

190-1100nm Silicon-Based Amplified Photodetector, Active area $\Phi 9.8\text{mm}$



- **Product Description**

IdealPhotonics' silicon-based amplified photodetector covers a wavelength range of 190nm to 1100nm. It features 8 adjustable gain levels, enabling quantitative photoconversion with a wide dynamic range, suitable for various optoelectronic development scenarios. With excellent performance and high cost-effectiveness, it provides comprehensive technical support and is commonly used in ultraviolet and visible light measurements.

- **Product features**

Wavelength range from 190nm to 1100nm, commonly used in ultraviolet and visible light measurements. 、 Amplified photodetector with 8

adjustable gain levels for quantitative photoconversion. 、 Wide dynamic range, suitable for various optoelectronic development scenarios. 、 Excellent performance and high cost-effectiveness, with comprehensive technical support. 、 Custom non-standard services available.

● Part Number

MP-PD-M-S-11-AA1A98

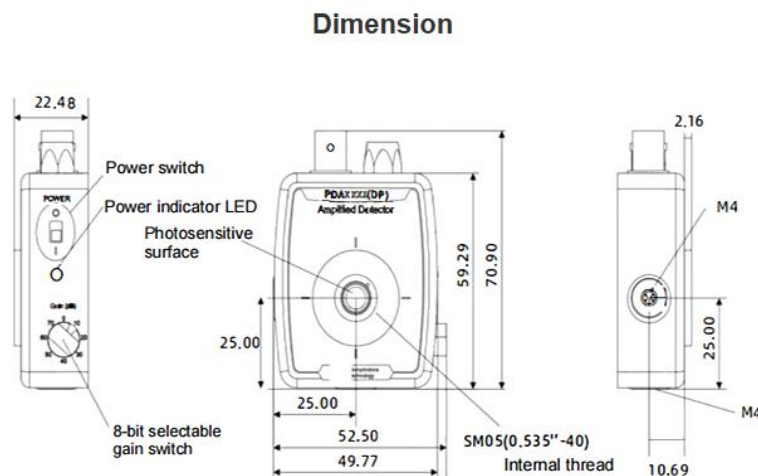
● Application area

Ultraviolet and visible light measurements.

● Core parameters

Wavelength	Active Area	Bandwidth
190-1100nm	Φ9.8mm	11MHz

● Dimension Drawing





● General Parameters

General Parameters

Parameters	Value			
Wavelength Range	350-1100nm	190-1100nm	320-1100nm	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 × 10 ³ V/	Gain (Hi-Z)	4.75 × 10 ³ V	Gain (Hi-Z)	1.5 ×	Gain (Hi-Z)	4.75 × 10 ⁴ V/A

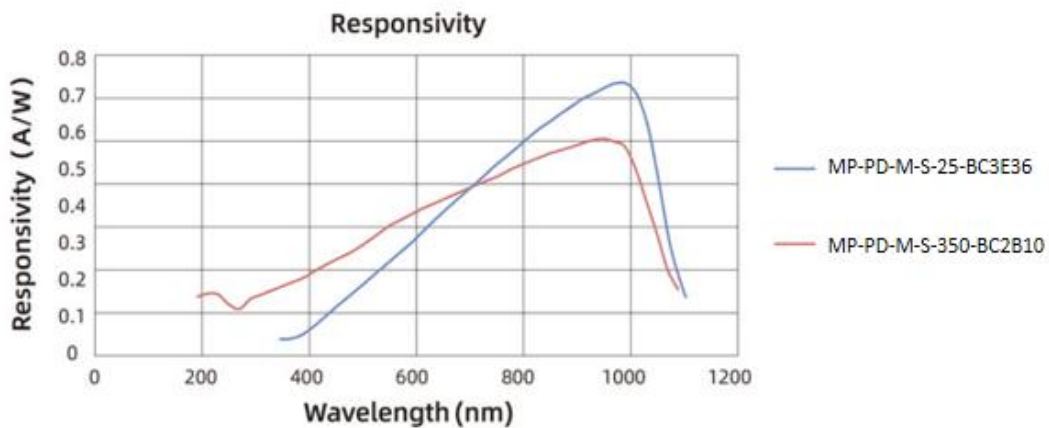


	A		/A		10^4V		
					/A		
Gain (50 Ω)	$0.75 \times 10^3V/A$	Gain (50 Ω)	$2.38 \times 10^3V/A$	Gain (50 Ω)	$\times 10^4V/A$	Gain (50 Ω)	$2.38 \times 10^4V/A$
Bandwidth (BW)	12MHz	Bandwidth (BW)	1.6MHz	Bandwidth (BW)	1MHz	Bandwidth (BW)	260kHz
Noise (RMS)	258uV	Noise (RMS)	192uV	Noise (RMS)	207uV	Noise (RMS)	211uV
40dB		50dB		60dB		70dB	
Gain (Hi-Z)	$1.51 \times 10^5V/A$	Gain (Hi-Z)	$4.75 \times 10^5V/A$	Gain (Hi-Z)	$\times 10^6V/A$	Gain (Hi-Z)	$4.75 \times 10^6V/A$
	A		/A		A		V/A
Gain (50 Ω)	$0.75 \times 10^5V/A$	Gain (50 Ω)	$2.38 \times 10^5V/A$	Gain (50 Ω)	$\times 10^6V/A$	Gain (50 Ω)	$2.38 \times 10^6V/A$
Bandwidth	90MHz	Bandwidth	28MHz	Bandwidth	9kHz	Bandwidth	3kHz



dth (BW)		dth (BW)		dth (BW)	z	dth (BW)	
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 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



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