

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

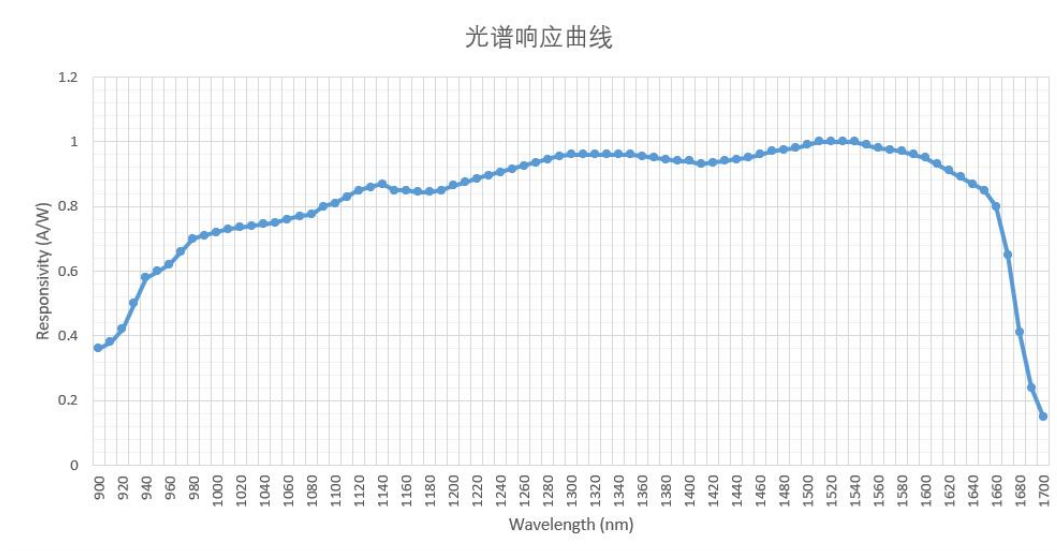
- ◆ LiDAR
- ◆ Industrial imaging
- ◆ Detect space weak light signals
- ◆ Detect fast space laser pulses
- ◆ RF and pulse waveform extraction from laser light sources
- ◆ Spatial heterodyne laser beat frequency signal detection

❖ SPECIFICATIONS

Item	FPD510-NIR-250M	FPD510-NIR-500M
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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@50 Ω	<16mV	<5mV
Maximum output amplitude@Hz	4.0V	2.5V
Work voltage	12VDC ±10%	
Work current	<100mA	
Output connector	SMA	
Output impedance	50 Ω	
Output coupling mode	DC	
Work temperature	–20~65℃	
Storage temperature	–40~85℃	
Package Size	60mm x 50mm x 32mm (LxHxD, without connector)	

❖ RESPONSE CURVE



❖ MECHANICAL DRAWING

