## **Fiber Optic Detector**

### **OPF420**



#### Features:

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



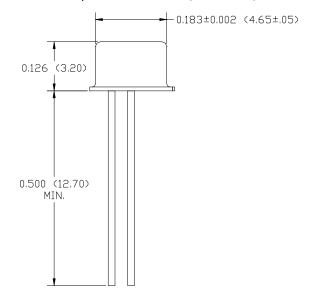
#### **Description:**

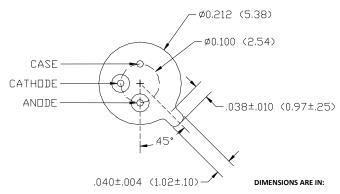
The OPF420 is a low noise silicon PIN photodiode mounted in a low cost package for fiber optic applications. It offers fast response at moderate bias and is compatible with LED and laser diode sources in the 800-1000 nm wavelength region. Low capacitance improves signal to noise performance in typical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







INCHES

[MILLIMETERS]

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## **Electrical Specifications**

#### Absolute Maximum Ratings (T<sub>A</sub> = 25° C unless otherwise noted)

Storage Temperature Range	-65° C to +150° C
Operating Temperature Range	-55° C to +125° C
Lead Soldering Temperature <sup>(1)</sup>	260° C
Continuous Power Dissipation <sup>(2)</sup>	200 mW
Maximum Reverse Voltage	100 VDC

#### **Electrical Characteristics** (T<sub>A</sub> = 25° C unless otherwise noted)

SYMBOL	PARAMETER	MIN	ТҮР	MAX	UNITS	TEST CONDITIONS
R	Responsivity	0.45	0.55		A/W	V <sub>R</sub> = 5.0V; 50/125μm fiber; I = 850nm
I <sub>D</sub>	Dark Current		0.1	5.0	nA	V <sub>R</sub> = 5.0V
I <sub>p</sub>	Peak Response Wavelength		905		nm	
t <sub>r</sub>	Output Rise Time		6.0		ns	$V_R = 15V; R_L = 50\Omega, 10\%-90\%$
C <sub>T</sub>	Total Capacitance		3.0		pF	V <sub>R</sub> = 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**

