

## InGaAs weak light coherent reception module

800-1700nm DC-350M



- **Product Description**

IdealPhotonics has developed a high-speed, low-noise analog coherent receiving module for optical coherent detection applications. This SVDC power coherent receiver module integrates a high-speed, low-noise analog optoelectronic balanced detector and a high-quality fiber coupler. During the manufacturing process, the splitter ratio and length of the coupler are



strictly controlled to further enhance the common-mode rejection ratio.

Building on the coherent reception, to further improve the optical signal-to-noise ratio (SNR), the high SNR coherent receiving module integrates a low-noise small-signal fiber amplifier to amplify weak backscattered light signals. This module is suitable for fiber optic sensing, lidar, wind measurement radar, and other fields.

- **Product features**

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

- **Part Number**

MP-CRM-M-I-350-F-D

- **Application area**

Fiber optic sensing、 Laser wind radar、 Optical coherence tomography、 Spectral measurement



## ● Core parameters

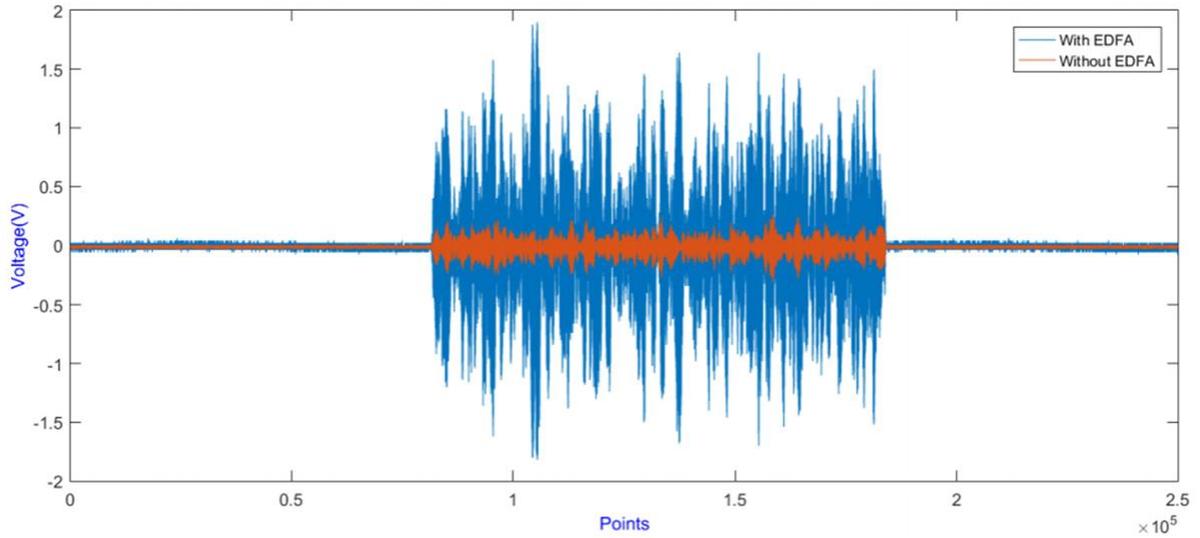
Wavelength	Bandwidth	Resopnsivity
800-1700nm	350MHz	0.95A/W@1550nm

