

A transimpedance amplifier is available for the amplification of very small photodiode current output. High sensitivity and can be operated by PC.

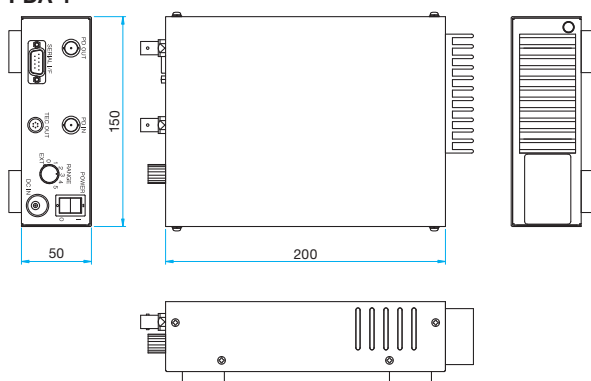


- Six conversion ranges $10^5 - 10^{10}$ (V/A) and extremely large conversion ratio, enabling detection of weak light.
- Operated from the front panel as well as by PC (RS232C interface). Excellent compatibility with measurement control software such as SGADVANCEE.
- Temperature control photodiode (PDA-PD-1 as option), achieving stable detection of weak light.

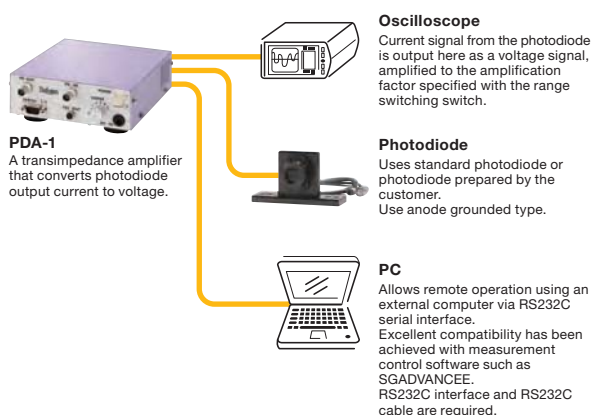
Outline Drawing

(Units: mm)

PDA-1



System Configuration



Characteristics Table (Ambient Temperature 25°C)

Operation Temperature		0°C – 40°C (Except sensor)
Amplifier Gain	Range 0	10^5 V/A
	Range 1	10^6 V/A
	Range 2	10^7 V/A
	Range 3	10^8 V/A
	Range 4	10^9 V/A
	Range 5	10^{10} V/A
MAX analog output voltage Load 2kΩ		4V
Measurement Gain Error	(@Range 0 – 3)	2% vs. max light received in range
	(@Range 4)	3% vs. max light received in range
	(@Range 5)	4% vs. max light received in range
Cutoff Frequency	(@Range 1)	3kHz
	(@Range 3)	30Hz
	(@Range 5)	0.3Hz
A/D Converter Conversion Frequency		16Hz
A/D Converter Resolution		24bits (but effective resolution is 16bits)
Temperature Control Temperature		–10°C (Special photodiode)
Temperature Control Fluctuation Temperature		0.1°C (Special photodiode)
Peltier Output Current		1A (Special Photodiode)

Note) Use of Peltier is limited to the special photodiode.

Specifications

Part Number	PDA-1
Operation Ambient Temperature	0°C – 40°C
Storage Ambient Temperature	–20°C – 60°C
Ambient Humidity	20 – 90%RH (without condensation)
External Dimensions [mm]	(W)150×(H)50×(D)200 (Except for protrusions)
Interface	RS232C Photodiode signal input connector (Attention: PD and photodiode are anode grounded) SIGMA's photodiode special temperature control connector Signal output connector etc.
Accessories	Special AC adapter (AC100V)

Option ■ Temperature controlled Photodiode PDA-PD-1



- The PDA-PD-1 has built-in Peltier cooler, amplifier, temperature control circuit, and photo detector.
- Peltier cooling module maintains low temperature.
- Absorptive ND filters can be used and mounted to adjust the volume of exposed light.
- 0.5 meter length cable used.
- Ultra low noise.

Guide

- ▶ C mount for temperature control photodiode (PDA-PD-1) is available separately. Contact our Sales Division for more information.

Specifications

Part Number		PDA-PD-1
Light Receiving Surface Size [mm]		5.8×5.8
Electrical and Optical Characteristics (Ambient Temperature 25°C)	Sensitivity wavelength range	λ=190 – 1100nm
	MAX sensitivity wavelength	λp=960nm