

APD20 series avalanche photodetectors

OVERVIEW

InGaAs avalanche photodetectors (APD) have higher sensitivity and lower noise than standard PIN detectors, Suitable for low optical power applications, Our detectors have integrated temperature sensors that adjust the bias voltage to compensate for the effect of temperature changes on the M-factor. The detector is single-supply for ease of use and housing with an FC optical connector compatible with FC/PC and FC/APC connectors.

FEATURES

- ◆ M-factor temperature compensation
- ◆ APD overcurrent protection
- ◆ Noise equivalent power as low as $1.2\text{pW}/\sqrt{\text{Hz}}$
- ◆ Bandwidth 20M/100M/200M optional
- ◆ Low noise, high gain
- ◆ DC12V single supply operation
- ◆ SMA output
- ◆ Support customization
- ◆ All-metal shell with excellent shielding performance
- ◆ M3/M6 threaded holes for easy installation and use

APPLICATIONS

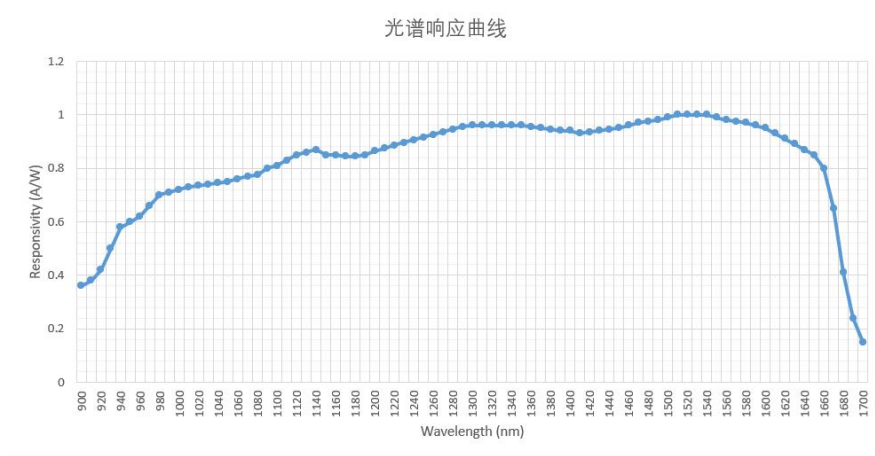
- ◆ Detect ultra-weak light signals
- ◆ Detect fast laser pulses

- ◆ Raman fiber optic temperature monitoring system DTS
- ◆ DVS/DAS
- ◆ OTDR

SPECIFICATIONS

Item	APD20-200M	APD20-100M	APD20-20M
Detector	InGaAs		
Wavelength Range	800-1700nm		
Optical Input	FC		
Active Area	50um		
Peak Response	9A/W @ 1550nm (M = 10)		
Bandwidth	DC-200MHz	DC-100MHz	DC-20MHz
Rise Time	1.8ns	3.5ns	18ns
Maximum gain@HiZ	$0.9 \times 10^5 \text{V/W}$	$3.2 \times 10^5 \text{V/W}$	$9 \times 10^6 \text{V/W}$
Minimum optical power@1550nm	-45dBm	-46dBm	-55dBm
Saturated optical power@1550nm	-15.5dBm	-21dBm	-35dBm
Noise voltage	<8mV	<10mV	<10mV
Maximum output amplitude@HiZ	2.5V	2.5V	2.5V
Work voltage	12VDC \pm 10%		
Work current	<100mA		
Output connector	SMA		
Output impedance	50 Ω		
Output coupling mode	DC		
Work temperature	-20~65°C		
Storage temperature	-40~85°C		
Package Size	82.5mm x 64mm x 25mm (长 x 宽 x 厚, 不含连接器)		

RESPONSE CURVE



MECHANICAL DRAWING

