400-1100nm High-speed Silicon-based Bias Photodetector Sensitive Area Φ250um, Rise Time 150ps, Bandwidth 2GHz Input Coupling Method: Window piece

Product Description

IdealPhotonics' high-speed silicon-based bias photodetector has a light sensitivity range covering 400nm to 1100nm. It features extremely low noise, fast response, no gain, and low cost. It is suitable for conventional optoelectronic detection applications, offering excellent performance and high cost-effectiveness. Comprehensive orientation technical support is provided, and it is commonly used for visible and infrared light measurement.

Part Number

PDSBH2W

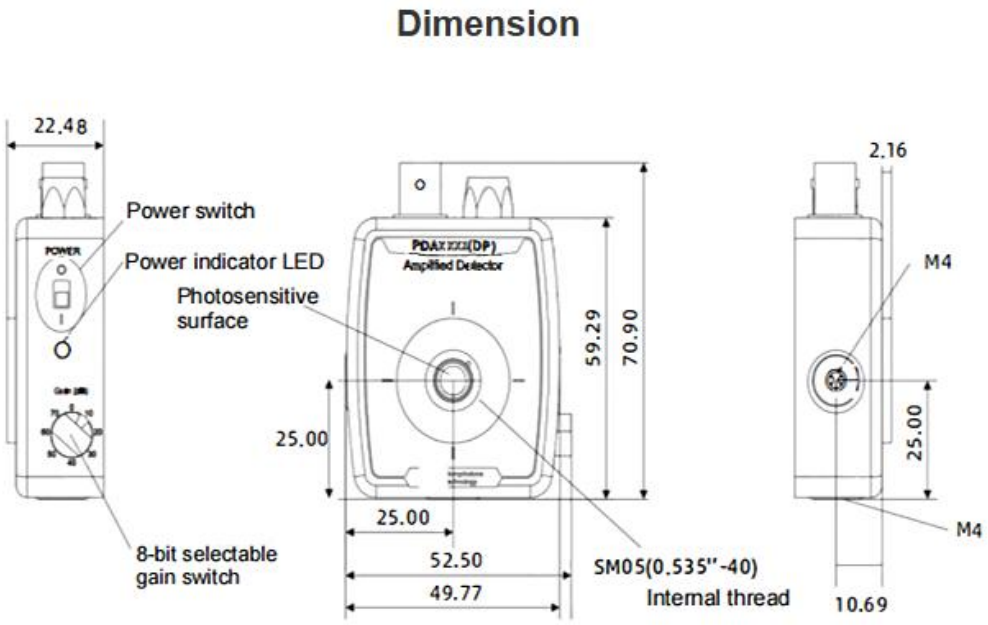
Product features

Sensitivity range covers 400nm to 1100nm, commonly used for visible and near-infrared light measurement、Bias-type detector with extremely low noise, fast response, and no gain、 Low cost, suitable for intensity-time waveform measurements of high-speed laser pulses or light-emitting 、 Excellent performance, high cost-effectiveness, and Comprehensive orientation technical support、 Provides non-standa

Application area

Visible and near-infrared light measurement.

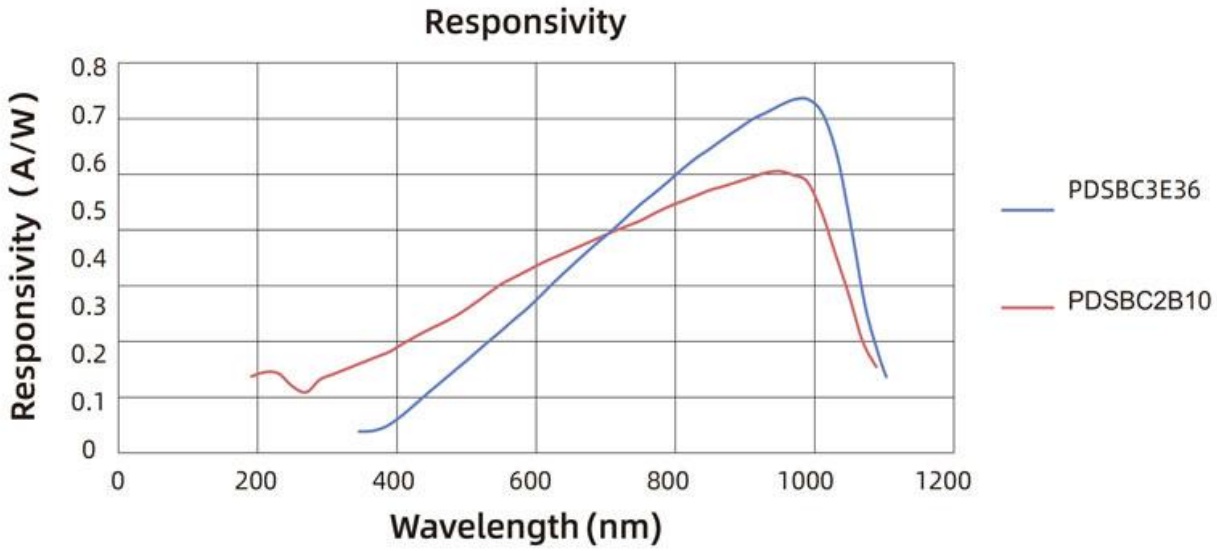
Dimensional Drawing



Main Parameters

Parameter	Value		
Input Coupling Method	Window piece	Ball lens	FC/PC Optical Fiber Mount
Wavelength Range	400-1100nm, Peak Wavelength 730nm		
Peak Responsivity	0.46A/W		
3dB Bandwidth (@50Ω)	2Ghz		1GHz
Rise/Fall Time (@50Ω)	150ps/150ps		1ns/1ns
NEP	9.29× 10-15W/Hz1/2		9.5 × 10-15W/Hz1/2
Dark Current	35pA		126pA
Output Voltage	2V(Max)		3.3V(Max)
Junction Capacitance	1.73pF		
Bias Voltage	12V		
Output Current	0~10mA		
Operating Impedance	50Ω		
Active Area	Φ250um		
Photosensitive Surface	Plane Anti-Reflection Coating	Lens Size 0.059" (1.50mm)	Embedded Coupling Lens 0.059" (1.50mm)
Detector Net Weight	0.18kg		
Operating/Storage Temperature	0-40℃		
Appearance Dimensions	2.21" X 1.4" X 0.80" (56.1 mm X 35.6 mm X 20.3mm)		
Power Supply Battery	Signal Interface		SMA (DC Coupled)
A23， 12VDC， 40mAh	Mounting Interface		M4× 1

SI Response Curve:



Attachment 1: Optional Configuration Table

Silicon-based Bias Photodetector	Optional Configuration						
Product Name	Material	Type	Features	Wavelength Range Sensitive Area	Bandwidth	Input Coupling Method	Optional Configuration
PD: "Photodetector"	S: Si Silicon-based	B: Bias type	H: High-speed type	4G025：400-1100 nm Φ 250um	2： 2G Hz	W: Window piece	
					1： 1G Hz	L: Ball lens	
						P: FC/PC Optical Fiber Mount	

Attachment 2: Model Number and Product Code Comparison Table

Model	Part Number	Specs
PDSBH2W	A80153424	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: Window piece
PDSBH2L	A80153425	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: Ball lens
PDSBH2P	A80153426	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: FC/PC Optical Fiber Mount
PDSBH1P	A80153427	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 1ns, Bandwidth 1GHz, Input Coupling: FC/PC Optical Fiber Mount