400-1100nm High-speed silicon-based biased photodetector, Active Area Φ250μm, rise time 1ns

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 technical support is provided technical support is provided, and it is commonly used for visible and infrared light measurement

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-standard customization services

Part Number

MP-CPD-M-S-B-H-4G025-1-F

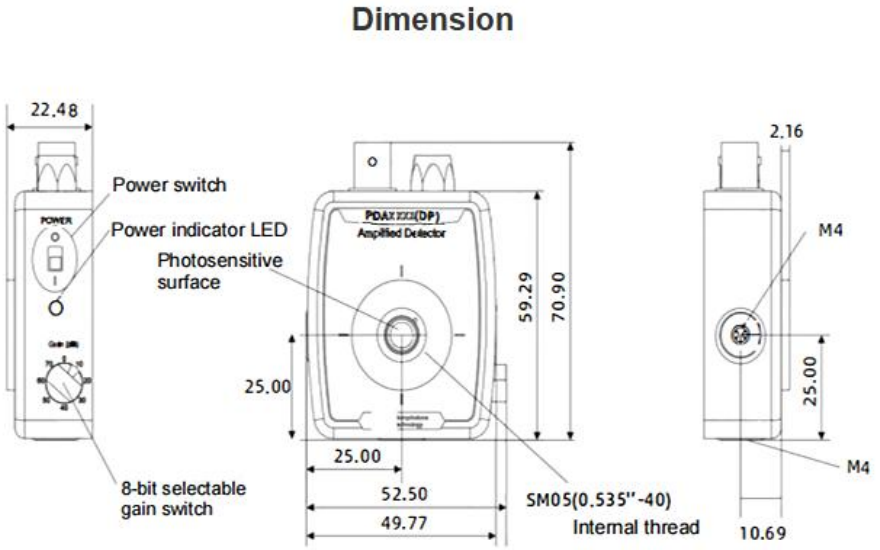
Application area

Visible and near-infrared light measurement.

Core parameters

Wavelength	Active Area	Bandwidth	Input Coupling
400-1100nm	Φ250um	1GHz	FC/PC

Dimension Drawing



General Parameters

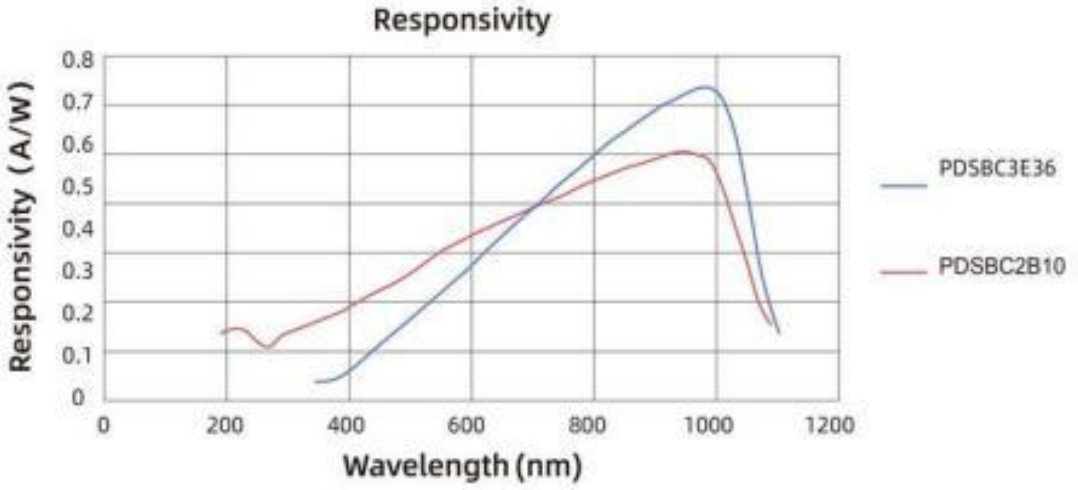
Main Parameters

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	$9.29\times10^{-15}W/Hz^{1/2}$		$9.5\times10^{-15}W/Hz^{1/2}$
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 20.3 mm)	
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
"Photodetector"	Si Silicon-based	Bias type	High-speed type	400-1100 nm Φ 250um	2G Hz	Window piece	
					1G Hz	Ball lens	

						FC/PC Optical Fiber Mount	

Attachment 2: Model Number and Product Code Comparison Table

Model	Specs
MP-CPD-M-S-B-H-4G025-2-W	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: Window piece
MP-CPD-M-S-B-H-4G025-2-L	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: Ball lens

MP-CPD-M-S-B-H-4G025-2-F	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: FC/PC Optical Fiber Mount
MP-CPD-M-S-B-H-4G025-1-F	400-1100nm High-speed Silicon-based Bias Photodetector, Active Area Φ250um, Rise Time 1ns, Bandwidth 1GHz, Input Coupling: FC/PC Optical Fiber Mount