320-1100nm Silicon-based Amplifying Photodetector, Active area 1.1mm×1.1mm

- ## Product Description

IdealPhotonics' silicon-based amplified photodetector covers a wavelength range of 200nm – 1100nm, with fixed gain. It is suitable for ultraviolet and visible light measurements, offering high bandwidth performance ideal for applications involving weak light intensity and fast speeds, with excellent performance and cost-effectiveness.

Product features

Wavelength range: 200nm – 1100nm, commonly used for ultraviolet and visible light measurements、 Amplified detector with fixed gain, enabling quantitative photoconversion、 High bandwidth performance, suitable for applications with weak light intensity and fast speeds 、 Excellent performance, high cost-performance ratio, with technical support 、 Customization Available

Part Number

MP-PD-M-S-20-AF3D11

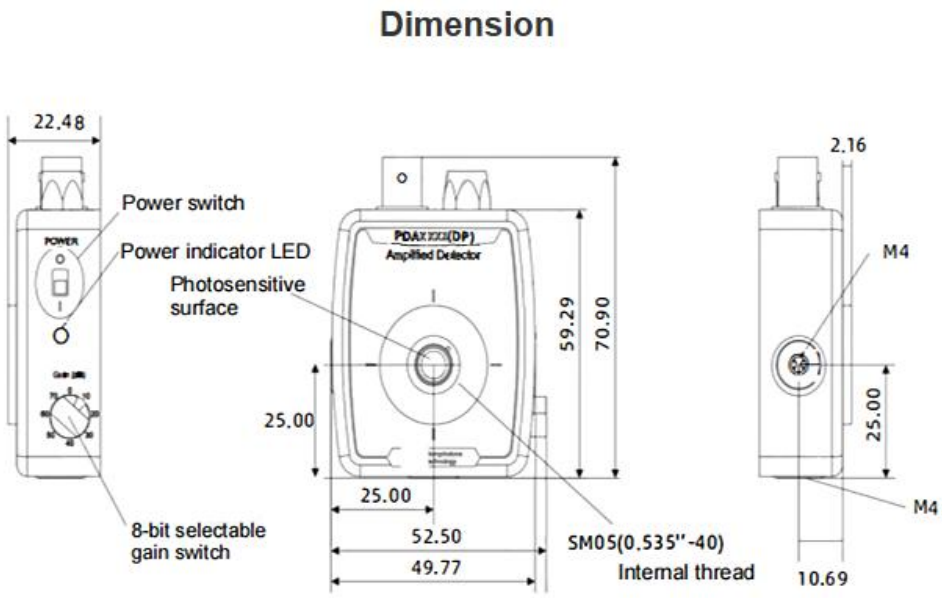
Application area

Ultraviolet and visible light measurement

Core parameters

Wavelength Range	Active Area	Bandwidth
320-1100nm	1.1x1.1mm	20MHz

Dimension Drawing



General Parameters

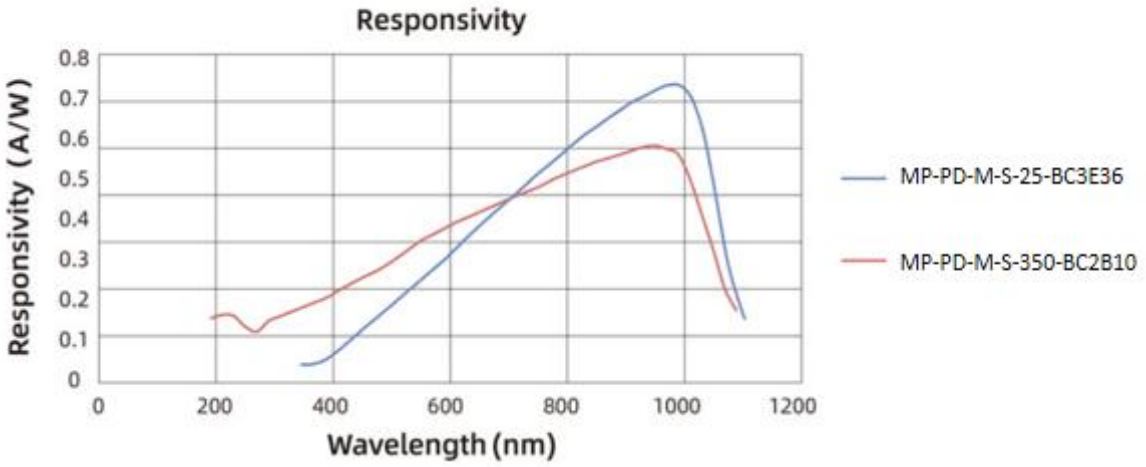
Main Parameters

Parameters	Value			
Wavelength Range	200-1100nm	400-1000nm	320-1100nm	320-1000nm
Active area	Φ1.0mm	Φ150um	1.1m×1.1mm	Φ0.8mm
Bandwidth	DC～150MHz	DC～380MHz	DC～20MHz	DC～50MHz

Range				
Gain Range	Hi-Z Load: 1 × 10^4 V/A; 50Ω Load: 5 × 10^3 V/A	Hi-Z Load: 5 × 10^4 V/A; 50Ω Load: 2.5 × 10^4 V/A	1 × 10^{12} V/A ±10%	Hi-Z Load: 100kV/A; 50Ω Load: 50kV/A
Signal Amplitude	Hi-Z Load: 0 ～10V; 50Ω Load: 0～5V	Hi-Z Load: 0 ～10V; 50Ω Load: 0～5V	0 ～10V	Hi-Z Load: 0～3.6V; 50Ω Load: 0~1.8V
