FPD510-NIR series space-coupled photodetector

OVERVIEW

The FPD510-NIR series is a high-speed, amplified, spatially coupled photodetector that can be used in a variety of space-based optical signal test and measurement applications, including high-speed optical pulse detection.The unit integrates a high-performance InGaAs PIN photodiode for evaluating pulsed lasers and high frequency modulation applications.

FEATURES

- Low noise, high gain
- All-metal shell with excellent shielding performance
- M6 threaded hole for easy installation

APPLICATIONS

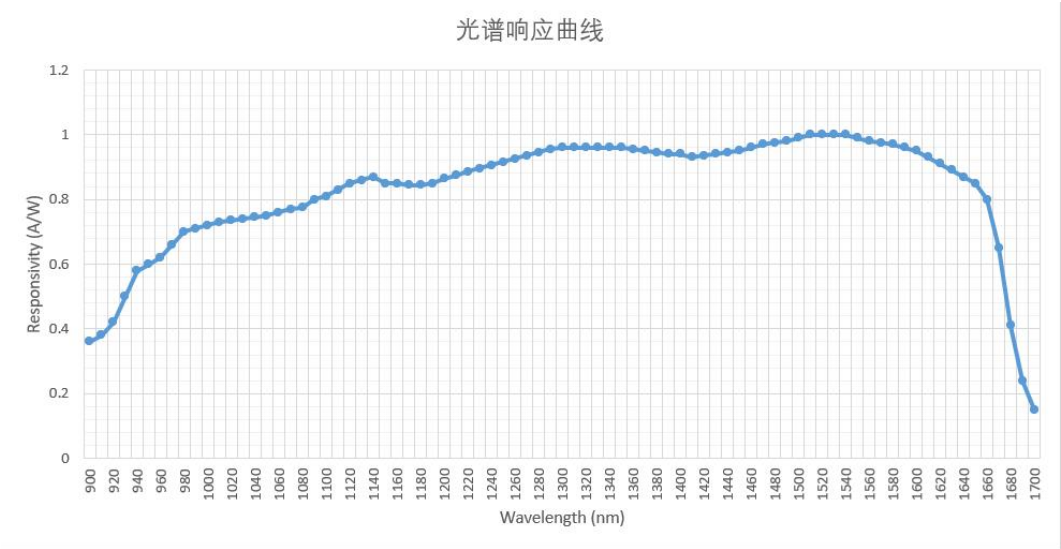
- LiDAR
- Industrial imaging
- Detect space weak light signals
- Detect fast space laser pulses
- RF and pulse waveform extraction from laser light sources
- Spatial heterodyne laser beat frequency signal detection

SPECIFICATIONS

Item	FPD510-NIR-250M	FPD510-NIR-500M
Detector	InGaAs	
Wavelength Range	800-1700nm	
Optical Input	Free space coupling	
Active Area	200um	

Peak Response	0.9A/W @ 1550nm	
Bandwidth	DC-250MHz	DC-500MHz
Rise Time	1.4ns	0.7ns
Maximum gain	$1.6x10^4$V/W	$1.1x10^3$V/W
Minimum optical power	-30.0dBm (1uw)	-23.5dBm (4.5uw)
Saturated optical power	-6.0dBm (0.25mw)	3.6dBm (2.3mw)
Noise voltage@50Ω	<16mV	<5mV
Maximum output amplitude@Hiz	4.0V	2.5V
Work voltage	12VDC ±10%	
Work current	<100mA	
Output connector	SMA	
Output impedance	50Ω	
Output coupling mode	DC	
Work temperature	-20~65℃	
Storage temperature	-40~85℃	
Package Size	60mm x 50mm x 32mm（长 x 宽 x 厚，不含连接器）	

RESPONSE CURVE



MECHANICAL DRAWING