190-1100nm Silicon-based Amplified Photodetector , Active area 3.6×3.6mm

- ## Product Description

The silicon-based amplified photodetector from Xiaoxiao Photon has a sensitive range covering 190nm to 1100nm, with 8 adjustable gain levels. It provides precise quantitative photoconversion and a wide dynamic range, making it suitable for various photonic development scenarios. It offers excellent performance and cost-effectiveness, with comprehensive technical support. The device is commonly used in UV and visible light measurements.

Product features

Wavelength range: 190nm -1100nm, commonly used for UV and visible light measurements 、Amplified photodetector with 8 adjustable gain levels for precise quantitative photoconversion 、Wide dynamic range, adaptable to various photonic development scenarios 、 High performance, cost-effective, with comprehensive technical support 、Customization options available

Part Number

MP-PD-M-S-12-AA1A36

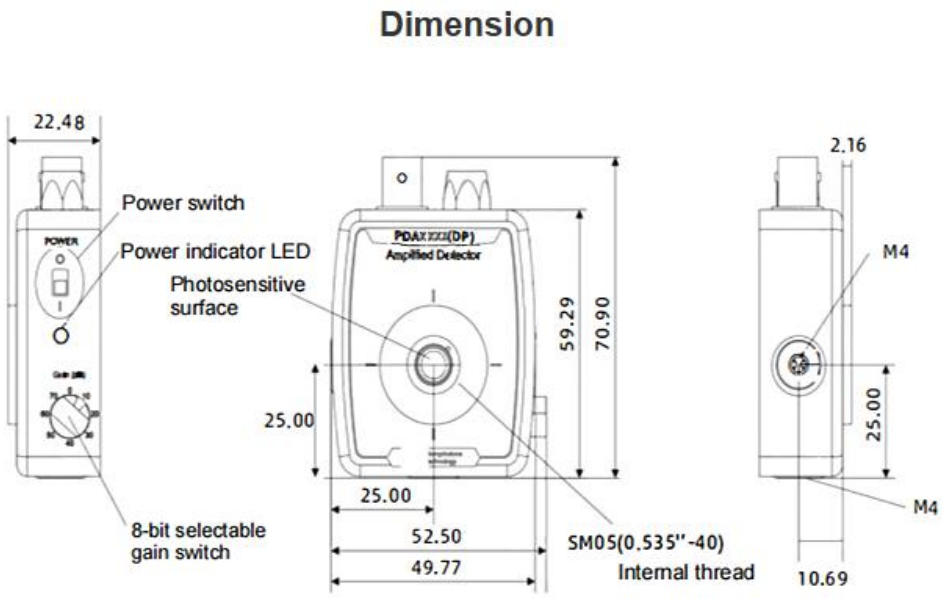
Application area

UV and visible light measurements

Core parameters

Wavelength	Active Area	Bandwidth
190-1100nm	3.6x3.6mm	11MHz

Dimension Drawing



General Parameters

General Parameters

Parameters	Value			
Wavelength Range	350-1100nm	190-1100n m	320-1100n m	190-1100nm
Active area	3.6mm×3.6mm		Φ9.8mm	
Response Time Constant	10ns	0.5us	35ns	3us
Bandwidth Range	DC～12MHz		DC～11MHz	
Gain Range	Hi-Z Load: 0.51kV/A～4.75MV/A; 50Ω Load: 0.75kV/A～2.38MV/A			

Signal Amplitude	Hi-Z Load: 0 ～10V; 50Ω Load: 0V～5V				
Gain Adjustment Method	Rotary switch adjustment: 0～70dB, 10dB per step, 8 steps. Bandwidth inversely proportional to gain.				
Sensitive Surface Depth	0.13" (3.3 mm)				
Detector Weight	0.10kg				
Operating Temperature	10-40°C				
Storage Temperature	-20-70°C				
Dimensions	2.79" X 2.07" X 0.89" (70.9 mm X 52.5 mm X 22.5 mm)				
NEP	3.25~75.7 pW/$Hz^{1/2}$	2.12~69.7pW/$Hz^{1/2}$	2.67~71.7pW/$Hz^{1/2}$	1.33~45.1pW/$Hz^{1/2}$	
Power Supply Interface	Power Switch	Signal Interface	Gain Adjustment	Mounting Interface	Optical Interface

