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Fiber Coupled UV/Visible Photodiode

(200 to 900nm, high efficiency >90%, all fiber types)

Product Description

The Fiber Coupled Si Photodiode is based on a unique configuration that features high sensitivity, low noise, and high optical coupling efficiency. The component integrates a fiber with a silicon PIN photodiode for signal detection with little optical loss. 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	200		900	nm
Optical Coupling Efficiency		90		%
Responsivity ² (600nm, oe=1μW, 100V)	0.2		1	A/W
Input Power			50	mW
Polarization extinction ratio ⁴	18	23		dB
Dark Current at 23°C, 600nm, 10V		0.3	01	nA
Reverse Voltage		5	10	V
Rise/Fall Time		1		ns
Capacitance		6		pF
Operating Temperature	-20		75	°C
Storage Temperature	-40		85	°C
Reliability		Telcordia 1209 and 1221		
Package Dimension		Ø 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 output fiber
3. Single Mode Fiber version only.
4. PM Fiber version only.

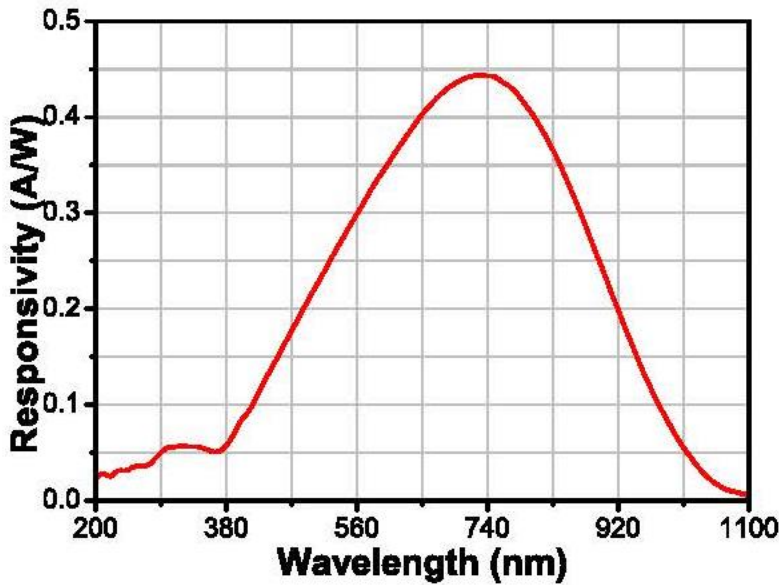
Features

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

Applications

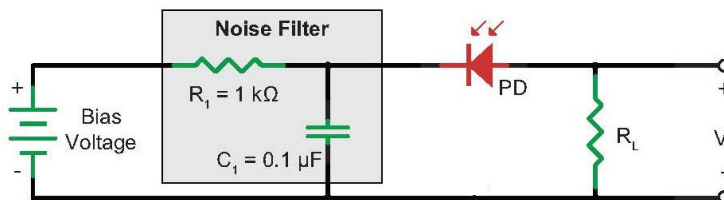
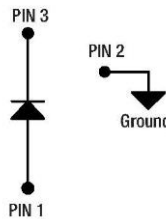
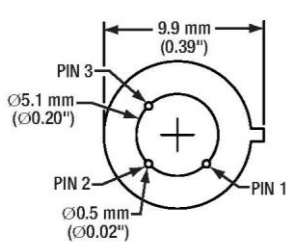
- Channel Monitoring
- Power Monitoring in Optical Interface Modules
- Gain Monitoring for Amplifier
- Instruments

Typical Characters

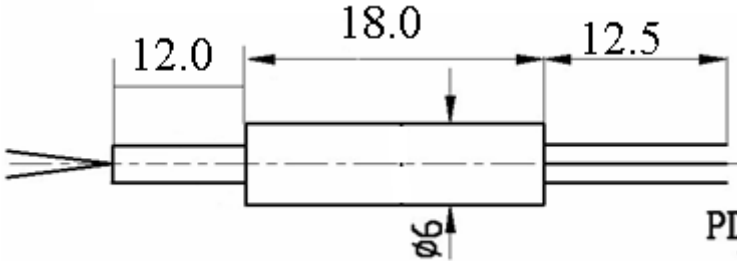


The responsivity of a photodiode is a measure of its sensitivity to light and is defined as the ratio of the photocurrent to the incident light power at a given wavelength: In other words, it is a measure of the effectiveness of the conversion of light power into electrical current. Responsivity varies from lot to lot and with the wavelength of the incident light, applied reverse bias, and temperature. It increases slightly with applied reverse bias due to improved charge collection efficiency in the photodiode. The change in temperature increases or decreases the width of the band gap and varies inversely with the temperature.

Electrical Connection/ Recommended Circuit



Mechanical Footprint Dimensions (Unit:mm)



Standard Package. 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

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