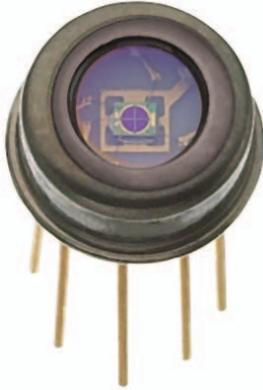


## APX-NG0031QPD

## Quadrant InGaAs Photodiode



### FEATURES

- Low Noise
- High Speed
- 10 $\mu$ m gap between elements

### APPLICATIONS

- Position Sensing
- Tracking Systems

### DESCRIPTION

The APX-NG0031QPD is a 2 mm diameter InGaAs quadrant photodiode in a hermetic TO-5 package. The detector features low crosstalk with 10 $\mu$ m gaps between the quadrants.

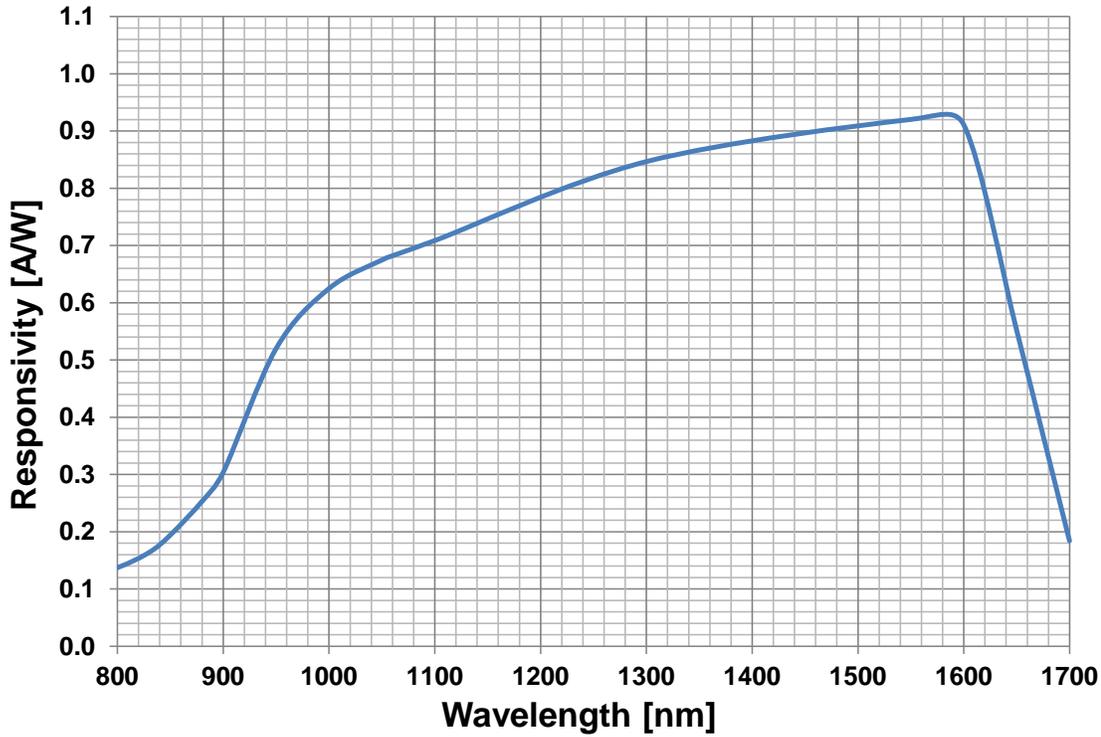
#### > Absolute Maximum Ratings

Model Number	Wavelength Range [nm]	Reverse Voltage [V]	Intensity [mW/cm <sup>2</sup> ]	Operating Temperature [C]	Storage Temperature [C]	Package
APX-NG0031QPD	900 to 1700	20	10	-40 to +85	-55 to +125	TO-5

