

PD58 Series Large Photosensitive PD Photodetector

Overview

The PD58 is a photodetector with an integrated amplifier circuit, designed for use in free-space optical systems. The device consists of a photodiode, a transimpedance amplifier, and RF connectors, all housed in an aluminum enclosure with a BNC connector at the output. Custom specifications are available.

Features

- SM1 female connector
- Customizable specifications
- High stability
- Large photosensitive area



Applications

- Detection of laser pulses
- Scientific experiments
- Analytical instruments

Specifications

Model	PD58A-100k	PD58A-1M	PD58A-10M	PD58A-20M
Material	Si			
Wavelength Range	320-1100nm			
Input Interface	Free Space (SM1 Internal Thread)			
Sensitivity	0.45A/W @850nm			
Photosensitive Area Diameter	5.8x5.8mm			
Bandwidth b	DC-100k	DC-1M	DC-10M	DC-20M
Rise Time b	3.5us	350ns	35ns	18ns
Transimpedance Gain a	1MV/A	200KV/A	20KV/A	8KV/A
Saturation Power	9uW	45uW	450uW	1.1mW

Output Bias	240mv	60mv	6mv	4mv
Voltage a				
Noise Voltage b	12mv	8mv	6mv	5mv
Equivalent Noise Power	5.6pW/√Hz	6.2pW/√Hz	21.5pW/√Hz	30.6pW/√Hz

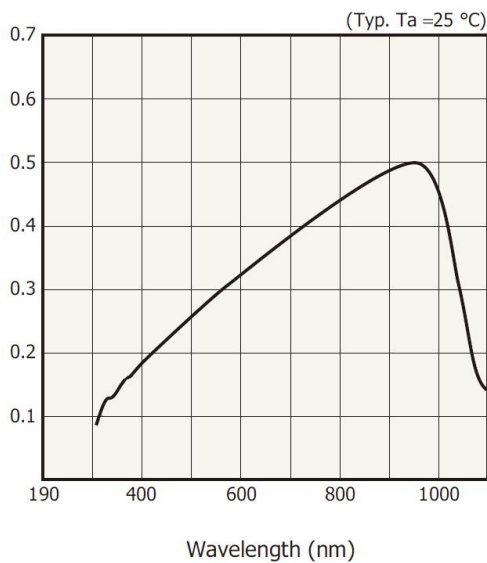
General Detector Parameters	Typical value
Maximum Output Amplitude a	4.5V
Operating Voltage	±12V
Operating Current	<200mA
Output Impedance	50Ω
Output Coupling Mode	DC
Output Connector	BNC female
Operating Temperature	-40~65°C
Storage Temperature	-40~85°C

Notes:

a For high-impedance loads

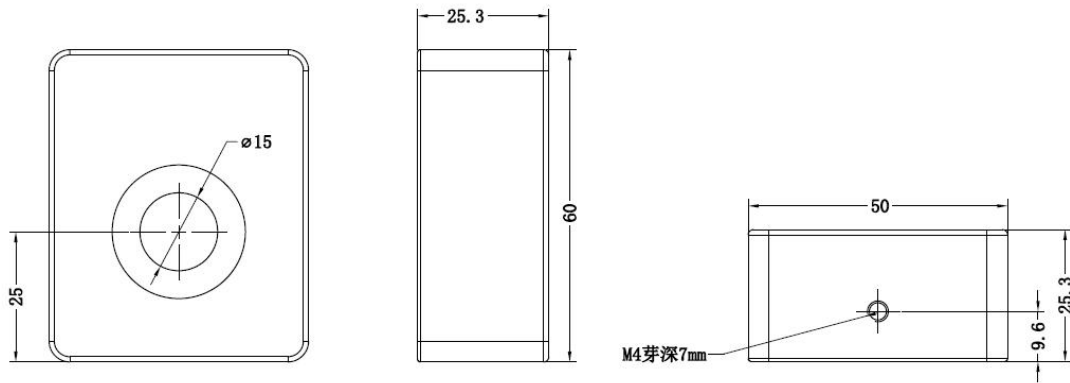
b For 50Ω loads

Response Curve

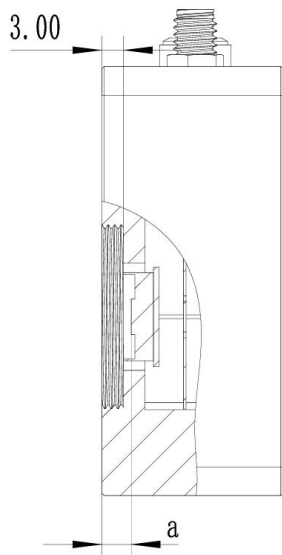


Note: The response curve shows typical values and is for reference only.

Machine Dimensions



Schematic Diagram of Light-Sensitive Distance Measurement



Distance	A Series
a=	8.2mm

Packing List

NO	Item Name	Quantity	Unit	Notes
1	Photodetector	1	each	
2	Bipolar Linear Power Supply	1	each	±12V
3	Dual-Ended BNC RF Cable	1	each	