

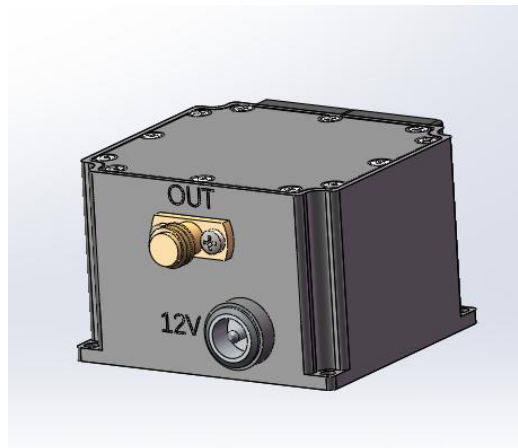
## BPD230 Balanced Photodetector

### Overview

The balanced photodetector contains two photodiodes and a low-noise transimpedance amplifier. The two photodiodes are matched to each other, enabling excellent common-mode rejection ratio. The detector subtracts the two detection signals from each other to eliminate common-mode noise, thereby allowing the detection of minute changes in the effective signal amidst interference noise. The detector is available in two spectral ranges: 400–1000 nm and 1000–1700 nm.

### Features

- Wavelength range: 400–1700 nm
- Compact housing
- Excellent common-mode rejection ratio
- SMA output connector



### Applications

- Spectroscopy
- Optical coherence tomography
- Heterodyne detection
- Optical delay measurements

### Specifications

Model	BPD230A-10M	BPD230A-75M	BPD230A-200M	BPD230A-400M
Material	Si			
Wavelength Range	320-1000nm			
Input Interface	Free space			
Sensitivity	0.5A/W @760nm			
Photosensitive Area	0.4mm			
Common-Mode Rejection Ratio	>25dB			
Bandwidth <sup>a</sup>	DC-10MHz	DC-75MHz	DC-200MHz z	DC-400MHz z
Rise Time <sup>a</sup>	36ns	4.5ns	2ns	1ns
Transimpedance Gain <sup>b</sup>	1MV/A	165kV/A	28.6kV/A	10kV/A
Saturation Optical Power	8uw	48uw	280uw	800uw
Noise Voltage <sup>a</sup>	10mV RMS	8mV RMS	4mV RMS	3.5mV RMS
Equivalent Noise Power	4.7pW/√ Hz	16.1pW/√ Hz	13.9pW/√ Hz <sup>c</sup>	84pW/√ Hz z

Model	BPD230C-5M	BPD230C-50M	BPD230C-150M	BPD230C-300M
Material	InGaAs			
Wavelength Range	1000-1700nm			
Input Interface	Free space			
Sensitivity	0.9A/W @1550nm			
Photosensitive Area	0.2mm			
Common-Mode Rejection Ratio	>25dB			
Bandwidth <sup>a</sup>	DC-10MHz	DC-75MHz	DC-150MHz	DC-300MHz
Rise Time <sup>a</sup>	36ns	4.5ns	2.2ns	1.2ns
Transimpedance Gain <sup>b</sup>	1MV/A	165kV/A	30kV/A	18kV/A
Saturation Optical Power	4.4uw	27uw	148uw	220uw
Noise Voltage <sup>a</sup>	9mV RMS	8mV RMS	4mV RMS	5mV RMS
Equivalent Noise Power	2.6pW/√Hz	11.4pW/√Hz	30.5pW/√Hz	16.5pW/√Hz

General Detector Parameters	Typical value
Maximum Output Amplitude <sup>a</sup>	±2.0V
Operating Voltage	12V
Operating Current	<200mA
Output Impedance	50Ω
Output Coupling Mode	DC
Output Connector	SMA female
Operating Temperature	-20~65°C
Storage Temperature	-40~85°C