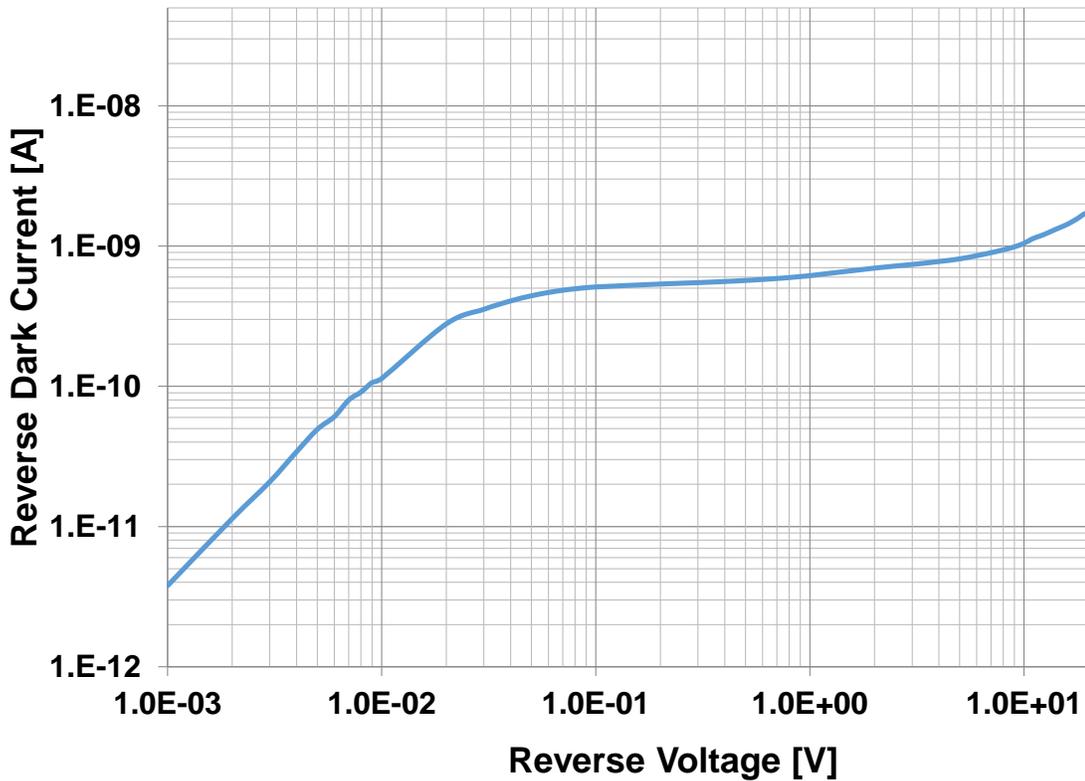
#### > Electrical and Optical Characteristics

Typical Characteristics (T=23°C unless specified)						
Parameter	Test Conditions	Symbol	Min	Typical	Max	Unit
Dark Current	V <sub>r</sub> = 5V	I <sub>D</sub>	-	0.8	10.0	nA
Responsivity	V <sub>r</sub> = 0V $\lambda$ = 1060nm	R	0.64	0.68	-	A/W
	V <sub>r</sub> = 0V $\lambda$ = 1550nm		0.88	0.92	-	
Capacitance	V <sub>r</sub> = 5V; f = 1MHz	C <sub>j</sub>	-	-	100	pF
Breakdown Voltage	I <sub>r</sub> = 10 $\mu$ A	V <sub>BR</sub>	10	40	-	V
Shunt Resistance	V <sub>r</sub> = 10mV	R <sub>sh</sub>	20	100	-	M $\Omega$
Crosstalk	V <sub>r</sub> = 1V; $\lambda$ = 1550nm	-	-	1	-	%
Noise Equivalent Power	$\lambda$ = 1550nm	NEP	-	-	1x10 <sup>-14</sup>	W/Hz <sup>0.5</sup>
Rise Time	$\lambda$ = 800-1550nm, V <sub>r</sub> = 5V	T <sub>rise</sub>	-	20	-	ns

