

800-1700nm Indium Gallium Arsenide Bias Photodetector, Sensitive Area Size $\Phi 2.0\text{mm}$, Rise Time 30ns



● Product Description

IdealPhotonics' indium gallium arsenide (InGaAs) bias photodetector has a spectral sensitivity range from 500nm to 2600nm, with extremely low noise, fast response, no gain, and low cost. It is suitable for general photodetection applications, offering excellent performance and high cost-effectiveness. The product provides comprehensive technical support and is commonly used in visible and infrared light measurements.

● Part Number

PDJBC8J20

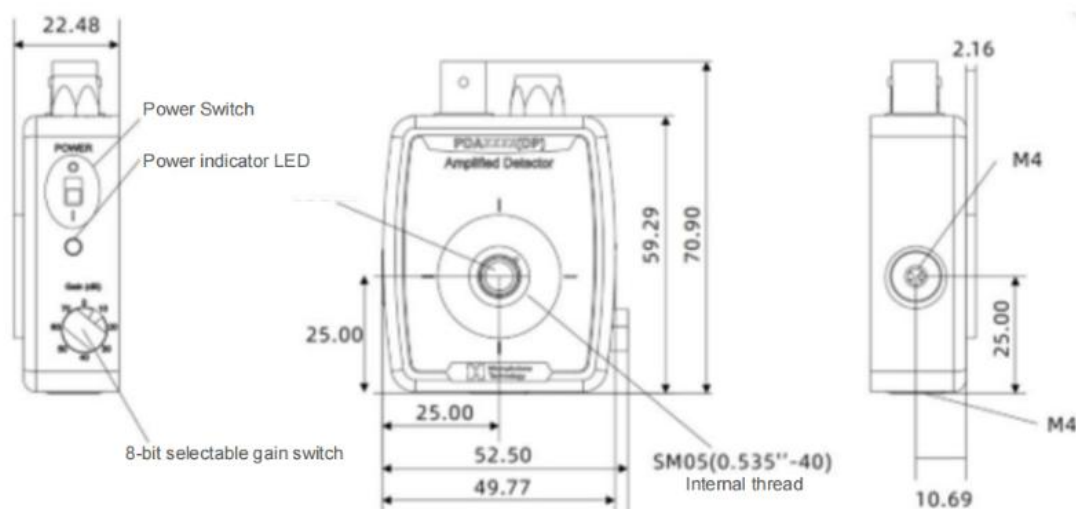
● Product features

Sensitivity range covers 500nm to 2600nm, commonly used in visible and infrared light measurements、 Bias-type detector, with extremely low noise and fast response, no gain 、 Low cost, suitable for general photodetection applications 、 Excellent performance,high cost-effectiveness,and comprehensive technical support、 Customization services are available upon request

