

# Polarization diversity coherent reception module (InGaAs balanced photodetector 1510-1590nm, bandwidth 1.5GHz)



## ● 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-UPR-M-I-1500-F-A

## ● Application area

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

## ● Core parameters

Wavelength	Bandwidth	Responsivity
1510-1590nm	1.5GHz	0.95A/W@1550nm

## ● General Parameters

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

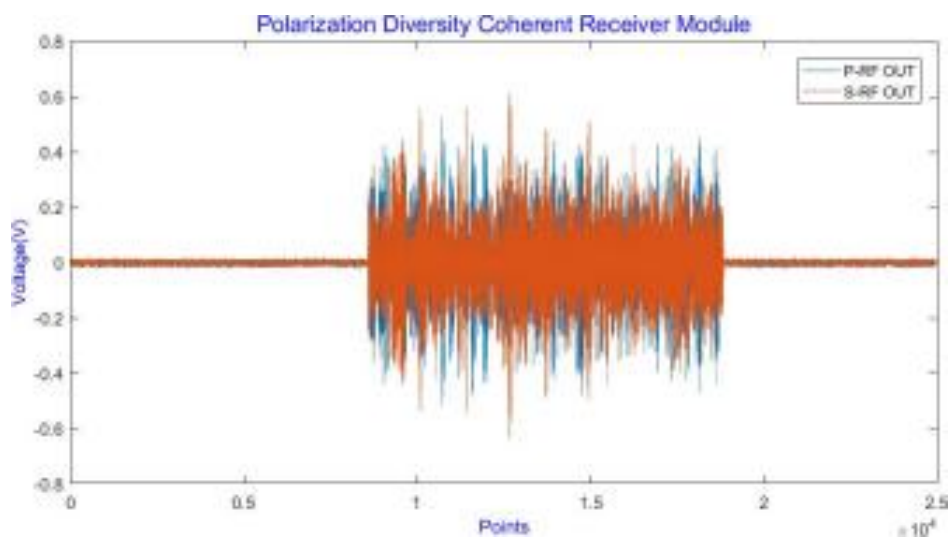


<b>Bandwidth</b>		100M	200M	350M	400M	500M	800M	1G	1.2G	1.5G	2G	2.5G	Hz
<b>Detector Responsivity</b>		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	A/W@ 1550nm
<b>Transimpedance Gain</b>		30K	30K	30K	10K	5K	30K	30K	30K	30K	15K	15K	V/A
<b>Input Light</b>	<b>Local</b>	<5	<5	<5	<5	<5	<5	<5	<5	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

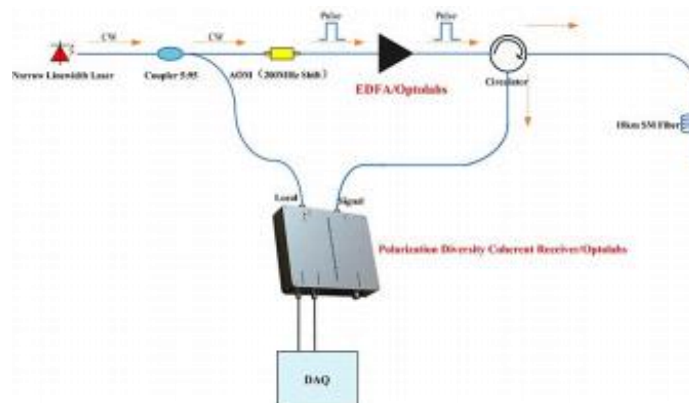


Method												
Interface Type	Electrical Interface: SMA						Fiber Interface: FC/APC					
Fiber Type	Local: PM ; Signal: SM											
RF Output	SMA											
Dimensions	120*100*25mm (Optional 90*80*20mm)											

### Testing:



Coherent signals of P polarization state and S polarization state.



Polarization diversity coherent reception optical circuit diagram.