

PD1000-xx-xx-H-B

**Description**

The PD1000-xx-xx-H-B series of photodetectors are low-cost components that are well suited for high-performance optical network applications. The devices feature low capacitance, high linearity, frequency response up to 1000MHz, a wide operating temperature range, and high responsivity. The PD1000 is designed for use in a variety of applications including CATV Forward/Return Path, PON, QAM systems, EDFA monitors, and FTTC/FTTH networks.

Features

- ❑ Low Capacitance, ≤ 2.0 pF
- ❑ 1000MHz frequency response
- ❑ High Responsivity:
 - ≥ 0.85 @ 1310-nm
 - ≥ 0.95 @ 1550-nm

Applications

- ❑ CATV Forward/Return Path
- ❑ PON
- ❑ QAM System
- ❑ EDFA Monitors
- ❑ FTTC/FTTH Networks





Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Max	Unit
Operating Case Temperature	Top	I=Iop	-40	85	°C
Storage Temperature	Tstg	--	-40	100	°C
Saturation Input Power	Ps	--	--	10	mW
Forward Current	If	--	--	10	mA
Reverse Bias	V _r	--	--	30	V

Electrical/Optical Characteristics

Parameters are over operating temperature range unless otherwise noted.

Parameter	Symbol	Min	Typ	Max	Unit
Active Diameter	A _d	--	40	80	μm
Detection Wavelength Range	λ	1100	--	1650	nm
Responsivity	R	--	≥ 0.85@1310nm ≥ 0.95@1550nm	--	mA/mW mA/mW
Frequency Bandwidth	F _b	1	--	1000	MHz
Frequency Response	F _r	--	+/- 0.5	--	dB
Second Order Intermodulation	IMD2*	--	≤ -75	--	dBc
Third Order Intermodulation	IMD3*	--	≤ -85	--	dBc
Back Reflection	RL	--	-45	-40	dB
Dark Current	I _d	--	0.1	1	nA
Capacitance	C	--	1.0	2.0	pF

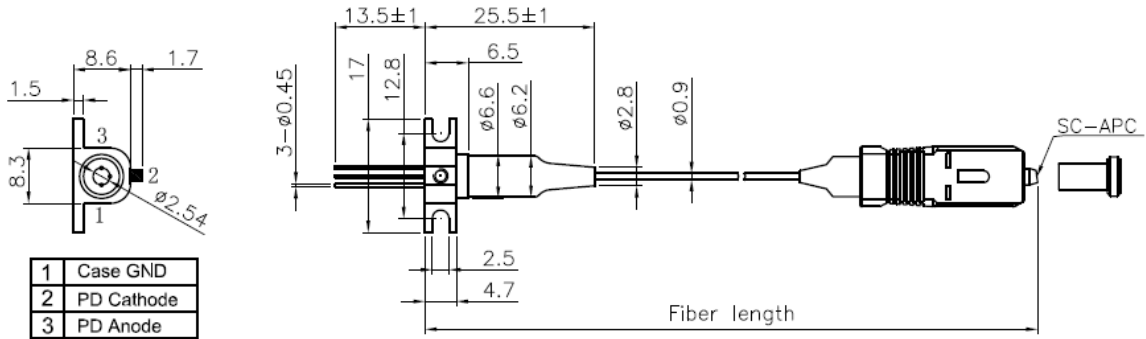
*Two laser test at 1310nm and each laser has 40% modulation index. Total received power is 0dBm.

fm=548.5MHz, f1=109.25, f2=439.25

fm=529.25MHz, f1=349.25, f2=439.25

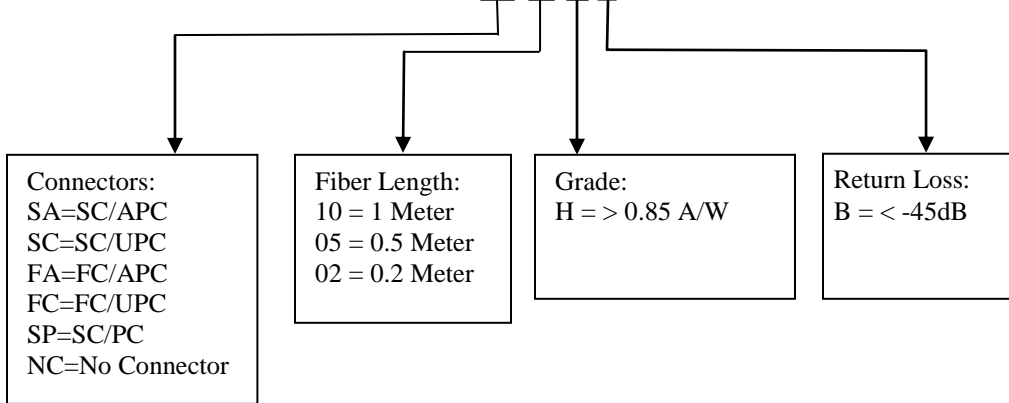
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Dimensions (in mm)



Ordering Options

PD1000-xx-xx-H-B





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Shipping/Packing Requirements:

Place the label as shown below on the exterior of all part Boxes, and Bags indicating:



13111 Jess Pirtle Blvd
 Sugar Land, TX 77478
 p :281.295.1800
 f :281.295.1888
 www.ao-inc.com

Part Number: PD1000-XX-XX-H-B

Serial Number: 600000002 

Manufacture Date: April 12, 2006

Responsivity(mA/mW)	0.85
Optical RL(dB)	50
IMD2 * (dBc)	75.0
IMD3** (dBc)	85.0

Note: Two laser test at 1310nm and each laser has 40% modulation index. Total received power is 0 dBm.
 * fm=548.5MHz, f1=109.25, f2=439.25

** fm=529.25MHz, f1=349.25, f2=439.25

Pin Assignment:

