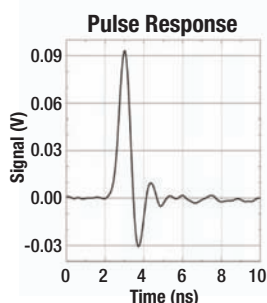


FPD310 Series of High-Sensitivity PIN Photodetectors: 10 MHz – 1 GHz



FPD310-F



For experiments requiring high bandwidths and extremely short rise times, choose Menlo Systems' FPD310 photodetector. It is an easy-to-use photodiode package with an integrated high-gain, low-noise, RF amplifier. Two models are available with an ultrafast free-space photoreceiver: FPD310-FV detects light from 400 – 1000 nm while FPD310-F detects light from 850 – 1650 nm. The third model (FPD310) is fiber coupled and detects light from 850 – 1650 nm. Rise times for all models are less than 1 ns. The user can switch between two gain settings. OEM integration can be achieved easily due to its compact housing.

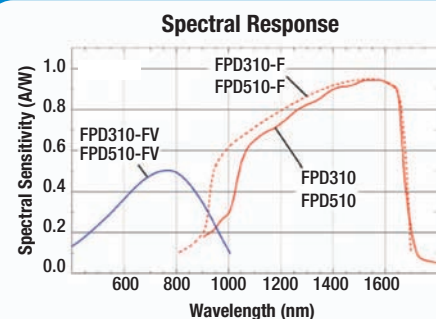
These photodetectors are not suitable for pulses longer than 30 ns or continuous light levels. Please see the FPD510 series on the next page for alternatives.

Features

- ~1 dB Bandwidth at 1 GHz
- Ultrafast Response (1 MHz – 1.8 GHz)
- OEM Package with FC/APC Pigtail (SMF-28e+) Fiber
- Spectral Range: 400 – 1650 nm
- Two Gain Settings

Applications

- Detection of Fast Laser Pulses
- Detection of Fiber-Coupled or Free-Space Low-Light Level Signals



Specifications

	FPD310	FPD310-F	FPD310-FV
Optical Input	Fiber ^a	Free Space	Free Space
Supply Voltage	8 – 20 V	8 – 20 V	8 – 20 V
Current Consumption	250 mA	250 mA	250 mA
Incident Power (Max)	2 mW	2 mW	2 mW
Operating Temperature	10 – 40 °C	10 – 40 °C	10 – 40 °C
Wavelength Range ^b	850 – 1650 nm	850 – 1650 nm	400 – 1000 nm
Detector Diameter	–	0.04 mm	0.4 mm
Frequency Range	1 – 1800 MHz	1 – 1800 MHz	1 – 1500 MHz
3 dB Bandwidth	10 – 1000 MHz	10 – 1000 MHz	10 – 900 MHz
Rise Time	0.5 ns	0.5 ns	0.7 ns
Gain Setting 1 ^c	5 x 10 ⁴ V/W	5 x 10 ⁴ V/W	5 x 10 ⁴ V/W
Gain Setting 2 ^c	5 x 10 ² V/W	5 x 10 ² V/W	5 x 10 ² V/W
Dark State Noise Level ^d	-90 dBm	-90 dBm	-90 dBm
NEP (Calculated)	15.7 pW/√Hz	16.6 pW/√Hz	30 pW/√Hz
Output Connector	SMA	SMA	SMA
Output Impedance	50 Ω	50 Ω	50 Ω
Device Dimensions	60 mm x 50 mm x 27 mm	60 mm x 50 mm x 27 mm	60 mm x 50 mm x 27 mm
Output Coupling	AC	AC	AC

^a SMF-28e+ Pigtail with FC/APC^b Other Spectral Ranges Available upon Request^c At 1 GHz, 1500 nm/750 nm^d Span: 5 MHz, Resolution Bandwidth 3 kHz

ITEM #	\$	£	€	RMB	DESCRIPTION
FPD310	\$ 1,023.00	£ 736.56	€ 890.00	¥ 8,153.31	850 – 1650 nm High-Sensitivity PIN Detector, Fiber Coupled, 1 MHz – 1.8 GHz
FPD310-F	\$ 1,023.00	£ 736.56	€ 890.00	¥ 8,153.31	850 – 1650 nm High-Sensitivity PIN Detector, Free Space, 1 MHz – 1.8 GHz
FPD310-FV	\$ 1,023.00	£ 736.56	€ 890.00	¥ 8,153.31	400 – 1000 nm High-Sensitivity PIN Detector, Free Space, 1 MHz – 1.5 GHz

For local and updated pricing, please call Menlo Systems, Inc. in North America 973-300-4490, Menlo Systems GmbH in Europe +49-89-189-1660, or Thorlabs Japan, Inc. in Asia +81-3-5979-8889, or email sales@menlosystems.com.