

190-1100nm Silicon-based Amplified Photodetector , Active area $3.6 \times 3.6\text{mm}$



- **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**

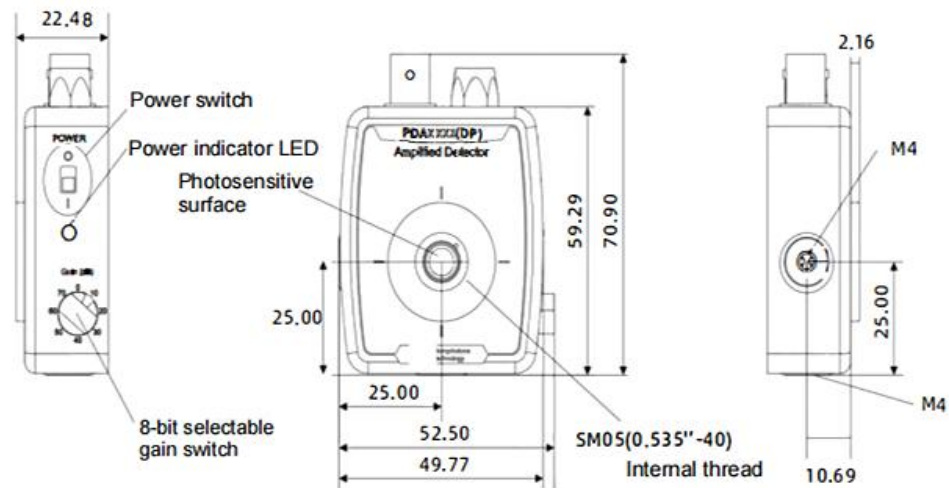
UV and visible light measurements

- **Core parameters**

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

● Dimension Drawing

Dimension



● 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 p W/Hz ^{1/2}	2.12~69.7p W /Hz ^{1/2}	2.67~71.7p W /Hz ^{1/2}	1.33~45.1pW/H z ^{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

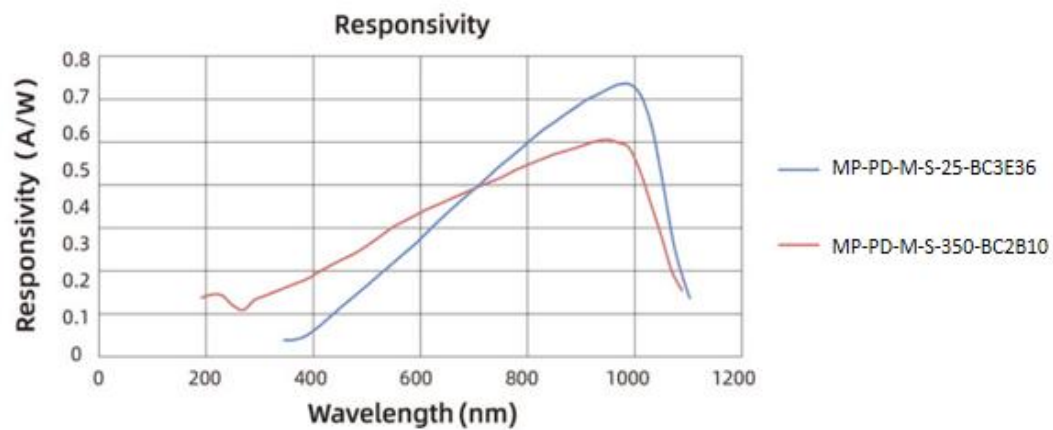
8-Stage Quantitative Adjustable Gain Parameters:

0dB		10dB		20dB		30dB	
Gain (Hi-Z)	$1.51 \times 10^3 \text{V/A}$	Gain (Hi-Z)	$4.75 \times 10^3 \text{V/A}$	Gain (Hi-Z)	$1.5 \times 10^4 \text{V/A}$	Gain (Hi-Z)	$4.75 \times 10^4 \text{V/A}$
Gain (50 Ω)	$0.75 \times 10^3 \text{V/A}$	Gain (50 Ω)	$2.38 \times 10^3 \text{V/A}$	Gain (50 Ω)	$0.75 \times 10^4 \text{V/A}$	Gain (50 Ω)	$2.38 \times 10^4 \text{V/A}$

Bandwidth (BW)	12MHz	Bandwidth (BW)	1.6MHz	Bandwidth (BW)	1MHz	Bandwidth (BW)	260kHz
Noise (RMS)	258uV	Noise (RMS)	192uV	Noise (RMS)	207uV	Noise (RMS)	211uV
40dB		50dB		60dB		70dB	
Gain (Hi-Z)	1.51 $\times 10^5 \text{V/}$	Gain (Hi-Z)	4.75 $\times 10^5 \text{V}$	Gain (Hi-Z)	1.5 $\times 10^6 \text{V}$ /	Gain (Hi-Z)	4.75×10^6
	A		/A		A		V/A
Gain (50 Ω)	$0.75 \times 10^5 \text{V/ A}$	Gain (50 Ω)	$2.38 \times 10^5 \text{V/ A}$	Gain (50 Ω)	$0.75 \times 10^6 \text{V}$ /A	Gain (50 Ω)	$2.38 \times 10^6 \text{V/A}$
Bandwidth (BW)	90MHz	Bandwidth (BW)	28MHz	Bandwidth (BW)	9kHz	Bandwidth (BW)	3kHz
Noise (RMS)	214uV	Noise (RMS)	234uV	Noise (RMS)	277uV	Noise (RMS)	388uV

Signal
 $\pm 8\text{mV(Typ.)}$, $\pm 12\text{mV(Max)}$
Offset

SI Response Curve:



Attachment 1: Optional Configuration Table

Silicon-Based Amplified Photodetector r	Optional Configuration
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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 $\Phi 9.8\text{mm}$, 0-70dB 8-step Adjustable Gain, Bandwidth DC ~ 11MHz
MP-PD-M-S-11-AA3D98	320-1100nm Silicon-Based Amplified Photodetector, Active area $\Phi 9.8\text{mm}$, 0-70dB 8-step Adjustable Gain, Bandwidth DC ~ 11MHz
MP-PD-M-S-12-AA3E36	350-1100nm Silicon-Based Amplified Photodetector, Active area $3.6 \times 3.6\text{mm}$, 0-70dB 8-step Adjustable Gain, Bandwidth DC ~ 12MHz