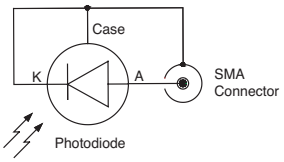
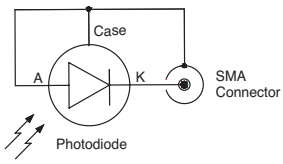
Mounted Photodiodes – SM05 and SM1 Compatible

The SM05PD/SM1PD family of mounted photodiodes consists of InGaAs, Ge, Si, or GaP photodiodes mounted in a convenient SM05/SM1 threaded tube. The photodiodes come in either a Type A (Cathode Grounded) or Type B (Anode Grounded) arrangement. All models are ideal for measuring pulsed and CW sources. The insulated external thread on the main body makes this family compatible with all Thorlabs SM05 or SM1 mounting adapters. The SM05PD series terminates on an SMA connector, while the SM1PD Series uses a BNC connector. Pages 782-783 for detailed specs on each photodiode.

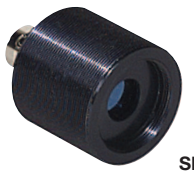
SM05PD1A



Electrical Connection Type A



Electrical Connection Type B



SM1PD1A

ITEM#	$	£	€	¥	DESCRIPTION
SM05PD1A	$ 48.00	£ 36.00	€ 50,40	¥ 8,160	Si Detector, FDS100, 350-1100nm, Type A
SM05PD1B	$ 48.00	£ 36.00	€ 50,40	¥ 8,160	Si Detector, FDS100, 350-1100nm, Type B
SM05PD2A	$ 78.00	£ 58.50	€ 81,90	¥ 13,260	Si Detector, FDS010, 200-1100nm, Type A
SM05PD2B	$ 78.00	£ 58.50	€ 81,90	¥ 13,260	Si Detector, FDS010, 200-1100nm, Type B
SM05PD4A	$ 198.00	£ 148.50	€ 207,90	¥ 33,660	InGaAs Detector, FGA10, 800-1800nm, Type A
SM05PD4B	$ 198.00	£ 148.50	€ 207,90	¥ 33,660	InGaAs Detector, FGA10, 800-1800nm, Type B
SM05PD5A	$ 269.00	£ 201.75	€ 282,45	¥ 45,730	InGaAs Detector, FGA21, 800-1800nm, Type A
SM05PD5B	$ 269.00	£ 201.75	€ 282,45	¥ 45,730	InGaAs Detector, FGA21, 800-1800nm, Type B
SM05PD6A	$ 159.00	£ 119.25	€ 166,95	¥ 27,030	Germanium Detector, 0.8MHz BW, 800-1800nm, Type A
SM05PD7A	$ 118.00	£ 88.50	€ 123,90	¥ 20,060	GaP Detector, FGAP71, 150-550nm, Type A
SM05PD7B	$ 118.00	£ 88.50	€ 123,90	¥ 20,060	GaP Detector, FGAP71, 150-550nm, Type B
SM1PD1A	$ 110.00	£ 77.00	€ 115,00	¥ 18,400	Si Detector, FDS1010, 350-1100nm, Type A
SM1PD1B	$ 110.00	£ 77.00	€ 115,00	¥ 18,400	Si Detector, FDS1010, 350-1100nm, Type B
SM1PD5A	$ 490.00	£ 367.50	€ 514,50	¥ 83,300	Germanium Detector, FDG1010, 800-1800nm, Type A
SM1PD5B	$ 490.00	£ 343.00	€ 514,00	¥ 82,240	Germanium Detector, FDG1010, 800-1800nm, Type B

Benchtop Photodiode Amplifier

PDA200

- Transimpedance Photocurrent Amplifier
- Extremely Low Noise Operation over Entire Dynamic Range of 100pA to 20mA
- 4 1/2 Digit Display with 10pA Resolution
- Supports Wavelength Dependent Calibration
- Switchable Bias Voltage to Sensor
- Supports both Diode Polarities (CG and AG)
- Offset Adjustment Compensation of the Photo Current

The Photocurrent Amplifier PDA200 is ideally suited for an ultra low noise amplification of very small photodiode currents. It offers 6 current ranges from 200nA to 20mA full scale. The unit is compatible with photodiodes of the cathode grounded (CG) or the anode grounded (AG) polarity. The adjustable biased voltage allows improvement to linearity of the responsivity and the frequency response.

PDA 200 Photocurrent Amplifier

Parameter

- Current Measurement Range . . . . . 200 nA to 20 mA
- Display Range . . . . . 0 to 19999 (AG), 0 to -19999 (CG)
- Polarity of the Photodiode. . . . . Anode grounded or Cathode grounded.
- Bias Voltage. . . . . 0 to -10V (CG), 0 to +10V (AG)
- Photodiode Sensitivity (power display) . . . . . 0.05 to 2 A / W
- Temperature Coefficient . . . . . < 50 ppm / °C
- Input Impedance . . . . . Virtual Ground
- Noise (rms) . . . . . 0.02% f.s.
- Output Voltage (CTRL output). . . . . 0 to +10 V (AG), 0 to -10V (CG)

Common Data

- Mains Voltage. . . . . 100 V / 115 V / 230 V (-10%, +15%) (selectable)
- Mains Frequency . . . . . 50 to 60 Hz
- Operating Temperature . . . . . 0 to +40 °C

MEASUREMENT RANGE	RESOLUTION (0-4.095V)	AMPLIFICATION	ACCURACY	BANDWIDTH
20 mA	1 µA	5 x 10^2 V / A	± 0.05 % f.s.	1500 kHz
2 mA	100 nA	5 x 10^3 V / A	± 0.05 % f.s.	200 kHz
200 µA	10 nA	5 x 10^4 V / A	± 0.05 % f.s.	70 kHz
20 µA	1 nA	5 x 10^5 V / A	± 0.05 % f.s.	10 kHz
2 µA	100 pA	5 x 10^6 V / A	± 0.05 % f.s.	1 kHz
200 nA	10 pA	5 x 10^7 V / A	± 0.1 % f.s.	100 Hz

ITEM#	$	£	€	¥	CONFIGURATION
PDA200	$ 828.00	£ 460.00	€ 690,00	¥ 110,400	16 Bit Benchtop Photodiode Amplifier