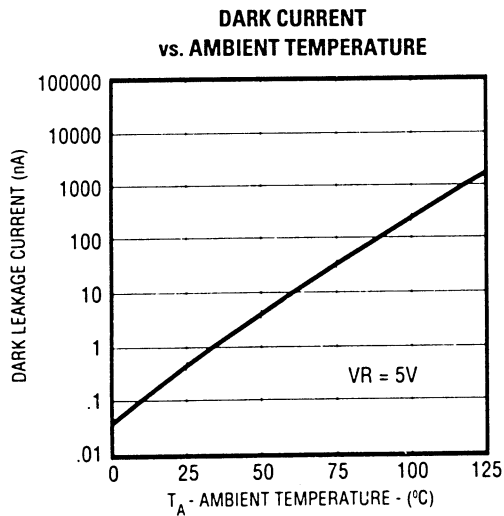
- (1) Derate linearly @ 2.0 mW/°C above 25°C.
- (2) RMA flux is recommended. Duration can be extended to 10 sec. max when flow soldering.
- (3) Test @  $V_R = 5\text{ V}$  with 50/125 micron, 0.20 N.A. fiber, @ 10  $\mu\text{W}$  optical power @ 850 nm. Responsivity levels apply to 50  $\mu\text{m}$ , 62.5  $\mu\text{m}$  and 100  $\mu\text{m}$  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	$V_R = 5.0\text{ V}$
$\lambda_p$	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



FIBER OPTIC COMPONENTS

Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

Optek Technology, Inc. 1215 W. Crosby Road Carrollton, Texas 75006 (972)323-2200 Fax (972)323-2396