APD210 series avalanche photodetectors

OVERVIEW

Avalanche photodetectors (APD) have higher sensitivity and lower noise than standard PIN detectors, This makes it suitable for use in 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, easy to use, designed for spatial coupling, and optionally available with FC optical connectors.

FEATURES

- M-factor temperature compensation
- APD overcurrent protection
- Up to 1.8G bandwidth
- Low noise, high gain
- DC12V single supply operation
- All-metal shell with excellent shielding performance
- M6 threaded holes for easy installation and use
- Free space coupling, 30mm optical cage system mounting holes

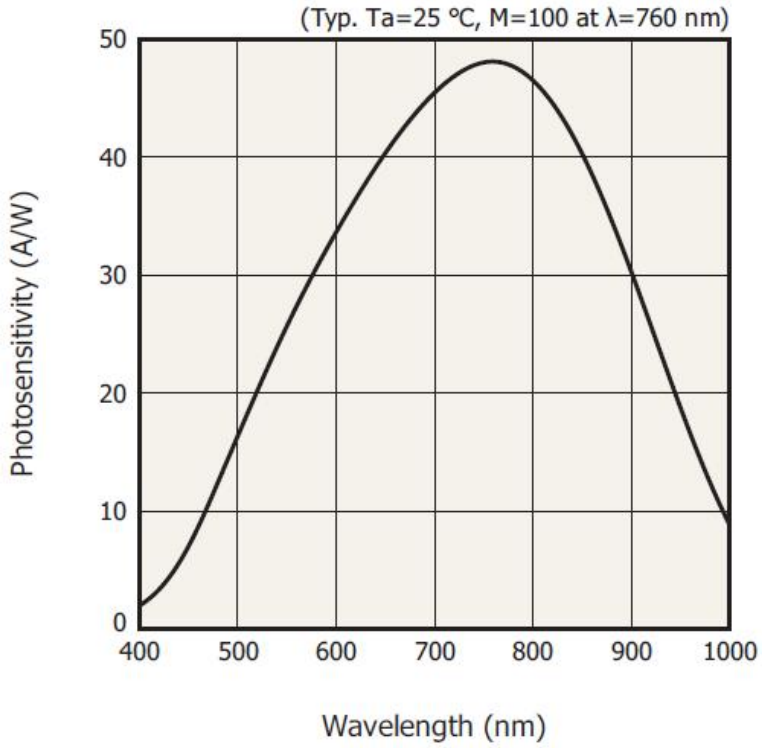
APPLICATIONS

- Detect ultra-weak light signals
- Ultrafast laser pulses
- Lidar
- Industrial testing
- Low light communication

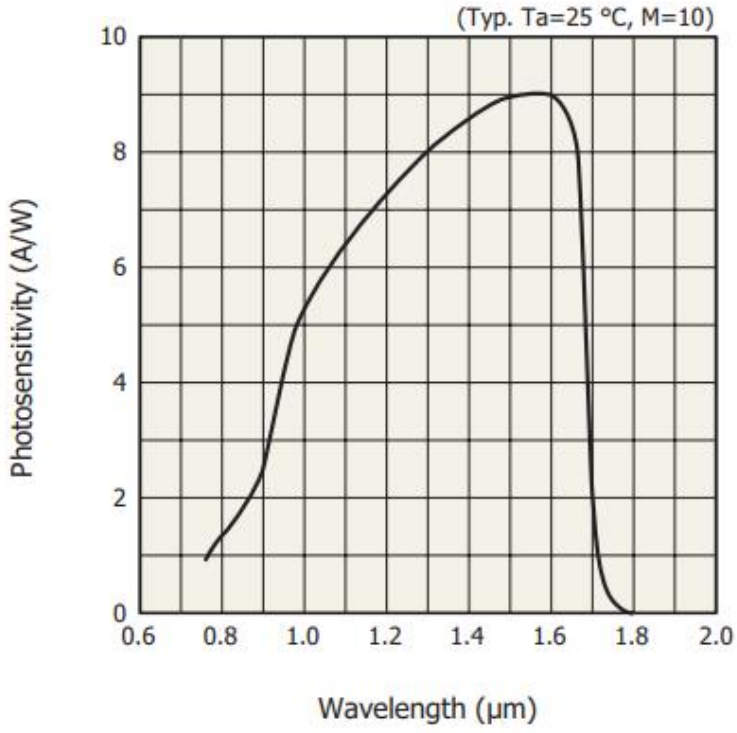
SPECIFICATIONS

Item	APD210A-1G	APD210A-1.8G	APD210C-1G
Detector	Si	Si	InGaAs
Wavelength Range	400-1100nm	400-1100nm	1000-1700nm
Optical Input	Free-Space	Free-Space	Free-Space
Active Area	200um	200um	200um
Peak Response	48A/W @ 760nm (M = 100)	48A/W @ 760nm (M = 100)	18A/W @ 1550nm (M = 20)
Bandwidth	DC-1GHz	DC-1.8GHz (200mV 小信号带宽)	DC-1GHz
Rise Time	500ps	250ps	500ps
Maximum gain@HiZ	$4.8x10^4$V/W	$2.4x10^4$V/W	$1.2x10^4$V/W
Noise voltage@50Ω	<3mVpp	<3mVpp	<3mVpp
Maximum output amplitude@50Ω	1.25V	1.25V	1.25V
Minimum optical power	120nw	240nw	500nw
Saturated optical power	50uw	100uw	210uw
Work voltage	12VDC ±10%		
Work current	<100mA		
Output connector	SMA		
Output impedance	50Ω		
Output coupling mode	DC		
Work temperature	-20~60℃		
Storage temperature	-40~85℃		
Package Size	60mm x 50mm x 32mm（长 x 宽 x 厚，不含连接器）		

RESPONSE CURVE



APD210A 响应曲线



APD210C 响应曲线

MECHANICAL DRAWING