

InGaAs weak light coherent receiver module

800-1700nm DC-100M



- **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-100-F-D

- **Application area**

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



● Core parameters

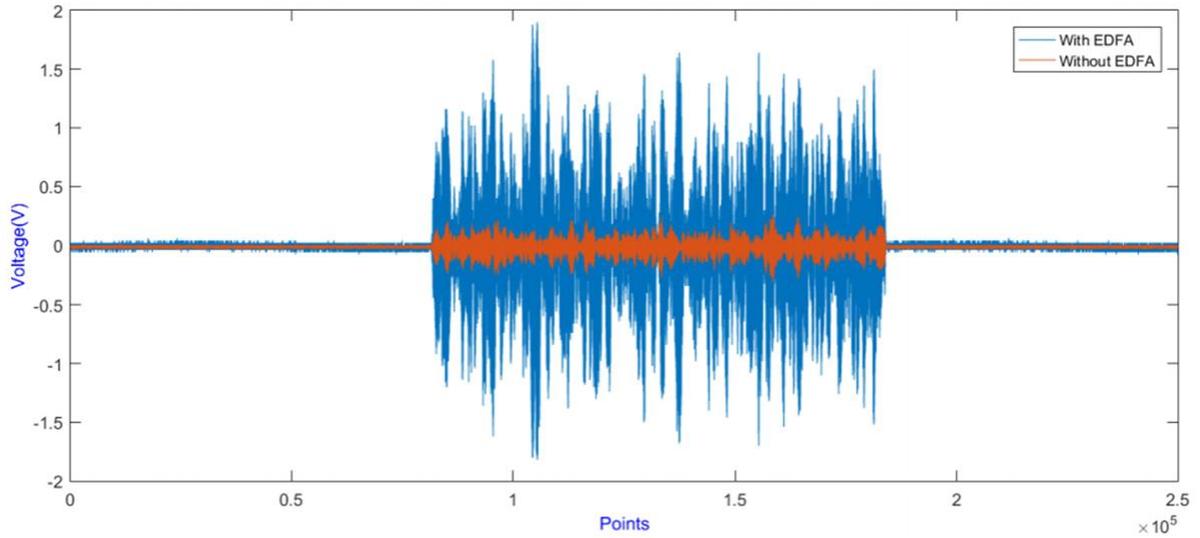
Wavelength	Bandwidth	Resopnsivity
800-1700nm	100MHz	0.95A/W@1550nm