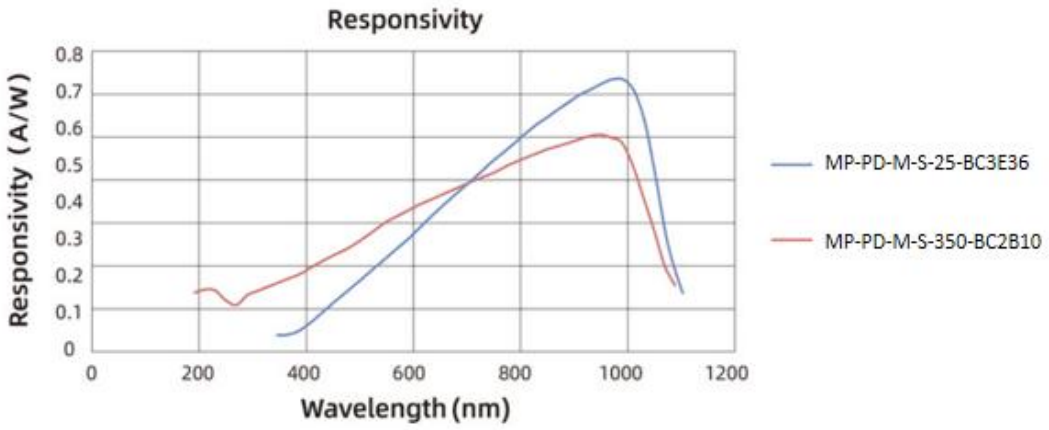
LUMBERG RSM V3 FE MALE	Slide Switch With LED Indicator	BNC Female Socket	8-Step Rotary Knob	M4 X 2	SM1 X 1 SM0.5 X 1

8-Stage Quantitative Adjustable Gain Parameters:

0dB		10dB		20dB		30dB	
Gain (Hi-Z)	1.51 × 10^3V/A	Gain (Hi-Z)	4.75 × 10^3V/A	Gain (Hi-Z)	1.5 × 10^4V/A	Gain (Hi-Z)	4.75 × 10^4V/A
Gain (50 Ω)	0.75× 10^3V/ A	Gain (50 Ω)	2.38× 10^3V /A	Gain (50 Ω)	0.75 × 10^4V/A	Gain (50 Ω)	2.38× 10^4V/A
Bandwidth (BW)	12MHz	Bandwidth (BW)	1.6MHz	Bandwidth (BW)	1MHz	Bandwidth (BW)	260kHz
Noise (RMS)	258uV	Noise (RMS)	192uV	Noise (RMS)	207 uV	Noise (RMS)	211uV
40dB		50dB		60dB		70dB	

Gain (Hi-Z)	1.51 × 10^5V/	Gain (Hi-Z)	4.75 × 10^5V	Gain (Hi-Z)	1.5 × 10^6V /	Gain (Hi-Z)	4.75× 10^6
	A		/A		A		V/A
Gain (50 Ω)	0.75× 10^5V/ A	Gain (50 Ω)	2.38× 10^5V /A	Gain (50 Ω)	0.75 × 10^6V /A	Gain (50 Ω)	2.38× 10^6 V/A
Bandwidth (BW)	90MHz	Bandwidth (BW)	28MHz	Bandwidth (BW)	9kHz	Bandwidth (BW)	3kHz
Noise (RMS)	214uV	Noise (RMS)	234uV	Noise (RMS)	277 uV	Noise (RMS)	388uV
Signal Offset	±8mV(Typ.) ， ±12mV(Max)						

SI Response Curve:



Attachment 1: Optional Configuration Table

Silicon-Based Amplified Photodetector	Optional Configuration				
Product Name	Material	Type	Features	Wavelength Range Photodetector Size	Reserved Optional Configurations
Photodetector	Si Silicon	Amplified	Adjustable Gain	190-1100nm，3.6×3.6mm	
				190-1100nm，Φ	

				9.8mm	
				320-1100nm，Φ 9.8mm	
				350-1100nm，3.6×3.6mm	

Attachment 2: Model Correspondence Table

Model	Specs
MP-PD-M-S-12-AA1A36	190-1100nm Silicon-Based Amplified Photodetector, Active area 3.6×3.6mm, 0-70dB 8-step Adjustable Gain, Bandwidth DC ~ 12MHz
MP-PD-M-S-11-AA1A98	190-1100nm Silicon-Based Amplified Photodetector, Active area Φ9.8mm, 0-70dB 8-step Adjustable Gain, Bandwidth DC ~ 11MHz
MP-PD-M-S-11-AA3D98	320-1100nm Silicon-Based Amplified Photodetector, Active area Φ9.8mm, 0-70dB 8-step Adjustable Gain, Bandwidth DC ~ 11MHz
MP-PD-M-S-12-AA3E36	350-1100nm Silicon-Based Amplified Photodetector, Active area 3.6×3.6mm, 0-70dB 8-step

	Adjustable Gain, Bandwidth DC ~ 12MHz