## ● General Parameters

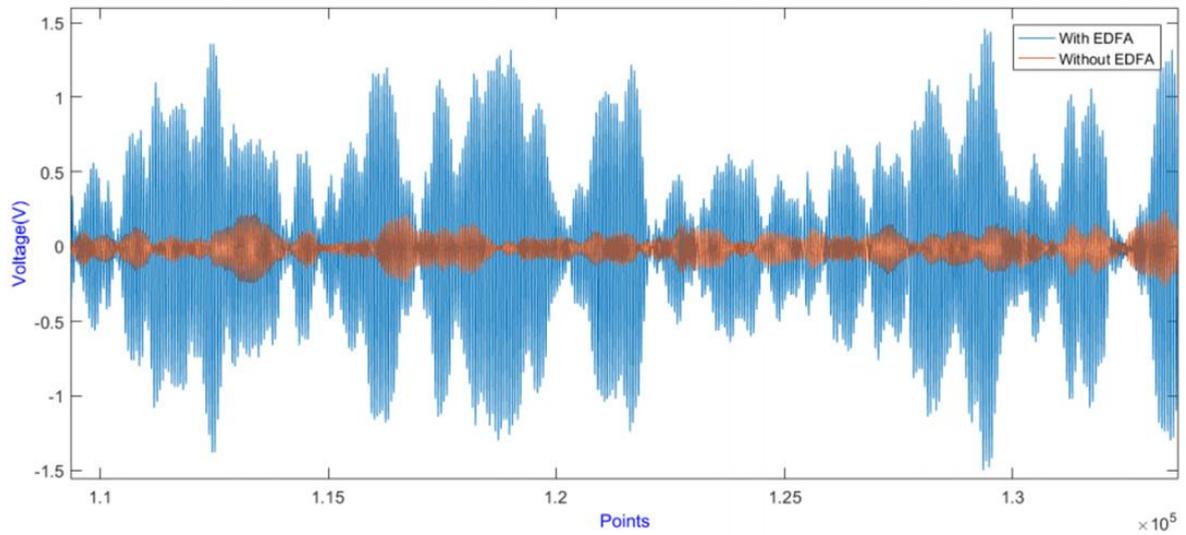
### Technical Parameters

Wavelength	800~1700	800~1700	800~1700	800~1700	800~1700	nm
Bandwidth	DC-100M	DC-200M	DC-350M	AC-800M	AC-1.6G	HZ
Detector Responsivity	0.95@1550nm	0.95@1550nm	0.95@1550nm	0.95@1550nm	0.95@1550nm	A/W
Transimpedance Gain	30k(60k)	30k(60k)	30k	30k	30k	V/A
Optical Input	Local	<5	<5	<5	<5	mW
	Signal	200	300	300	300	uW
Power Supply Voltage	5	5	5	12	12	V
Power Supply Current	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	A
Fiber Type	SMF-28(PM optional)					
Optical Input	FC/APC					
RF Output	SMA					
Dimensions	80*80*30mm					

