Fiber Optic Detector

OPF420

Features:

- Electrically isolated plastic cap package
- High speed, low capacitance
- Metal can for improved noise immunity
- 35MHz operation minimum

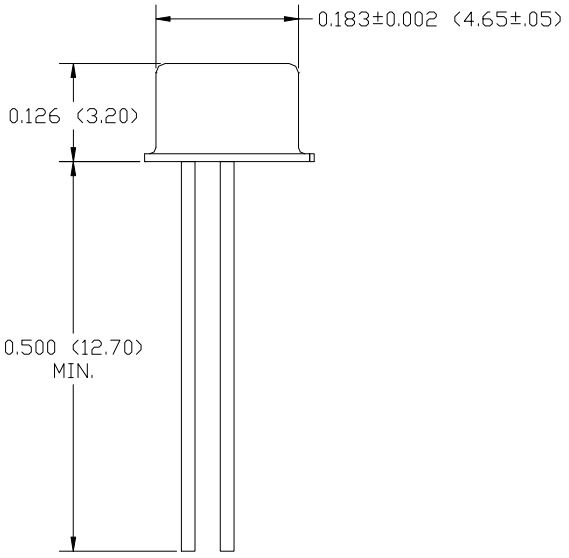
Description:

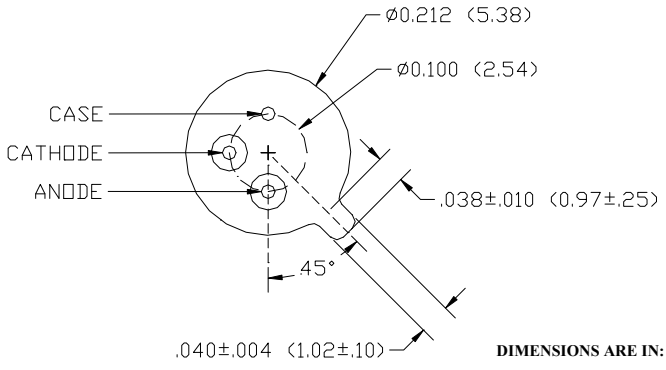
The OPF420 is a low noise silicon PIN photodiode mounted in a low cost package for fiber optic applications. It offers fast response at moderate bias and is compatible with LED and laser diode sources in the 800-1000 nm wavelength region. Low capacitance improves signal to noise performance in typical short haul LAN applications.

The OPF420 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





DIMENSIONS ARE IN: [MILLIMETERS] INCHES

RoHS

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

Electrical Specifications

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)	
Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-55° C to +125° C
Lead Soldering Temperature[1]	260° C
Continuous Power Dissipation[2]	200 mW
Maximum Reverse Voltage	100 VDC

Electrical Characteristics (T_A = 25° C unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
R	Responsivity	0.45	0.55		A/W	V_R = 5.0V; 50/125µm fiber; λ = 850nm
I_D	Dark Current		0.1	5.0	nA	V_R = 5.0V
λ_p	Peak Response Wavelength		905		nm	
t_r	Output Rise Time		6.0		ns	V_R = 15V; R_L = 50W, 10%-90%
C_T	Total Capacitance		3.0		pF	V_R = 20V
FoV	Field of View		80		deg	

Notes:
1. Maximum of 5 seconds with soldering iron. Duration can be extended to 10 seconds when flow soldering. RMA flux is recommended.
2. De-rate linearly at 1.60mW/°C above 25°C .