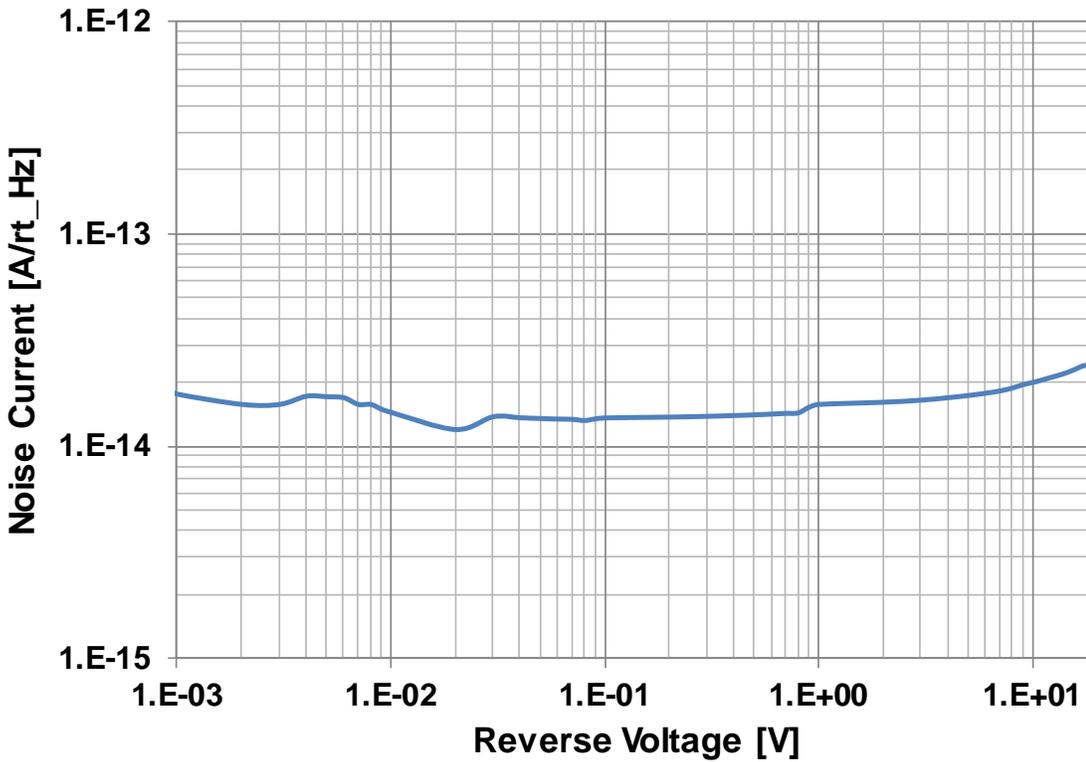
> Typical Spectral Response



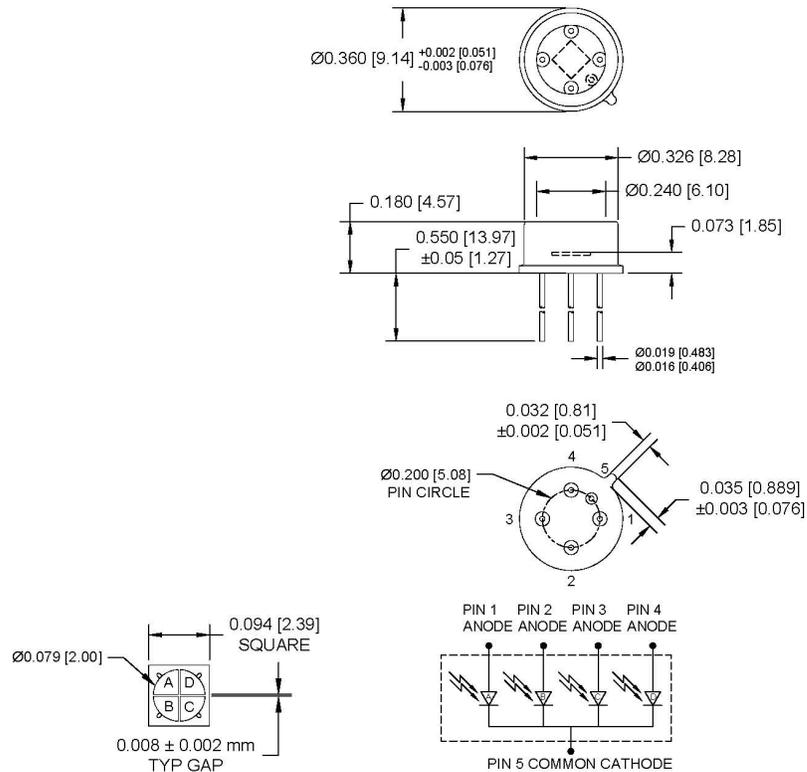
> Typical Reverse Dark Current



> Typical Noise Current



> Package Dimensions in inches[mm]



> Soldering Conditions: 260°C 1/16 inch away from case for 3 seconds max.

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## MATERIALS SAFETY

*This product is free of conflict minerals and meets REACH compliance. Please see website for reports.*