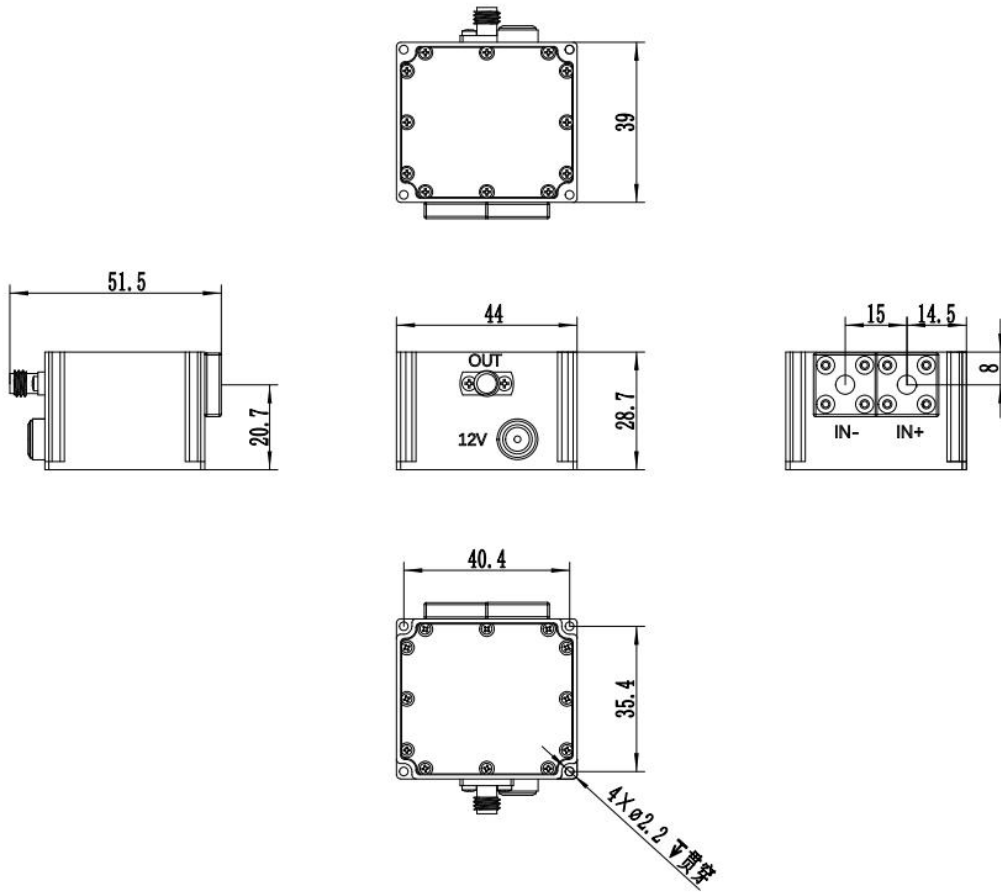
Notes:

*a* For a 50 Ω load

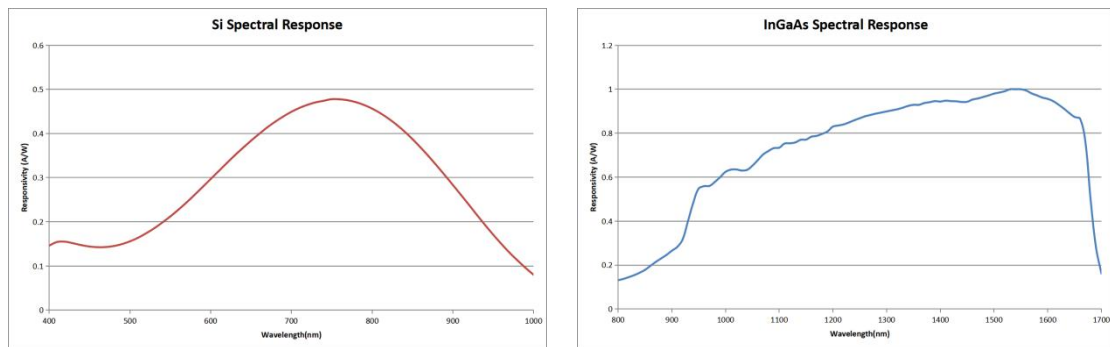
*b* For a high-impedance load

*c* DC-100 MHz

## Machine Dimensions



## Response Curve



Note: The response curve shows typical values and is for reference only.

## 1. 发货清单

NO	Item Name	Quantity	Unit	Notes
1	Photoelectric Detector	1	Piece	
2	12V Power Supply	1	Piece	
3	SMA-to-BNC RF Cable	1	Stick	

