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# Fiber Coupled High-Speed Si PIN Photodiode

(450 to 900nm, high speed 0.3ns, all fiber types)

## Product Description

The Fiber Coupled High-Speed Si PIN Photodiode is based on a unique package that features high speed fast rise and fall response. The component integrates a fiber with a high sensitivity/small area photodiode for signal detection. The response is analog. Our design minimizes component assembly costs and module footprint while increasing stability over a wide temperature and wavelength ranges.

Associated sensor electronic driver or amplifier is also available.



## Performance Specifications

Fiber Coupled Power Monitor	Min	Typical	Max	Unit
Wavelength	450		900	nm
Responsivity <sup>2</sup> (860nm, VR=5V)	0.45		0.55	A/W
Input Power	-45		27	dBm
Polarization extinction ratio <sup>4</sup>	18	23		dB
Dark Current at 23°C, VR=5V		0.1	1.0	nA
Capacitance		1.5		pF
Reverse Voltage		5	20	V
Rise/Fall Time		0.6		ns
Cut-Off Frequency		1		GHz
Operating Temperature	-20		75	°C
Storage Temperature	-40		85	°C
Reliability	Telcordia 1209 and 1221			
Package Dimension	∅ 6.0 x L 18			mm

Notes:

1. Insertion Loss excluding connectors.
2. The net responsivity is defined as the ratio of the PD current output and optical power measured at the output fiber. For multimode detection, the standard version is for detecting light intensity with a fixed coupled power ratio (CPR) which is a metric for mode spreading. If the light CPR varies, a larger area detector needs to be used, which can be produced as a special order.
3. Single Mode Fiber version only.
4. PM Fiber version only.

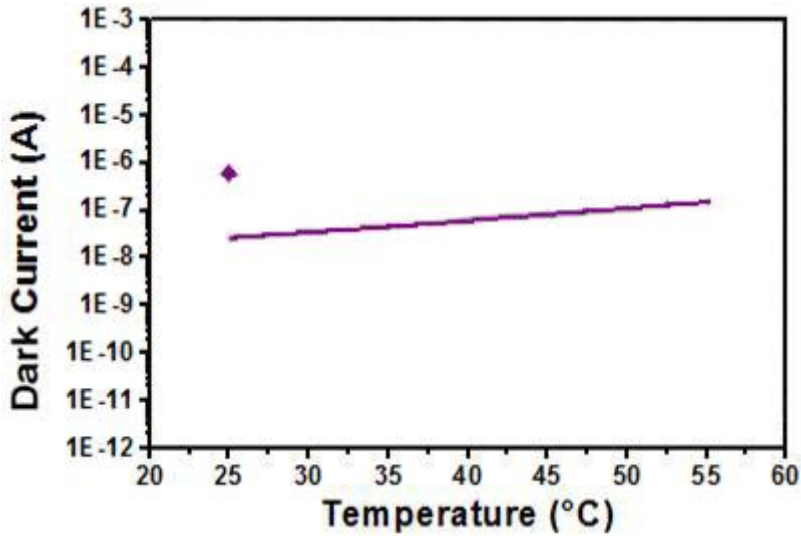
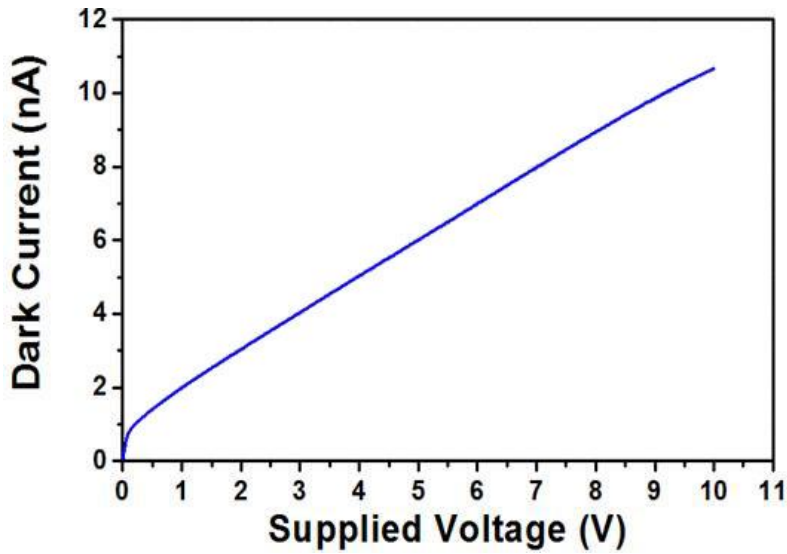
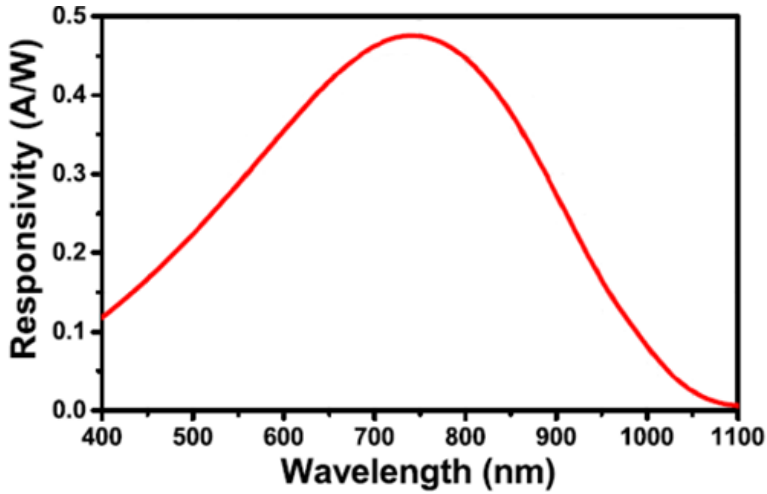
## Features

