

# Fiber Optic Detector

## OPF79X Series



### Features:

- High speed, low capacitance
- Popular ST<sup>®</sup> style receptacle
- Pre-tested with fiber to assure performance
- Component pre-mounted and ready to use
- 100MHz operation minimum

### Description:

The OPF79X is a low noise silicon PIN photodiode mounted in a low cost package for fiber optic applications. It offers fast response at moderate bias and is compatible with LED and laser diode sources in the 800-1000 nm wavelength region. Low capacitance improves signal to noise performance in typical short haul LAN applications.

The OPF79x series is designed to be compatible with multimode optical fibers from 50/125 to 200/300 microns.

### Applications:

- Industrial Ethernet equipment
- Copper-to-fiber media conversion
- Intra-system fiber optic links
- Video surveillance systems

Package Material		
Part Number	Body Material	Body Style
OPF792	Conductive Plastic	ST <sup>®</sup>
OPF794	Zinc, Die Cast	ST-LP <sup>®</sup>



**RoHS** ST<sup>®</sup> is a registered trademark of AT&T.

### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

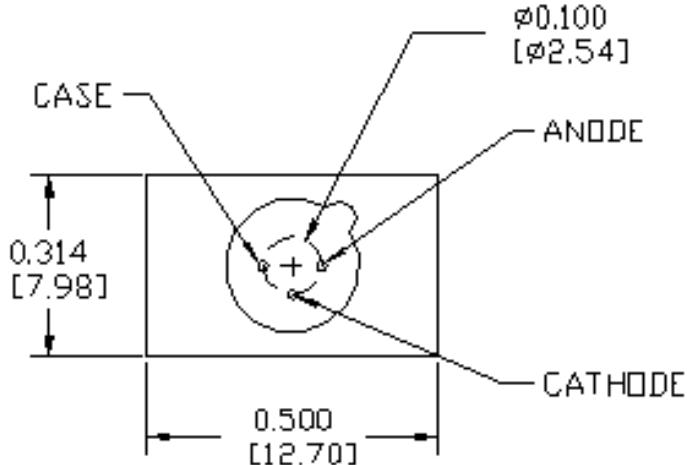
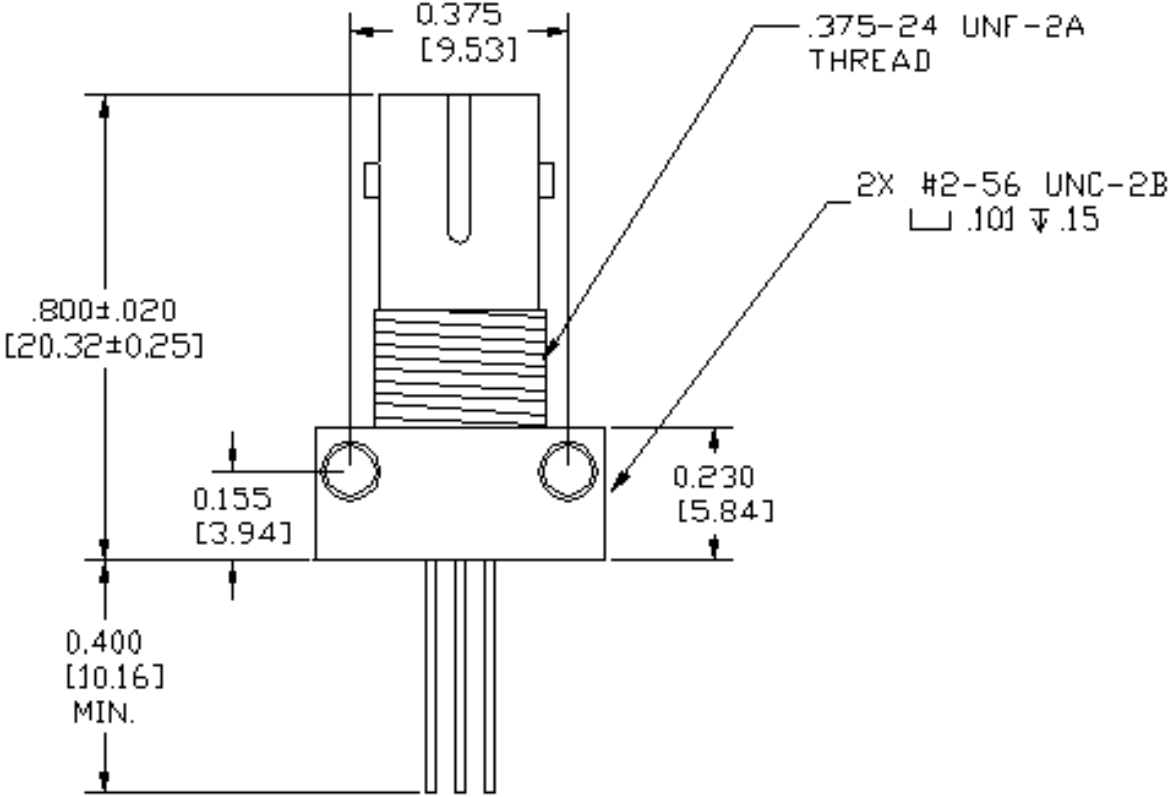
OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
www.optekinc.com | www.ttelectronics.com