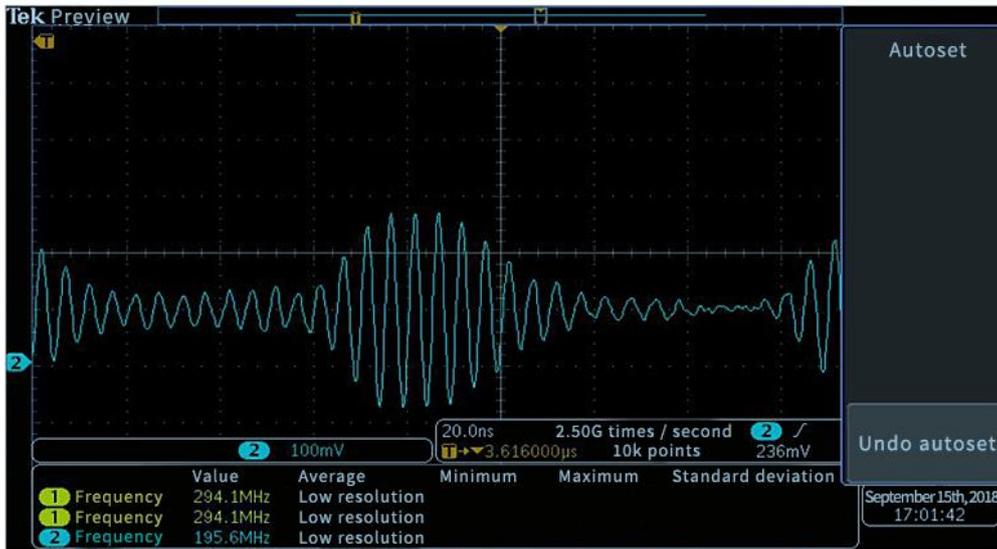
### Related test data



Comparison of interferometric beat frequency signals

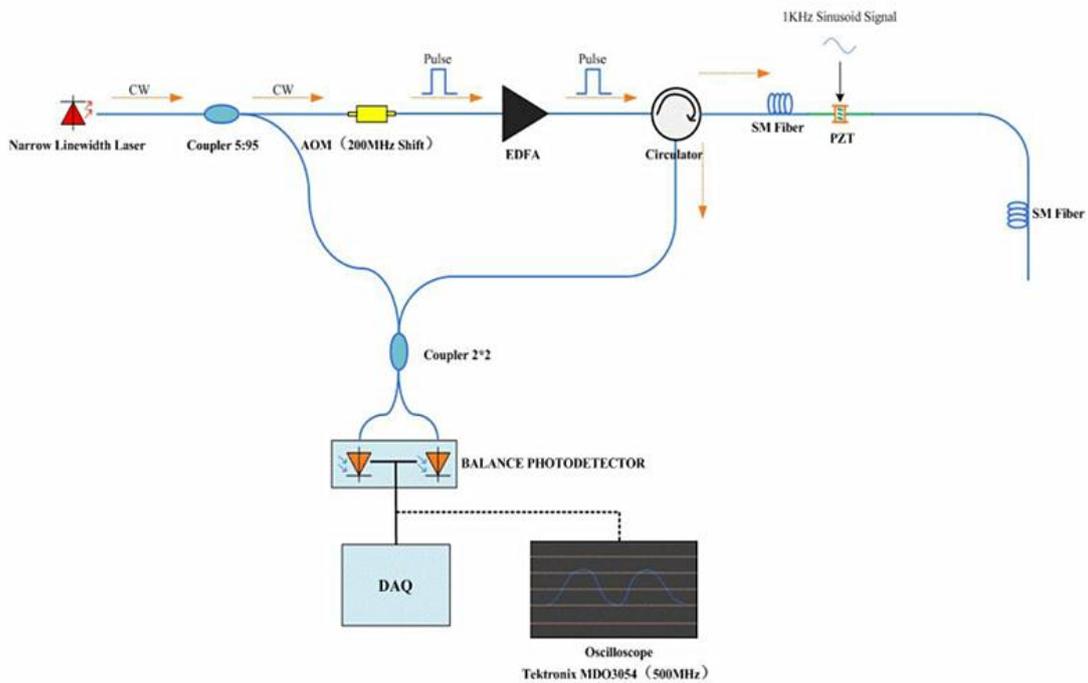


Local details of the signal

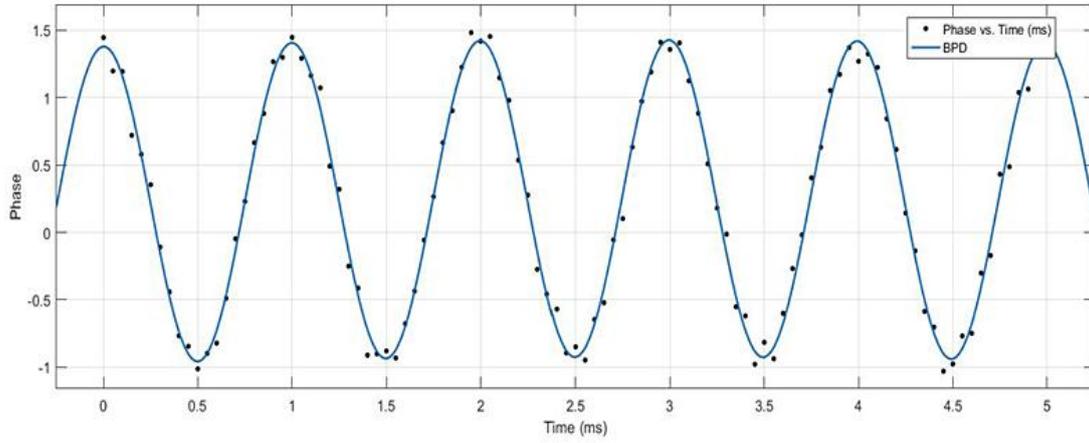


200MHz beat frequency signal (oscilloscope data)

Typical application areas



Coherent detection distributed optical fiber sensing



**PZT vibration point phase demodulation on optical fiber (1KHz)**