- Low Cost
- Large Bandwidth
- ns Fast Response
- High Reliability

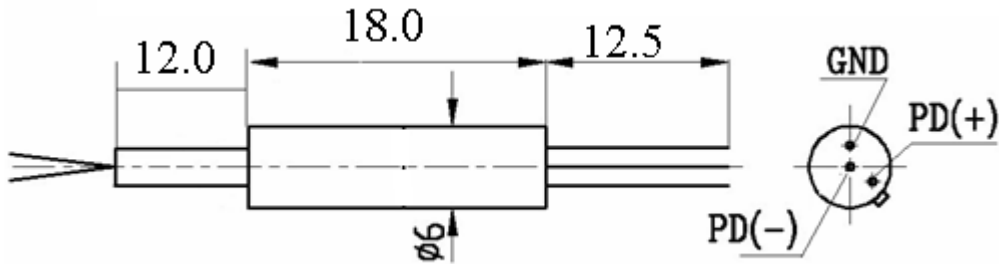
## Applications

- Channel Monitoring
- Power Monitoring in Optical Interface Modules
- Gain Monitoring for Amplifier
- Instruments

## Typical Characters



## Mechanical Footprint Dimensions (Unit:mm)



Standard Package for Infrared Band. For other wavelength band, size may vary due to special detector configurations.

\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

## Ordering Information

FCHS-	1 9	2	1	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Wavelength	AR Coating	TEC Cooling	Package	Fiber Type		Fiber Length	Connector
	450-900 = 19 Special = 0	Yes = 2	No = 1 Yes = 2	Standard=1 Special = 0	Choose from table below	900umTube=3 Bare fiber =1 Special = 0	0.25m= 1 0.5m = 2 1.0 m= 3 1.5 m= 5 Special =0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

01	SMF-28	34	PM1550	67	STEP 50/125μm)
02	SMF-28e	35	PM1950	68	
03	Corning XB	36	PM1310	69	
04	SM450	37	PM400	70	
05	SM2000	38	PM480	71	GIF50 (GIF 50/125μm)
06	SM600	39	PM630	72	GIF625 (GIF 62.5/125μm)
07	Hi780	40	PM850	73	106/125μm
08	SM800	41	PM980	74	FG105LCA
09	Hi980	42		75	FG50LGA
10	Hi1060	43		76	200 μm
11	Draka BBE	44		77	400 μm
12		45		78	800 μm