

PD3000-xx-xx-H-B

**Description**

The PD3000-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 3000MHz, a wide operating temperature range, and high responsivity. The PD3000 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, ≤ 1 pF
- ❑ 3000MHz 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	3000	--	--	MHz
Frequency Response	F _r	--	+/- 0.5	--	dB
Second Order Intermodulation	IMD2*	--	≤ -75	--	dBc
Third Order Intermodulation	IMD3*	--	≤ -85	--	dBc
Back Reflection	RL	--	-45	--	dB
Dark Current	I _d	--	0.1	1	nA
Capacitance	C	--	0.6	1	pF

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

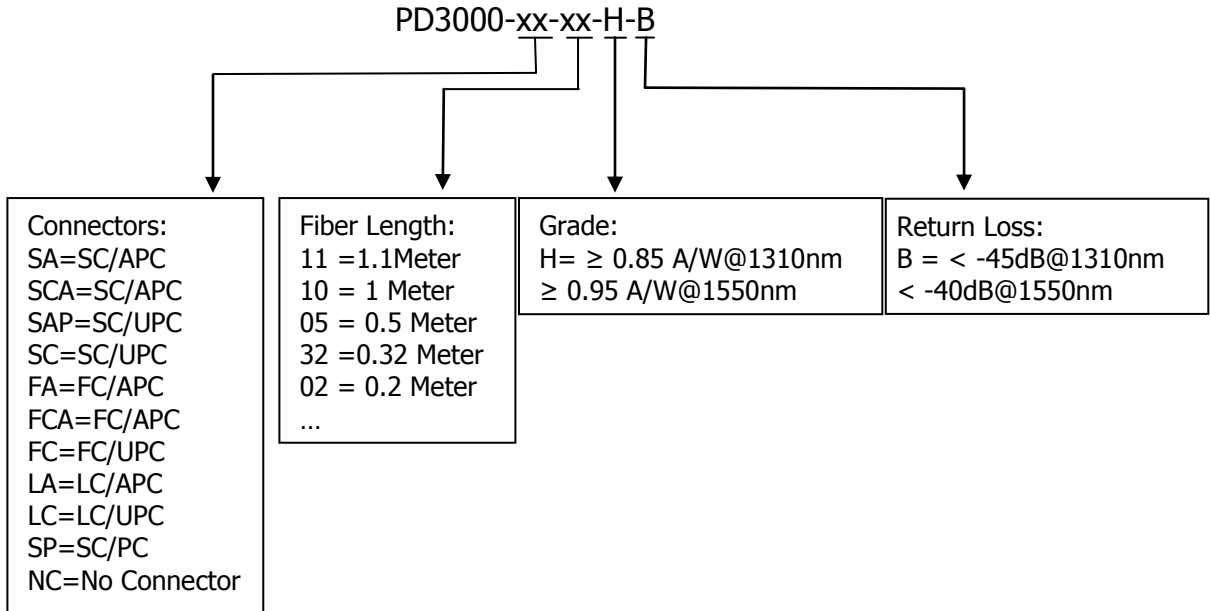
fm=548.5MHz, f1=109.25, f2=439.25

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



PD3000-xx-xx-H-B

Ordering Options

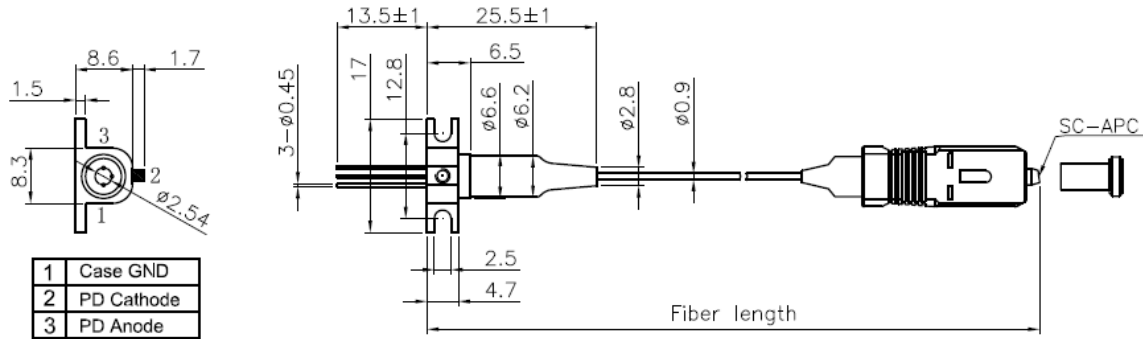


Note: marked as W/O Flange if not needed, for example PD3000-SC-10-H-B W/O Flange

PD3000-xx-xx-H-B

Figure 1: Outline Diagram

Dimensions are in millimeters




Item	PN	Fiber length (mm)
1	PD3000-SAP-11-H-B	1100+/-100
2	PD3000-FA-05-H-B	500+/-30
3	PD3000-FCA-05-H-B	500+/-30
4	PD3000-SA-05-H-B	510+/-30
5	PD3000-SC-05-H-B	510+/-30
6	PD3000-SA-02-H-B	200+/-40
7	PD3000-NC-10-H-B	1025+50/0
8	PD3000-SCA-10-H-B	1025+/-50
9	PD3000-FCA-10-H-B	1025+/-50
10	PD3000-SA-10-H-B	1025+/-50
11	PD3000-SC-10-H-B	1025+/-50
12	PD3000-FA-10-H-B	1025+/-50
13	PD3000-FC-10-H-B	1025+/-50
14	PD3000-FA-02-H-B	225+/-20
15	PD3000-SCA-32-H-B	385+/-30
16	PD3000-SC-10-H-B W/O Flange	1025+/-50
17	PD3000-FC-02-H-B	225+/-20
18	PD3000-SAP-12-H-B	1200+/-100

PD3000-xx-xx-H-B

Shipping/Packing Requirements:


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



APPLIED OPTOELECTRONICS, INC.

13115 Jess Pirtle Blvd
Sugar Land, TX 77478
p :281.295.1800
f :281.295.1888
www.ao-inc.com

Part Number: PD3000-XX-XX-H-B

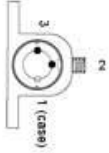
Serial Number: 600000002 

Manufacture Date: April 12, 2006

Responsivity(mA/mW)	0.85
Optical RL(dB)	50
IMD2 * (dBc)	75
IMD3** (dBc)	85

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:



Bottom view

