

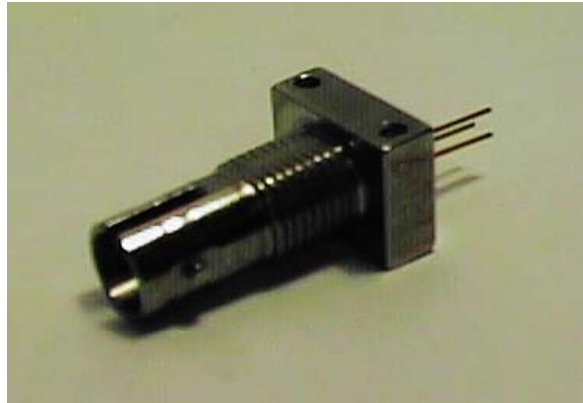
# Honeywell

## Fiber Optic LAN Components 1310nm InGaAs PIN Detector

HFD8003-002/XBA

### FEATURES

- High reliability passivated planar structure.
- High Responsivity
- Low Dark Current
- Hermetically sealed package installed in industry standard ST housing
- -40°C to +85°C operating temperature



### DESCRIPTION

The single mode design uses an InGaAs PIN photodetector to offer high responsivity for nearly all digital and analogue fibre optic applications. The unique design balances high speed performance with noise free linear output. Every component delivered has passed extensive high temperature screening to ensure long term reliability. Compatible with industry standards, the active device mounted components incorporate hermetically sealed TO -18 style PIN packages which have been actively aligned for optimum performance.

### APPLICATION

Spectral response has been optimised for the long wavelength region of 1100 nm to 1700 nm, which makes this device suitable for long distance single mode communications links. With an active area of 75  $\mu\text{m}$  diameter it is suitable for use with most fiber types.

# Fiber Optic LAN Components

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### ABSOLUTE MAXIMUM RATINGS

Storage temperature	-55 to +125°C
Operating temperature	-40 to +85°C
Reverse breakdown voltage	18 volts
Soldering temperature	+260 °C, 10 secs

### NOTICE

Stresses greater than those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operations section for extended periods of time may affect reliability.

### ELECTRO-OPTICAL CHARACTERISTICS (Tests made at 25°C unless otherwise specified)

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_r = 10 \mu A$ $I_r = 250 \mu A$	BVR	3.0		18	V
Forward Current		$I_f$			5	mA
Capacitance	$V_r = 0 V, f = 1 MHz$	C		1.15	1.9	pF
Responsivity (50 $\mu m$ coupled)	$H = 10 \mu W, V_r = 5 Volts$ 50 $\mu m$ Core, $\lambda = 1.3 \mu m$	$R_c$	0.75	0.85		A/W
Responsivity (62.5 $\mu m$ coupled)	$H = 10 \mu W, V_r = 5 Volts$ 62.5 $\mu m$ Core, $\lambda = 1.3 \mu m$	$R_c$	0.65	0.8		A/W
Dark Current	$V_r = 5 Volts, H = 0 mW$	$I_d$		2	5	nA
Response Time	10%-90%, $V_r = 5 Volts$	$t_r$ $t_f$		0.5 0.5	1.0 1.0	ns
Spectral Response		$\lambda$	1100		1700	nm
Electrical Bandwidth		BWE		1.5		GHz
Storage temperature			-55		+125	°C
Operating temperature			-40		+85	°C
Soldering temperature	Max. 10 seconds	T			+260	°C

### NOTICE

The inherent design of this component causes it to be sensitive to electrostatic discharge (ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product.

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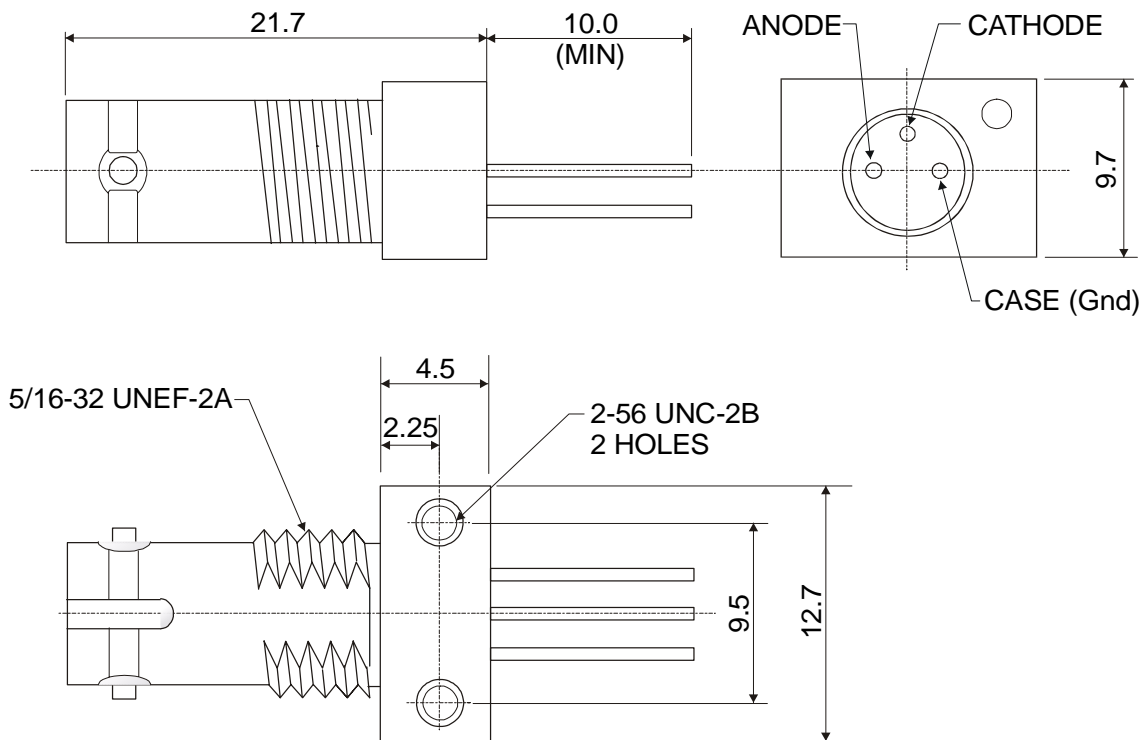
### **ORDER GUIDE**

Catalog Listing	Description
HFD8003-002/XBA	1300nm PIN Diode in ST PCB housing

### **MOUNTING DIMENSIONS**

(for reference only)

Note: 1. The component is isolated from the connector.



### **SALES AND SERVICE**

Honeywell's serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact a nearby sales office or:

1-815-235-6487 USA/Canada  
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### **INTERNET**

<http://www.honeywell.sensing.com>

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