Polarization diversity coherent reception module (InGaAs balanced photodetector 1510-1590nm, bandwidth 1GHz)

Product Description

The IdealPhotonics' PDR series polarization diversity reception module is designed for polarization-sensitive fiber optic sensing applications. This polarization diversity reception module coherently detects the two polarization states of the local oscillator and signal light separately, using two high-speed, low-noise balanced detectors for independent reception. It effectively solves the issue of coherent polarization states and is suitable for

applications in distributed fiber optic sensing, laser wind radar, optical coherence tomography, and other related fields.

Product features

High bandwidth、High Gain、Low Noise、Built-in low-noise isolation power supply

Part Number

MP-PDR-M-I-1000-F-A

Application area

Optical fiber sensing、 Laser wind radar、 Optical coherence tomography、 Spectral measurement

Core parameters

Wavelength	Bandwidth	Responsivity
1510-1590nm	1GHz	0.95A/W@1550nm

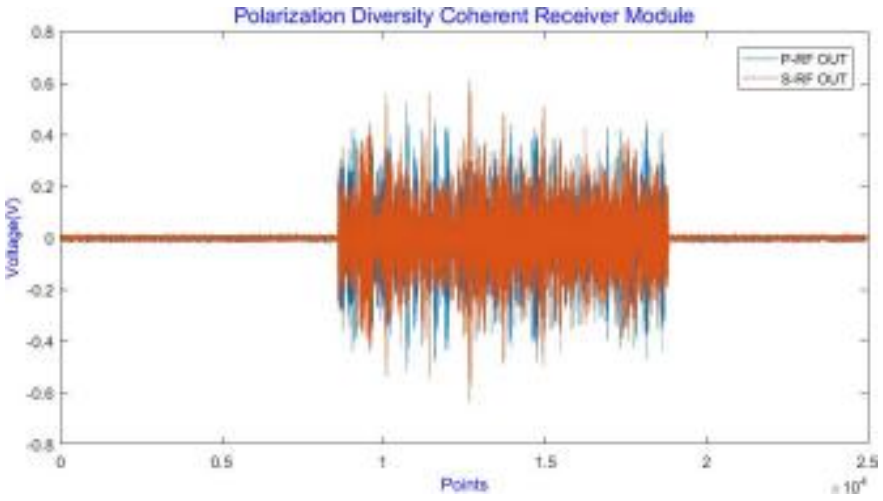
General Parameters

Wavelength	1510~1590（1300±40nm；1060±40nm Optional）	nm

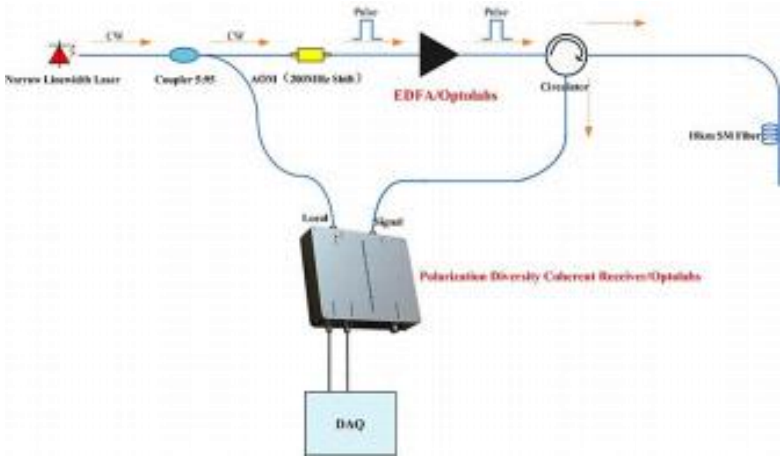
Bandwidth		100M	200M	350M	400M	500M	800M	1G	1.2G	1.5G	2G	2.5G	Hz
Detector Responsivity		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	A/W@1550nm
Transimpedance Gain		30K	30K	30K	10K	5K	30K	30K	30K	30K	15K	15K	V/A
Input Light	Local	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	mW
	Signal	300	300	300	300	300	300	300	300	300	300	300	μW
Polarization Extinction Ratio		22	22	22	22	22	22	22	22	22	22	22	dB
NEP		5	5	5	7	7	9	9	9	9	9	9	pW/Sqrt(Hz)
Supply Voltage		5	5	5	5	5	12	12	12	12	12	12	V
Supply Current		0.4(max)	0.4(max)	0.4(max)	0.4(max)	0.4(max)	0.3(max)	0.3(max)	0.3(max)	0.3(max)	0.3(max)	0.3(max)	A
Output Coupling		AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC	

Method												
Interface Type	ElectricalInterface: SMA					Fiber Interface: FC/APC						
Fiber Type	Local: PM; Signal: SM											
RF Output	SMA											
Dimensions	120*100*25mm (Optional 90*80*20mm)											

Testing:



Coherent signals of P polarization state and S polarization state.



Polarization diversity coherent reception optical circuit diagram.