

320-1100nm Silicon-based Amplifying Photodetector, Photodetector Size 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.

● Part Number

PDSAF3D11

● Product features

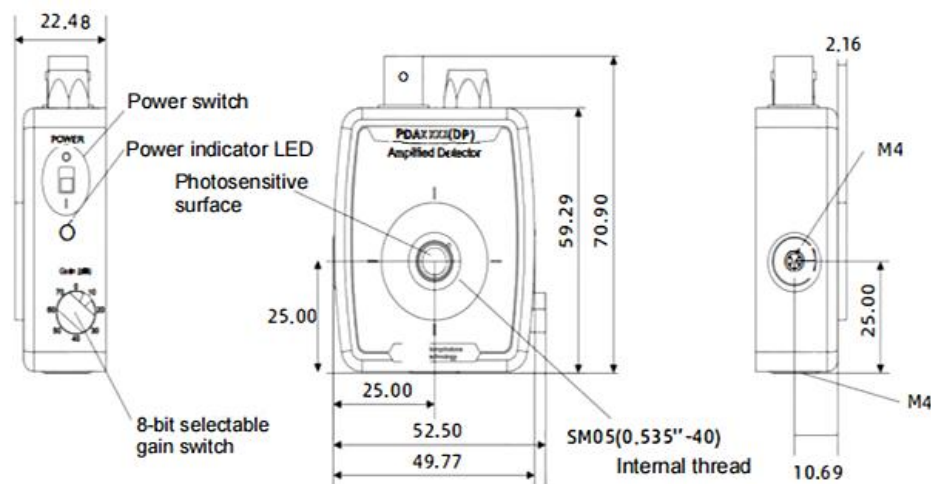
Wavelength range: 200nm–1100nm, commonly used for ultraviolet and visible light measurements、 Amplified detector with fixed gain, enabling quantitative photoconversion、 High bandwidth performance, suitable for applications with weak light intensity and fast speeds 、 Excellent performance, high cost-performance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

● Application area

Medical field、 Printing、 Fiber laser systems

Dimensional Drawing

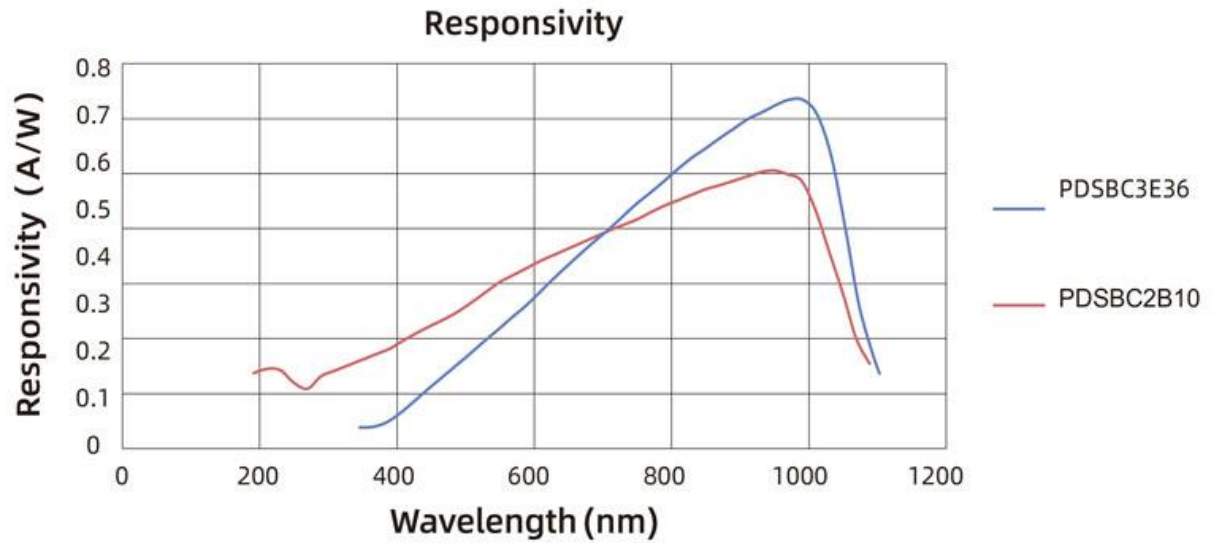
Dimension



Main Parameters

Parameter	Value				
Wavelength Range	200-1100nm	350-1100nm	320-1100nm		
Active area	Φ 1.0mm	Φ 3.6mm	Φ 10.0mm		
Bandwidth	350MHz	25MHz	10MHz		
Rise Time (@50 Ω)	1ns	14ns	35ns		
NEP	$5.0 \times 10^{-14} \text{W/Hz}^{1/2}$	$1.6 \times 10^{-14} \text{W/Hz}^{1/2}$	$2.4 \times 10^{-14} \text{W/Hz}^{1/2}$		
Dark Current	0.3nA(Typ.)/10 nA(Max)	0.35nA(Typ.)/6.0nA(Max)	0.9nA(Typ.)/10nA(Max)		
Junction Capacitance	6pF(Typ.)	40pF(Typ.)	150pF(Typ.)		
Bias Voltage	10V				
Output Current	0~10mA				
Output Voltage	~9V(Hi-Z); ~170 mV(50 Ω)				
Light-sensitive Depth	0.09" (2.2 mm)	0.09" (2.2 mm)	0.13" (3.3mm)		
Operating Temperature	10-40℃				
Storage Temperature	-20-70℃				
Detector Weight	0.10kg				
Undervoltage Indicator	$V_{out} \leq 9V(Hi-Z)$ $V_{out} \leq 170mV(50 \Omega)$				
Dimensions	2.79" X 1.96" X 0.89" (70.9 mm X 49.8 mm X 22.5 mm)				
Power Supply	Power Switch	Signal Interface	Battery Monitoring	Support Rod Interface	Optical Interface
A23 , 12VDC , 40mAh	Sliding Switch	BNC Female Socket	Instantaneous Button	M4 X 2	SM1 X 1 SM0.5 X 1

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
PD: "Photodetector"	S: Si	A:	F: Fixed Gain	2B10: 200-1100nm , Φ 1.0mm	
				4F015: 400-1000nm , Φ 150um	
				3D11: 320-1100nm , 1.1mmX1.1mm	
				3C8: 320-1000nm , Φ 0.8mm	

Attachment 2: Model and Part Number Reference Table

Model	Part Number	Specs
PDSAF2B10	A80153417	200-1100nm Silicon-based Amplified Photodetector, Active area: Φ 1.0mm, Fixed Gain: 1×10^4 V/A, Bandwidth: DC ~ 150MHz
PDSAF4F015	A80153418	400-1000nm Silicon-based Amplified Photodetector, Active area: Φ 150um, Fixed Gain: 5×10^4 V/A, Bandwidth: DC ~ 380MHz
PDSAF3D11	A80153419	320-1100nm Silicon-based Amplified Photodetector, Active area: 1.1mm $\times$ 1.1mm, Fixed Gain: 1×10^{12} V/A $\pm$ 10%, Bandwidth: DC ~ 20MHz
PDSAF3C8	A80153420	320-1000nm Silicon-based Amplified Photodetector, Active area: Φ 0.8mm, Fixed Gain: 100kV/A, Bandwidth: DC ~ 50MHz