Fiber Optic Detector

OPF430

Features:

- Electrically isolated metal can package
- High speed, low capacitance
- Metal can for improved noise immunity
- 100MHz operation minimum

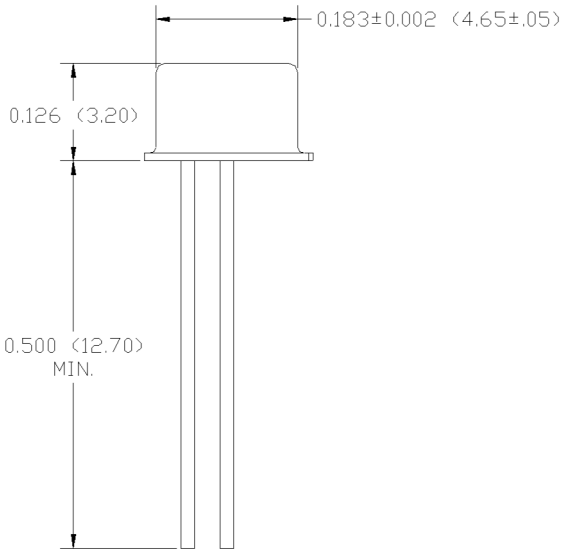
Description:

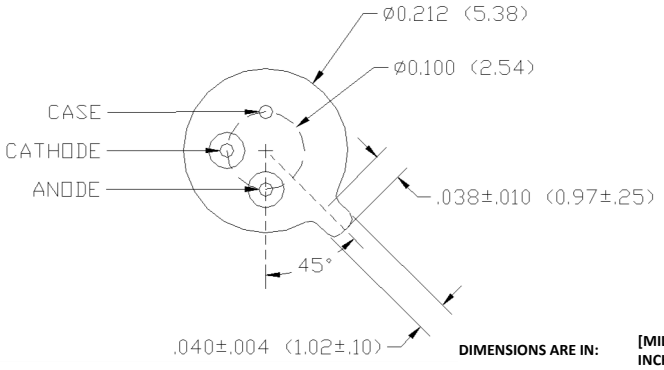
The OPF430 is a low noise silicon PIN photodiode mounted in a low cost package for fiber optic applications. It offers fast response at moderate bias and is compatible with LED and laser diode sources in the 800-1000 nm wavelength region. Low capacitance improves signal to noise performance in typical short haul LAN applications.

The OPF430 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





RoHS

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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 = 5.0 V; 50/125 µm fiber; λ = 850 nm
I_D	Dark Current		0.1	5.0	nA	V_R = 5.0 V
λ_p	Peak Response Wavelength		905		nm	
t_r	Output Rise Time		2.0		ns	V_R = 5 V; R_L = 50 Ω , 10%-90%
C_T	Total Capacitance		1.5	2.0	pF	V_R = 5 V
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 1.60 mW/°C above 25 °C .

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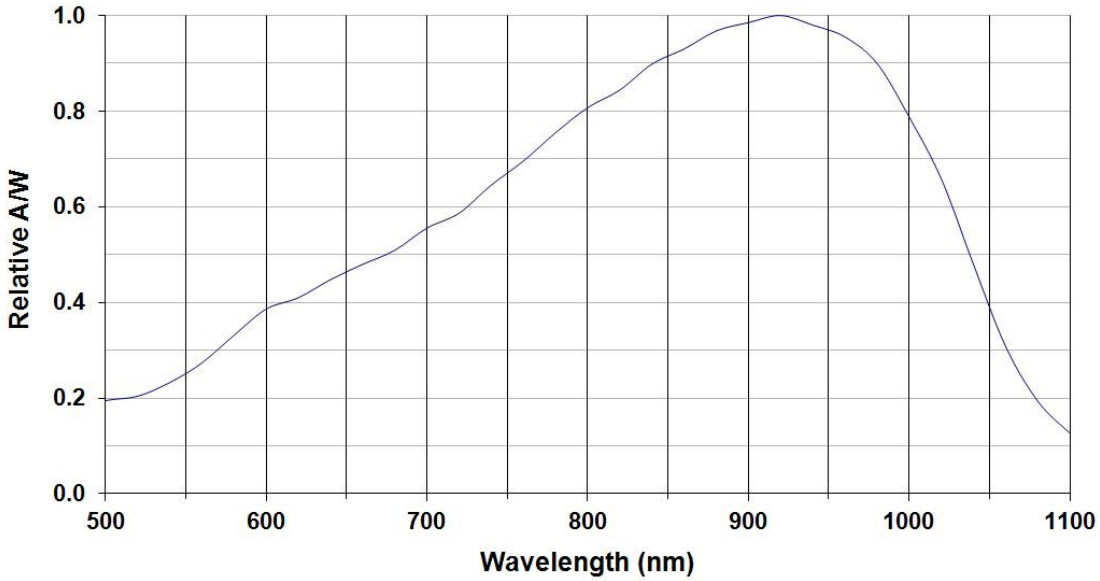
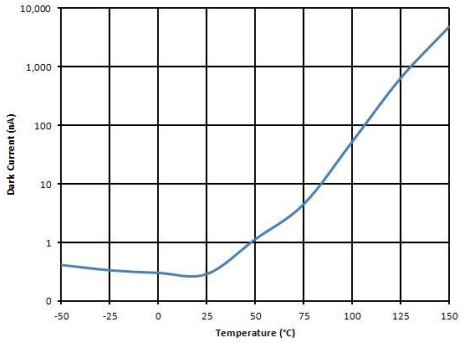
Performance

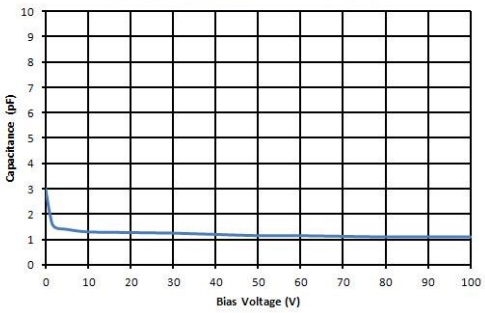
Typical Responsivity



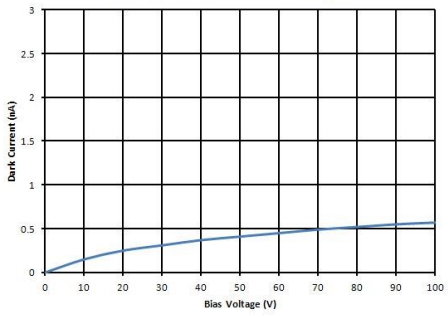
Dark Current vs. Temperature



Capacitance vs. Bias Voltage



Dark Current vs. Bias Voltage



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