NEP	2.92×10^{-11}W/$Hz^{1/2}$	3.6×10^{-11}W/$Hz^{1/2}$	3.0×10^{-15}W/$Hz^{1/2}$	7.8×10^{-12}W/$Hz^{1/2}$
Photodetector Depth	0.09" (2.2 mm)	0.20" (5.0 mm)	0.10" (2.4 mm)	0.07" (1.8 mm)
Operating Temperature	10-50℃	10-40℃	10-50℃	
Storage Temperature	-25-70℃			

Detector Net Weight	0.10kg		0.06kg		
Dimensions	2.79" X 1.96" X 0.89" (70.9 mm X 49.8 mm X 22.5 mm)		2.79" X 1.96" X 0.89" (70.9 mm X 49.9 mmX 22.5 mm)		
Power Supply Interface	Power Supply	Power Switch	Signal Interface	Support Rod Interface	Optical Interface
LUMBERG RSMV3 FEMALE	LDS12B(DP), ±12VD, C Linear Power Supply, 6W, 220VAC	Slide switch with LED indicator	BNC Female Socket	M4 X 2	SM1 X 1 SM0.5 X 1

SI Response Curve:



Attachment 1: Optional Configuration Table

Silicon-Based Amplifying Photodetector	Optional Configuration				
Product Name	Material	Type	Features	Wavelength Range Photodetector Size	Reserved Optional Configuration
Photodetector	Si Silicon-based	Amplifying Type	Fixed Gain	200-1100nm，Φ 1.0mm	

				400-1000nm , Φ150um	
				320-1100nm , 1.1mmX1.1 mm	
				320-1000nm , Φ 0.8mm	

Attachment 2：Model Comparison Table

Model	Specs
MP-PD-M-S-150-AF2B10	200-1100nm Silicon-based Amplifying Photodetector, Active area Φ1.0mm, Fixed Gain 1 × 10^4V/A, Bandwidth DC ~ 150MHz
MP-PD-M-S-380-AF4F015	400-1000nm Silicon-based Amplifying Photodetector, Active area Φ150μm, Fixed Gain 5 × 10^4V/A, Bandwidth DC ~ 380MHz
MP-PD-M-S-20-AF3D11	320-1100nm Silicon-based Amplifying Photodetector, Active area 1.1mm × 1.1mm, Fixed Gain 1 × 10^{12}V/A ± 10%, Bandwidth DC ~ 20MHz

MP-PD-M-S-50-AF3C8	320-1000nm Silicon-based Amplifying Photodetector, Active area Φ0.8mm, Fixed Gain 100kV/A, Bandwidth DC ~ 50MHz