

# PD10C Series Amplified Photodetector



## ❖ Overview

The PD10C series is a high sensitivity, low noise, wide dynamic range, amplified photodetector designed for a variety of test and measurement applications. This device incorporates a high performance InGaAs(Si) PIN photodiode and is well suited for evaluation of pulsed lasers and modulation applications. This model has good linearity over the input range, resulting in low analog signal distortion. The housing has an FC optical connector and is compatible with FC/PC and FC/APC connectors.

## ❖ Features

- ◆ High temperature stability
- ◆ Low noise, high gain
- ◆ M6 threaded hole for easy installation
- ◆ All-metal housing, excellent shielding performance

## ❖ Applications

- ◆ Detection of low light signals
- ◆ Detection of laser pulses
- ◆ RF and pulse waveform extraction of laser light sources
- ◆ Outlier laser beat frequency signal detection

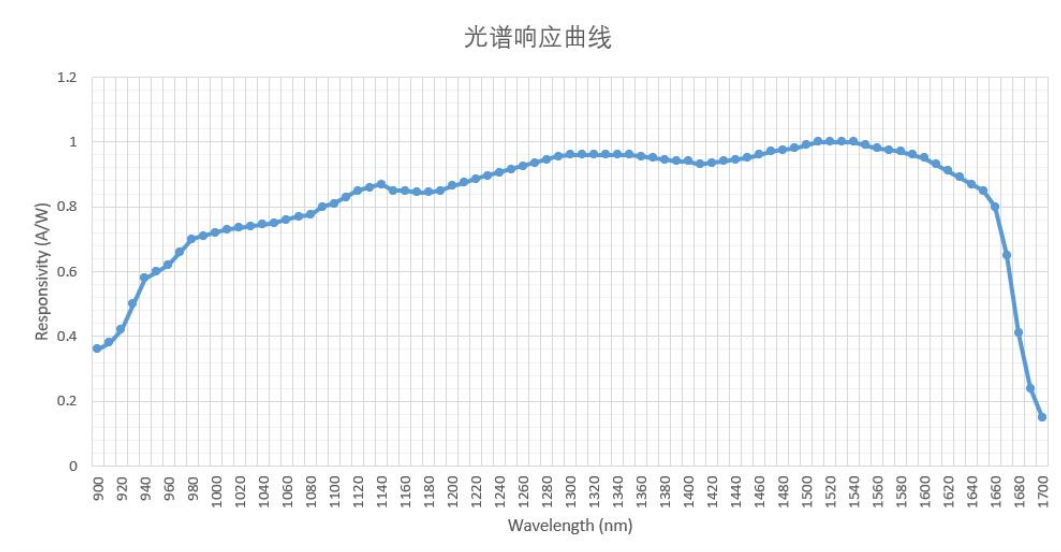
## ❖ Specification

Item	PD10C-NIR-50k	PD10C-NIR-300k	PD10C-NIR-700k
Materials	InGaAs		
Wavelength	800-1700nm		
Input Connector	FC		
Responsiveness	0.9A/W @ 1550nm		
Bandwidth	DC-50kHz	DC-300kHz	DC-700kHz
Rise time	7us	1us	500ns
Max Gain	$0.9 \times 10^6 \text{V/W}$	$1.8 \times 10^5 \text{V/W}$	$4.6 \times 10^4 \text{V/W}$
Minimum optical power	-53.6dBm (4.4nw)	-47.8dBm (16.7nw)	-43.7dBm (43nw)
Saturated optical power	-23.8dBm (4.2uw)	-15.6dBm (27.8uw)	-6dBm (0.25mw)
Output Bias Voltage@HiZ	10mV		
Noise voltage@HiZ	<4mVpp	<3mVpp	<2.5mVpp
Maximum output amplitude@HiZ	5.0V		
Operating Voltage	9-12 VDC		
Operating current	<100mA		
Output connector	SMA		
Output Impedance	50 $\Omega$		
Output coupling method	DC		
Operating temperature	-20~65°C		
Storage temperature	-40~85°C		
Dimension	81mm x 64mm x 25mm (LxWxD, without connector)		

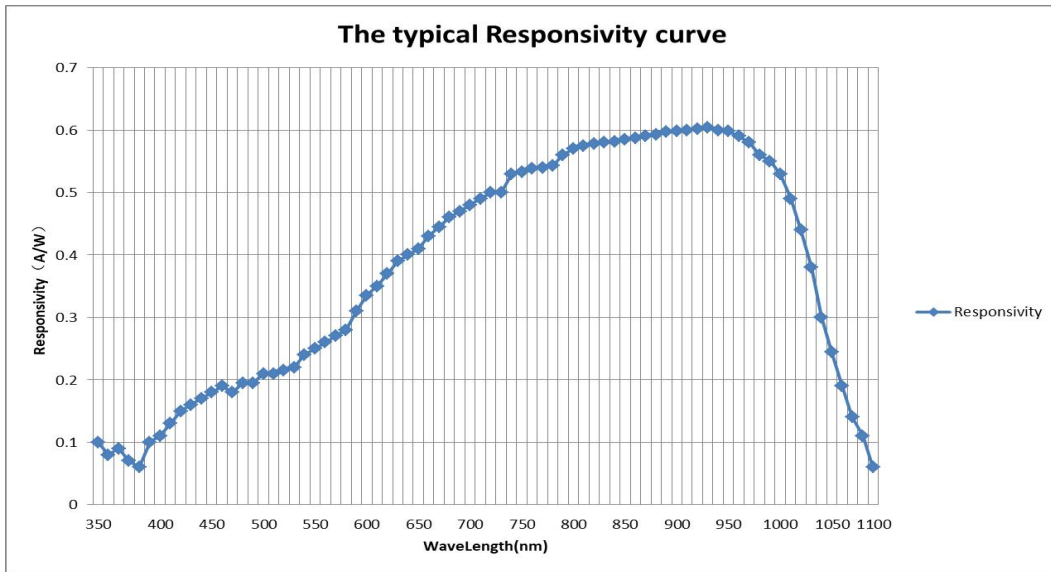
Item	PD10C-VIS-50k	PD10C-VIS-300k	PD10C-VIS-700k
Materials	Si		
Wavelength	400-1100nm		
Input Connector	FC		
Responsiveness	0.55A/W @ 850nm		
Bandwidth	DC-50kHz	DC-300kHz	DC-700kHz
Rise time	7us	1us	500ns
Max Gain	$0.55 \times 10^6 \text{V/W}$	$1.1 \times 10^5 \text{V/W}$	$2.8 \times 10^4 \text{V/W}$

Minimum optical power	-51.4dBm (7.3nw)	-45.6dBm (27.3nw)	-39.7dBm (107nw)
Saturated optical power	-20.4dBm (9.1uw)	-13.4dBm (45.5uw)	-7.5dBm (0.18mw)
Output Bias Voltage@HiZ	10mV		
Noise voltage@HiZ	<4mVpp	<3mVpp	<2.5mVpp
Maximum output amplitude@HiZ	5.0V		
Operating Voltage	9-12 VDC		
Operating current	<100mA		
Output connector	SMA		
Output Impedance	50 Ω		
Output coupling method	DC		
Operating temperature	-20~65°C		
Storage temperature	-40~85°C		
Dimension	81mm x 64mm x 25mm (LxWxD, without connector)		

## Response curve



PD10C-NIR 响应曲线



PD10C-VIS 响应曲线

## Dimension