# Fiber Optic Detector

OPF79X Series



## Mechanical Data - OPF792



DIMENSIONS ARE IN: [MILLIMETERS]  
INCHES

General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

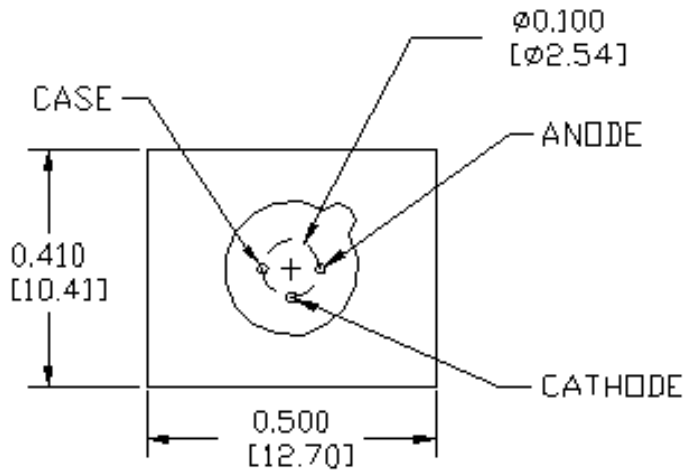
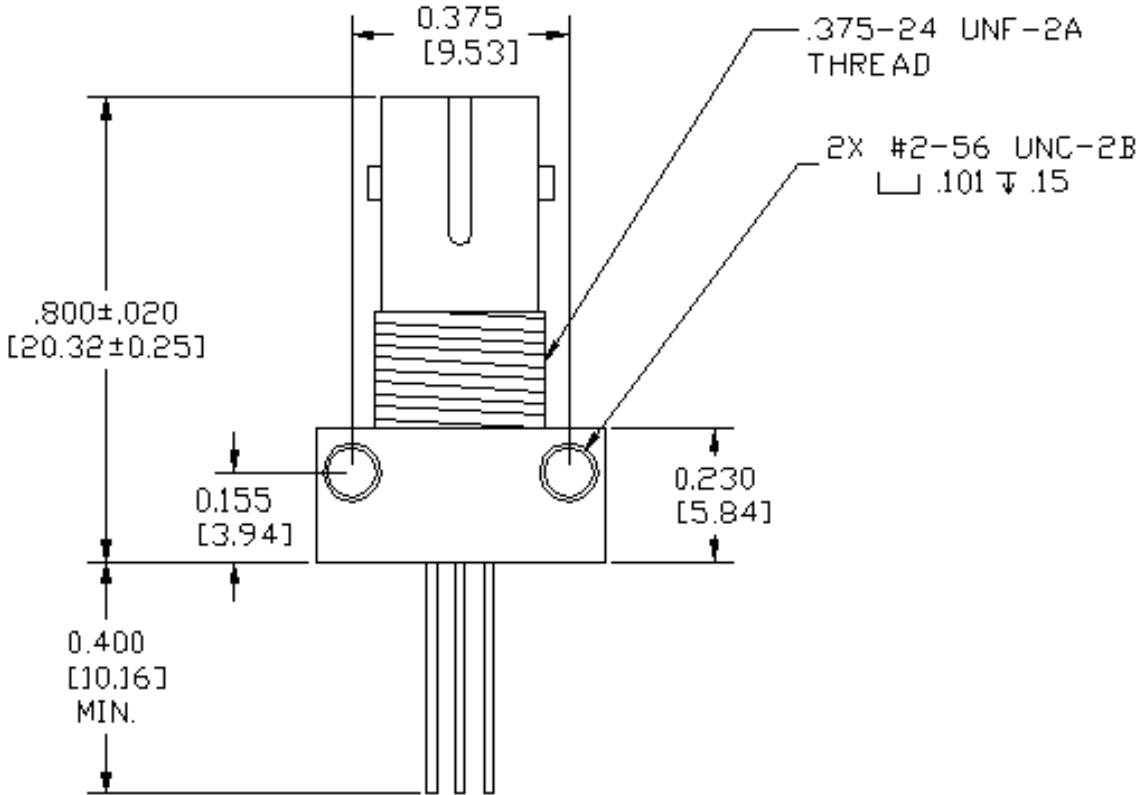
OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
www.optekinc.com | www.ttelectronics.com

