

# 400-1100nm High-speed Silicon-based Bias Photodetector, Input Coupling Method: Ball lens



## ● 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-4G025-2-L

- **Application area**

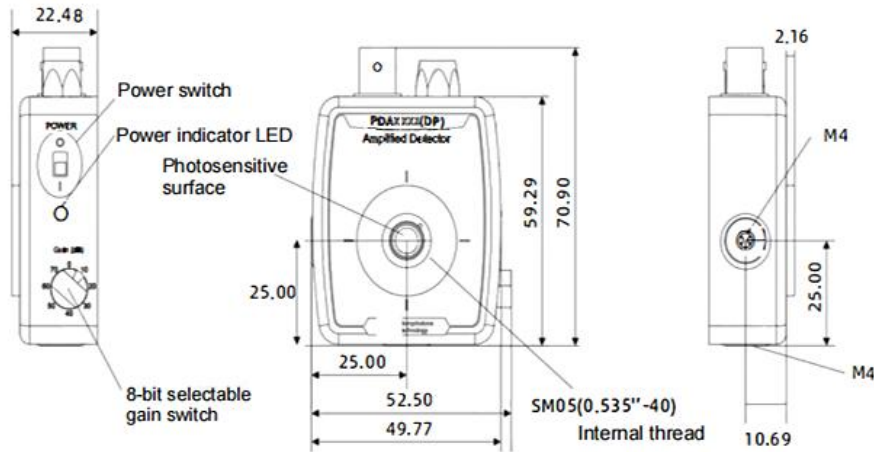
Visible and near-infrared light measurement.

- **Core parameters**

Wavelength	Active Area	Bandwidth	Input Coupling
400-1100nm	Φ250um	2GHz	Ball lens

## ● Dimension Drawing

Dimension



## ● 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	

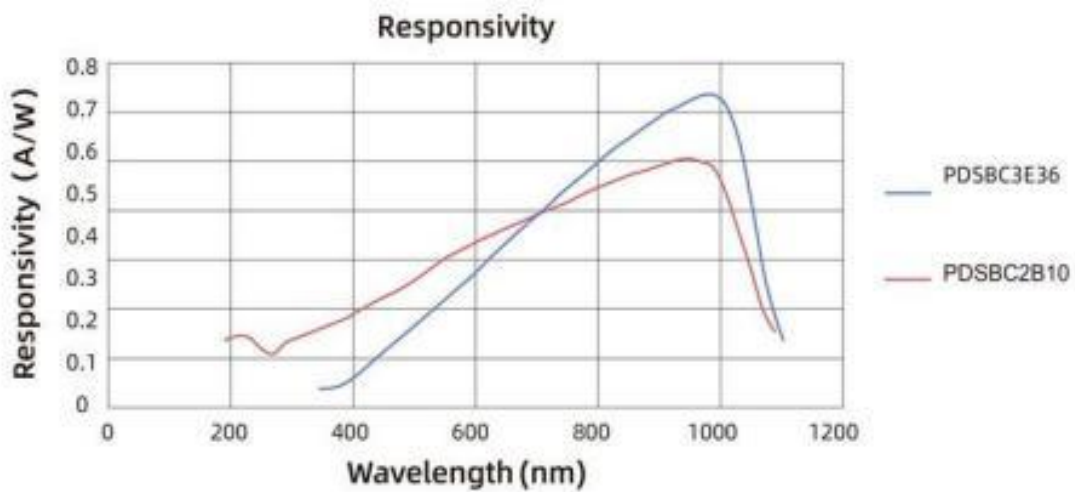


Rise/Fall Time (@50Ω)	150ps/150ps		1ns/1ns
NEP	$9.29 \times 10^{-15} \text{W/Hz}^{1/2}$		$9.5 \times 10^{-15} \text{W/Hz}^{1/2}$
Dark Current	35pA		126pA
Output Voltage	2V(Max)		3.3V(Max)
Junction Capacitance	1.73pF		
Bias Voltage	12V		
Output Current	0~10mA		
Operating Impedance	50Ω		
Active Area	Φ250um		
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°C		



<b>Appearance Dimensions</b>	2.21" X 1.4" X 0.80" (56.1 mm X 35.6 mm X 20.3 mm)	
<b>Power Supply Battery</b>	<b>Signal Interface</b>	<b>SMA (DC Coupled)</b>
<b>A23 , 12VDC , 40mAh</b>	<b>Mounting Interface</b>	<b>M4×1</b>

### SI Response Curve:



### Attachment 1: Optional Configuration Table

<b>Silicon-based Photodetector</b>	<b>Optional Configuration</b>
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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 $\Phi$ 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
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<b>MP-CPD-M-S-B-H-4G025-2-W</b>	<p><b>400-1100nm High-speed Silicon-based Bias Photodetector, Active Area <math>\Phi</math>250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: Window piece</b></p>
<b>MP-CPD-M-S-B-H-4G025-2-L</b>	<p><b>400-1100nm High-speed Silicon-based Bias Photodetector, Active Area <math>\Phi</math>250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: Ball lens</b></p>
<b>MP-CPD-M-S-B-H-4G025-2-F</b>	<p><b>400-1100nm High-speed Silicon-based Bias Photodetector, Active Area <math>\Phi</math>250um, Rise Time 150ps, Bandwidth 2GHz, Input Coupling: FC/PC Optical Fiber Mount</b></p>
<b>MP-CPD-M-S-B-H-4G025-1-F</b>	<p><b>400-1100nm High-speed Silicon-based Bias Photodetector, Active Area <math>\Phi</math>250um, Rise Time 1ns, Bandwidth 1GHz, Input Coupling: FC/PC Optical Fiber Mount</b></p>