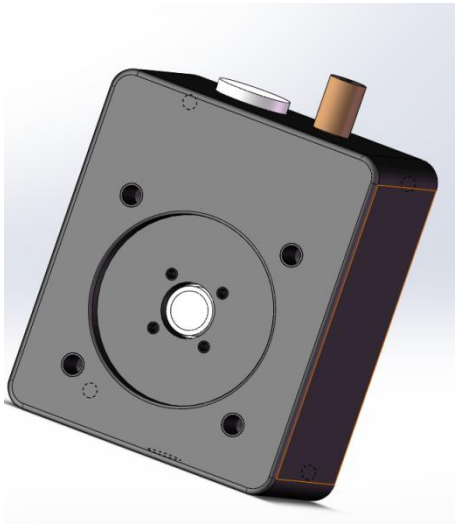
PD1650 1654nm Gas Detection Photodetector

Overview

The PD1650 is a photodetector with an integrated amplifier, designed for free-space optical systems. The device incorporates a photodiode, a transimpedance amplifier, and RF connectors, all housed in an aluminum enclosure. It features an SMA connector at the output to minimize size and maximize frequency response, and the product line covers a wide range of bandwidths.



Features

- Wavelength range: 900–1750 nm
- Bandwidth: from kHz to MHz
- Low noise
- SMA output connector

Applications

- Detection of weak light signals
- Detection of laser pulses
- Scientific experiments
- Analytical instruments

Specifications

Model	**PD1650C-20M**
Material	InGaAs
Wavelength Range	900-1750nm
Photosensitive Area Size	1mm
Sensitivity	1.0A/W @1654nm
Bandwidth	DC-20MHz
Rise Time [b]	18ns
Gain [a]	$1.1x10^5$V/W
Saturation Power	45uw
Maximum Output Amplitude [a]	5V
Noise Voltage [b]	18mV
Equivalent Noise Power	8.1pW/ √ Hz

General Sensor Parameters	**Typical value**
Operating Voltage	9-12V
Operating Current	<200mA
Output Impedance	50Ω
Output Coupling Method	DC
Output Connector	SMA female
Operating Temperature	-20~65℃
Storage Temperature	-40~85℃

Notes:

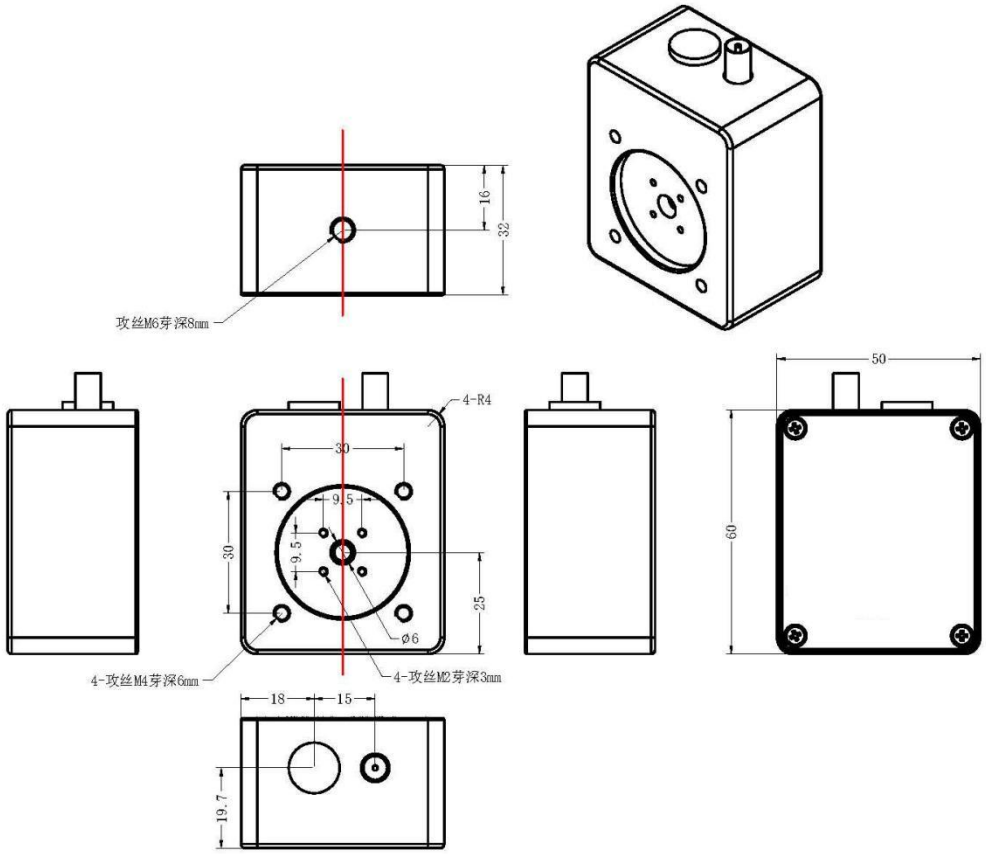
a For high-impedance loads

b For 50Ω loads

Response Curve

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

Machine Dimensions



Packing List

No.	Item	Qty	Unit	Remarks
1	Photodetector	1	Piece	—
2	Power Adapter	1	Piece	12 V
3	SMA-to-BNC RF Cable	1	Piece	—