● Application area

Visible and infrared light measurements

Dimensional Drawing



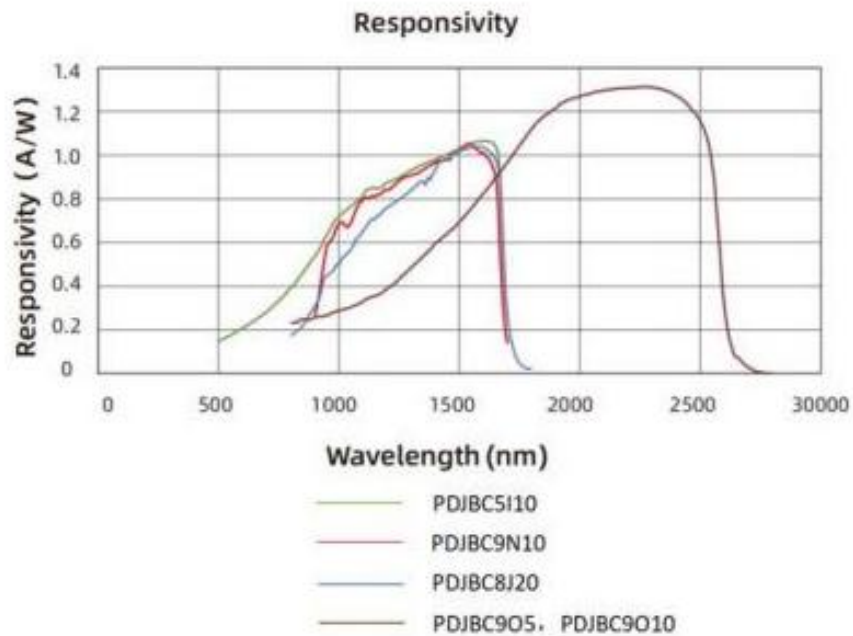
Parameters

Main Parameters

Parameter	Value				
Wavelength Range	500-1700nm	900-1700nm	800-1700nm	900-2600nm	
Active Area	Φ 1.0mm	Φ 1.0mm	Φ 2.0mm	Φ 0.5mm	Φ 1.0mm
Bandwidth Range	70MHz	35MHz	11.7MHz	20.6MHz	14MHz
Rise Time (@50 Ω)	5ns	10ns	30ns	17ns	25ns
NEP	$2.0 \times 10^{-14} \text{ W} / \text{Hz}^{1/2}$	$2.5 \times 10^{-14} \text{ W} / \text{Hz}^{1/2}$	$1.3 \times 10^{-13} \text{ W} / \text{Hz}^{1/2}$	$1.0 \times 10^{-12} \text{ W} / \text{Hz}^{1/2}$	$1.5 \times 10^{-12} \text{ W} / \text{Hz}^{1/2}$

Dark Current	1.5nA(Typ.)/10 nA(Max)	1.0nA(Typ.)/25 nA(Max)	55nA(Typ.)/200 nA(Max)	2uA(Typ.)/20uA(Max)	5uA(Typ.)/40uA(Max)
Junction Capacitance	50pF(Typ.)	80pF(Typ.)	100pF(Typ.)	140pF(Typ.)	500pF(Typ.)
Bias Voltage	5V		1.8V		
Output Current	0~5mA				
Output Voltage	~9V(Hi-Z); ~170 mV(50 Ω)				
Active Area Depth	0.09" (2.2 mm)				
Operating Temperature	10-50℃				
Storage Temperature	-20-70℃				
Detector Net Weight	0.10kg				
Under Voltage Indicator	Vout ≤9V(Hi-Z) Vout ≤170mV(50 Ω)				
Dimensions	2.79" X 1.96" X 0.89" (70.9 mm X 49.8 mm X 22.5 mm)				
Power Supply Battery	Power Switch	Signal Interface	Battery Monitoring	Support Rod Interface	Optical Interface
A23 , 12VDC, 40mAh	Slide Switch	BNC Female Socket	Instantaneous Button	M4 X 2	SM1 X 1 SM0.5 X 1

Response Curve :



Product Configuration :



Accessory 1: A23, 12V battery



Accessory 2: BNC-BNC signal cable

Attachment 1: Optional Configuration Table

Silicon-based Bias Photodetector	Optional				
Name	Material	Type	Features	Wavelength Range Sensitive Area Size	Reserved Optional Configuration
PD: "Photodetector"	J: InGaAs (Indium Gallium Arsenide)	B: Bias Type	C: Conventional Type	5I10: 500-1700nm , Φ 1.0mm	
				9N10: 900-1700nm , Φ 1.0mm	
				8J20: 800-1700nm , Φ 2.0mm	
				9O5 : 900-2600nm , Φ 0.5mm	
				9O10: 900-2600nm , Φ 1.0mm	

Attachment 2: Model and Product Number Cross Reference Table

Model	Part Number	Specs
PDJBC5I10	A80153435	500-1700nm InGaAs Bias Photodetector, Active Area Φ 1.0mm, Rise Time 5ns, Bandwidth 70MHz
PDJBC9N10	A80153436	900-1700nm InGaAs Bias Photodetector, Active Area Φ 1.0mm, Rise Time 10ns, Bandwidth 35MHz
PDJBC8J20	A80153437	800-1700nm InGaAs Bias Photodetector, Active Area Φ 2.0mm, Rise Time 30ns, Bandwidth 11.7MHz
PDJBC9O5	A80153438	900-2600nm InGaAs Bias Photodetector, Active Area Φ 0.5mm, Rise Time 17ns, Bandwidth 20.6MHz
PDJBC9O10	A80153439	900-2600nm InGaAs Bias Photodetector, Active Area Φ 1.0mm, Rise Time 25ns, Bandwidth 14MHz