# Fiber Optic Detector

OPF79X Series



## Mechanical Data - OPF794



DIMENSIONS ARE IN: [MILLIMETERS]  
INCHES

General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
www.optekinc.com | www.ttelectronics.com

# Fiber Optic Detector

## OPF79X Series



### Electrical Specifications

Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)	
Storage Temperature Range	-55° C to +100° C
Operating Temperature Range	-40° C to +85° C
Lead Soldering Temperature <sup>(1)</sup>	260° C
Maximum Reverse Voltage	50 VDC

Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)						
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
R	Responsivity	0.45	0.55		A/W	$V_R = 5.0\text{V}$ ; 50/125 $\mu\text{m}$ fiber; $\lambda = 850\text{nm}$
$I_D$	Dark Current		0.5	5.0	nA	$V_R = 5.0\text{V}$
$\lambda_p$	Peak Response Wavelength		800		nm	
$t_r$	Output Rise Time		2.0		ns	$V_R = 5.0\text{V}$ ; $R_L = 50\Omega$ , 10%-90%
BW	Bandwidth		175		MHz	$V_R = 5.0\text{V}$

Notes:

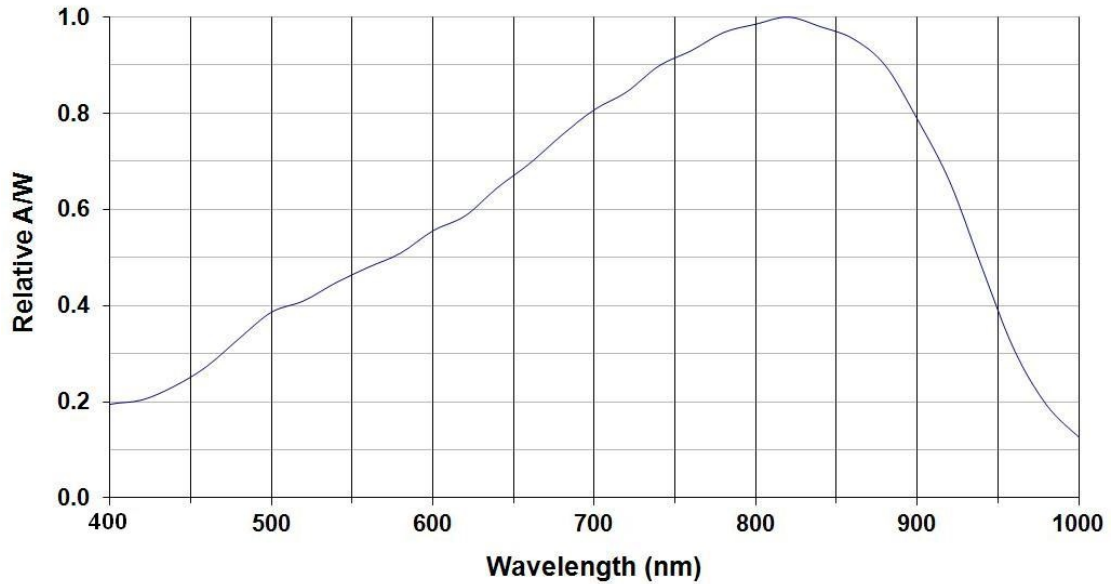
1. Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.

General Note

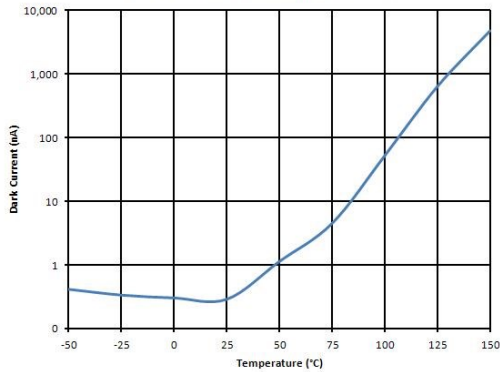
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
www.optekinc.com | www.ttelectronics.com

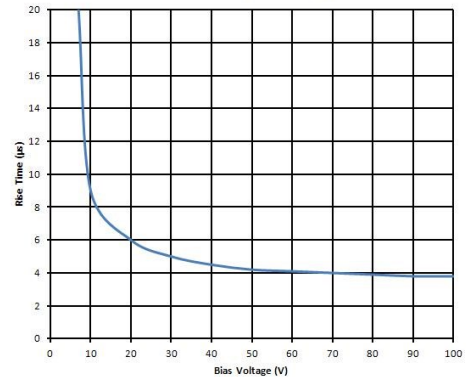
### Performance Typical Responsivity



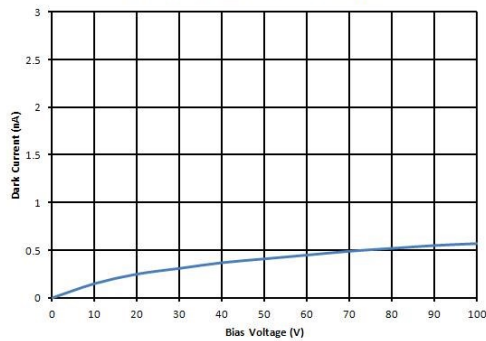
#### Dark Current vs. Temperature



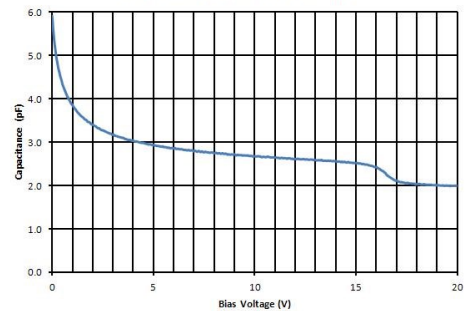
#### Rise Time vs. Bias Voltage



#### Dark Current vs. Bias Voltage



#### Capacitance vs. Bias Voltage



#### General Note

TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
[www.optekinc.com](http://www.optekinc.com) | [www.ttelectronics.com](http://www.ttelectronics.com)