

PFD510 series space-coupled photodetector



❖ OVERVIEW

The PFD510 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 Si 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

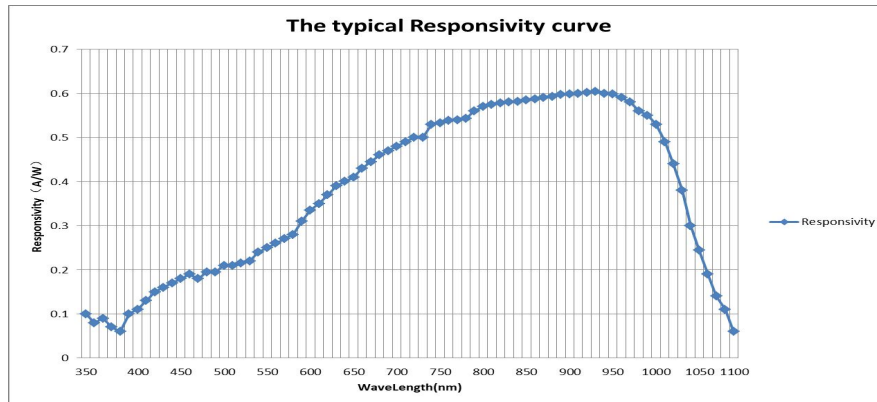
❖ APPLICATIONS

- ◆ 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	FPD510-20M	FPD510-250M	FPD510-500M
Detector	Si		
Wavelength Range	400-1100nm		
Optical Input	Free space coupling		
Peak Response	0.55A/W @850nm		
Active Area	1.2mm	0.2mm	0.2mm
Bandwidth	DC-20MHz	DC-250MHz	DC-500MHz
Rise Time	25ns	1.5ns	800ps
Maximum gain	11kV/W @850nm	11kV/W @850nm	660V/W @850nm
Minimum optical power	-30.5dBm(0.9uW) @850nm	-28.2dBm(1.5uW) @850nm	-22.1dBm(6.1uW) @850nm
Saturated optical power	-4.4dBm(0.36mW) @850nm	-4.4dBm(0.36mW) @850nm	5.8dBm(3.8mW) @850nm
Noise voltage@50Ω	<4mV	<16mV	<3mV
Maximum output amplitude@Hiz	3.7V	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

