350-1100nm Silicon-based Amplified Photodetector, Active area 3.6×3.6mm

• Product Description

IdealPhotonics' silicon-based amplified photodetector covers 190nm – 1100nm with 8 adjustable gain settings, providing quantitative photoelectric conversion and a wide dynamic range. It is suitable for UV and visible light measurements, offering excellent performance and cost-efficiency.

• Product features

Light-sensitive range: 190nm~1100nm, commonly used in UV and visible light measurements、 Amplified detector with 8 adjustable gain settings for quantitative photoelectric conversion、 Wide dynamic range, suitable for

various photoelectric development applications、 Excellent performance, cost-effective, with comprehensive technical support、 Custom solutions available

Part Number

MP-PD-M-S-12-AA3E36

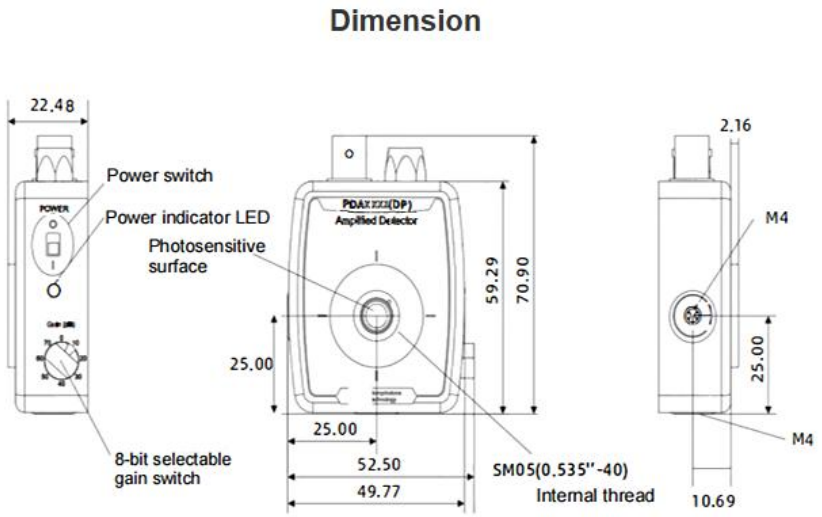
Application area

Ultraviolet and visible light measurements

Core parameters

Wavelength	Active Area	Bandwidth
350-1100nm	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

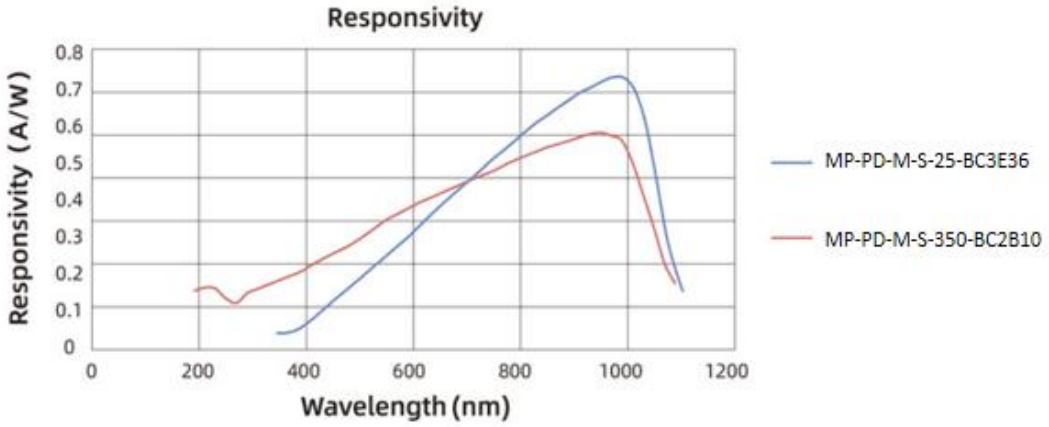
8-Stage Quantitative Adjustable Gain Parameters:

0dB		10dB		20dB		30dB	
Gain (Hi-Z)	1.51 × 10^3V/	Gain (Hi-Z)	4.75 × 10^3V	Gain (Hi-Z)	1.5 ×	Gain (Hi-Z)	4.75 × 10^4V/A

	A		/A		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
Bandwi	90MHz	Bandwi	28MHz	Bandwi	9kH	Bandwi	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	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，Φ9.8mm	
				320-1100nm，Φ9.8mm	
				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