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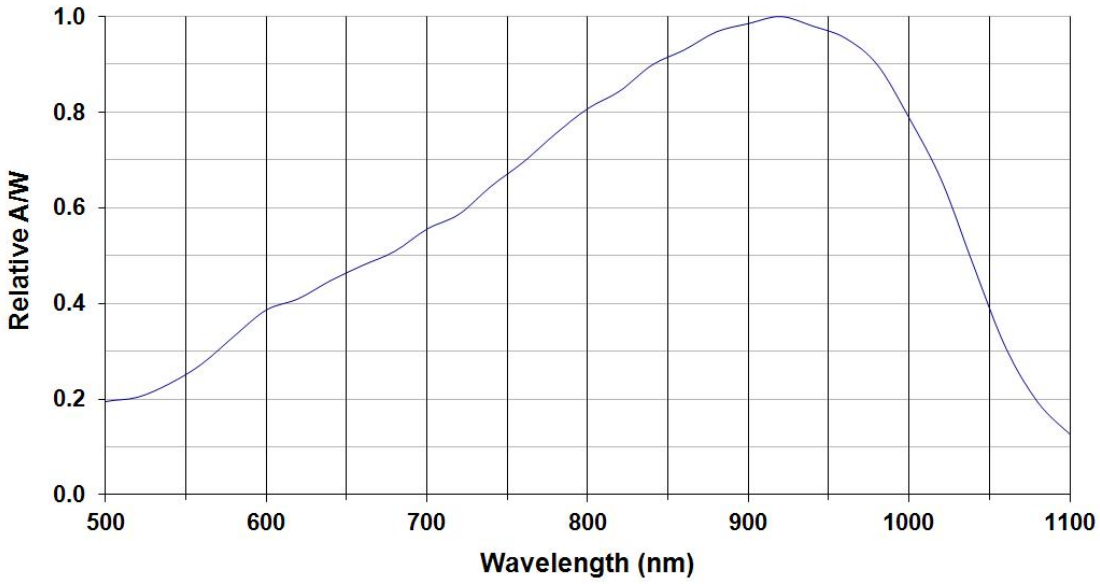
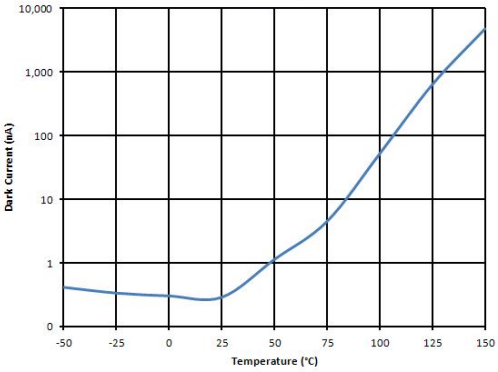
Performance

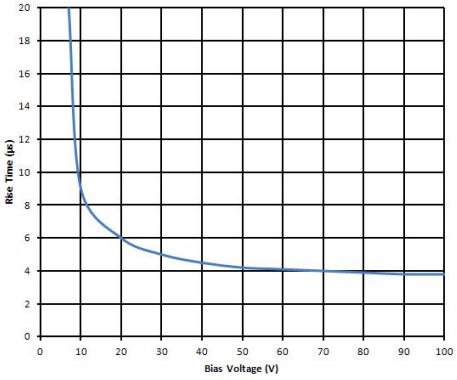
Typical Responsivity



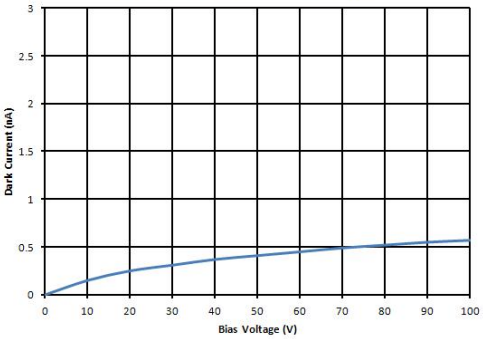
Dark Current vs. Temperature



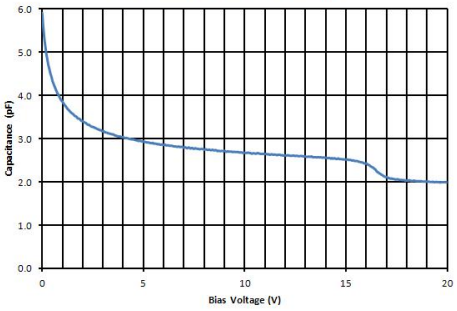
Rise Time vs. Bias Voltage



Dark Current vs. Bias Voltage



Capacitance vs. Bias Voltage



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