

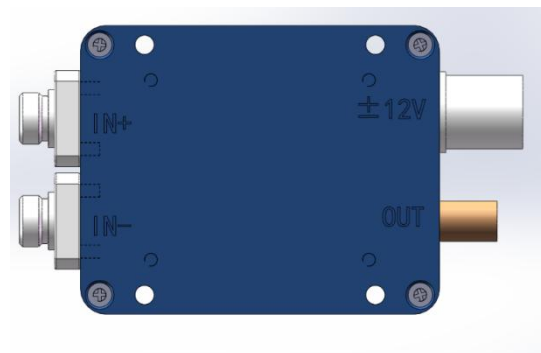
BPD465 Balanced Photodetector

1. Overview

The balanced photodetector contains two photodiodes and a low-noise transimpedance amplifier, where the two photodiodes are matched to each other for excellent common mode rejection ratio, and the detector subtracts the two detected signals to eliminate the common mode noise, so that small variations of the effective signal can be obtained from the interfering noise. The detector is available in two spectral ranges, 400-1000nm and 1000-1700nm.

2. Features

- Covers wavelength range 400-1700nm
- Compact housing
- Excellent common mode rejection ratio
- SMA output connector



3. Applications

- OCT
- DAS
- Outlier detection
- Optical delay measurement

4. Specifications

Items	BPD465A-10M	BPD465A-75M	BPD465A-200M	BPD465A-400M
Materials	Si			
Wavelength	400-1000nm			
Input connector	FC 法兰			
Responsivity	0.5A/W @780nm			
Common mode rejection ratio	>25dB			
Bandwidth ^a	DC-10MHz	DC-75MHz	DC-200MHz	DC-400MHz
Rise time ^a	36ns	4.5ns	1.8ns	1ns
Gain ^b	1MV/A	165kV/A	30kV/A	10kV/A
Saturated Optical power	8uw	48uw	267uw	800uw
Noise voltage ^a	9mV RMS	8mV RMS	4mV RMS	3.5mV RMS
NEP	4.7pW/√ Hz	20.5pW/√ Hz	56pW/√ Hz	84pW/√ Hz

Items	BPD465C-10M	BPD465C-75M	BPD465C-200M	BPD465C-400M
Materials	InGaAs			
Wavelength	1000-1700nm			
Input connector	FC 法兰			
Responsivity	0.9A/W @1550nm			
Common mode rejection ratio	>25dB			
Bandwidth ^a	DC-10MHz	DC-75MHz	DC-200MHz	DC-400MHz
Rise time ^a	36ns	4.5ns	1.8ns	1ns
Gain ^b	1MV/A	165kV/A	30kV/A	10kV/A
Saturated Optical power	4.4uw	27uw	148uw	445uw
Noise voltage ^a	9mV RMS	8mV RMS	4mV RMS	3.5mV RMS
NEP	2.6pW/√Hz	11.4pW/√Hz	32pW/√Hz	48pW/√Hz

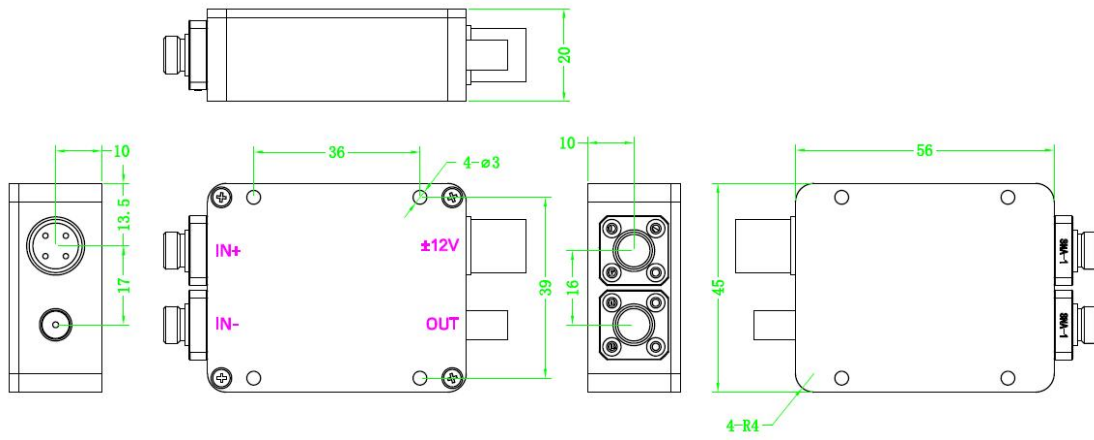
Params	Detector Common Parameters
Maximum output amplitude ^a	±2.0V
Operating voltage	±12V
Operating Current	<200mA
Output Impedance	50Ω
Output coupling mode	DC
Output connector	SMA female
Operating temperature	-20~65°C
Storage temperature	-40~85°C

Remarks:

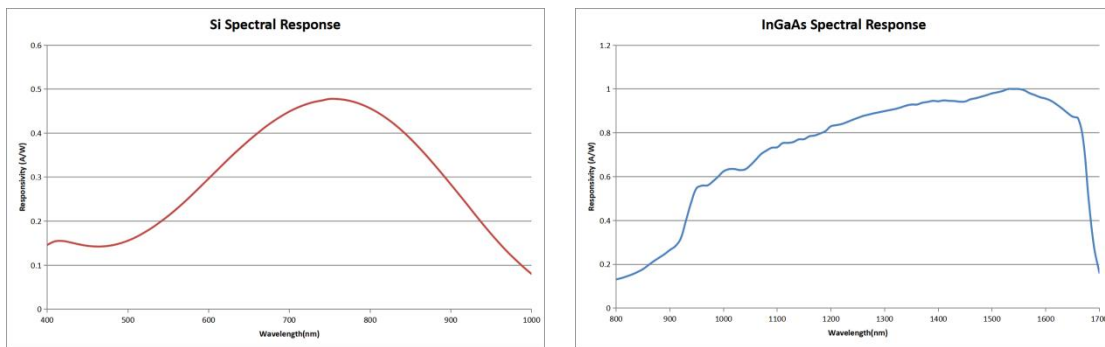
a : For 50Ω loads

b : For high resistance loads

5. Mechanical dimensions



6. Response curve



Note: Response curves are typical values for reference only.