● General Parameters

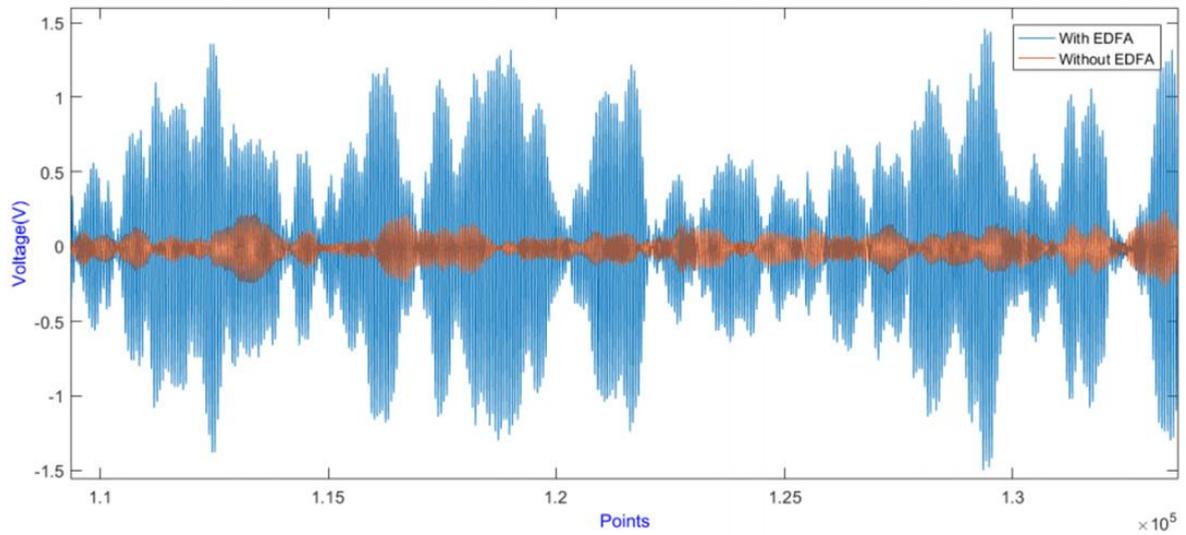
Technical Parameters

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					

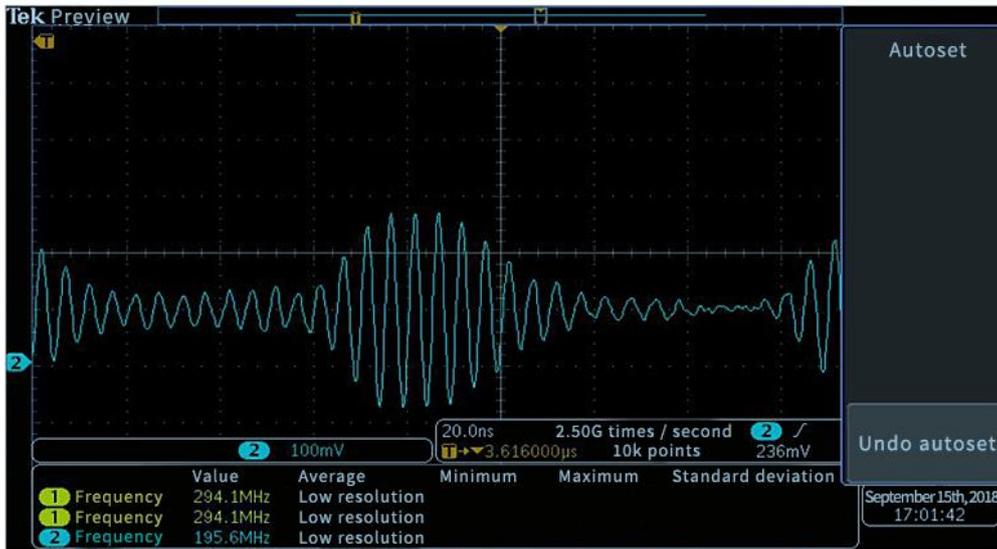
Related test data



Comparison of interferometric beat frequency signals

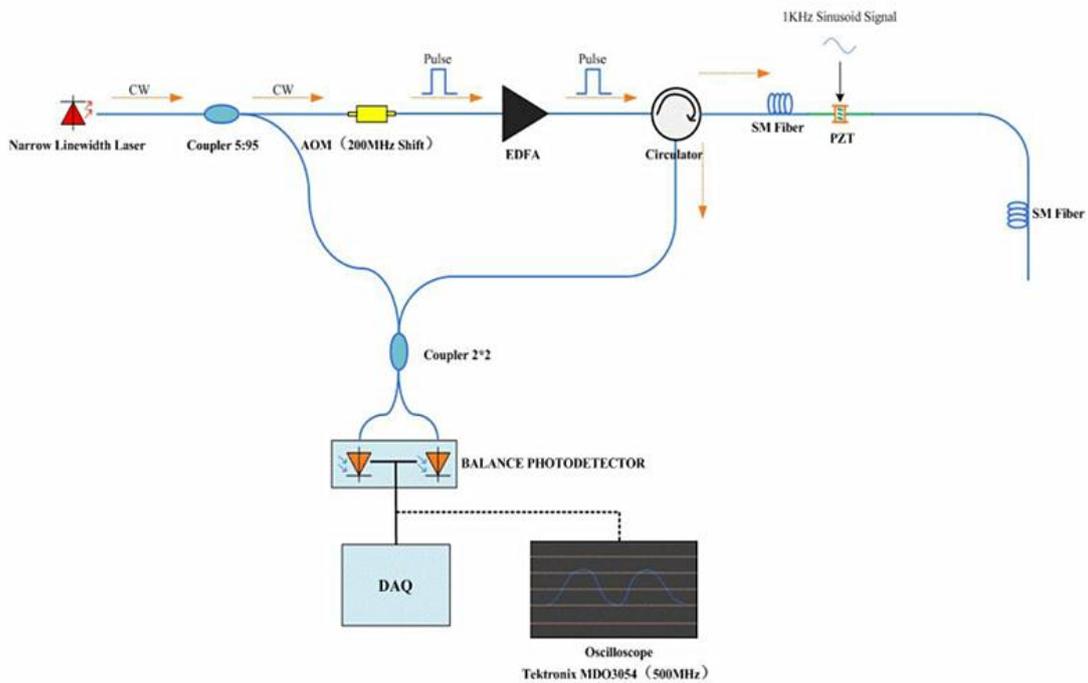


Local details of the signal

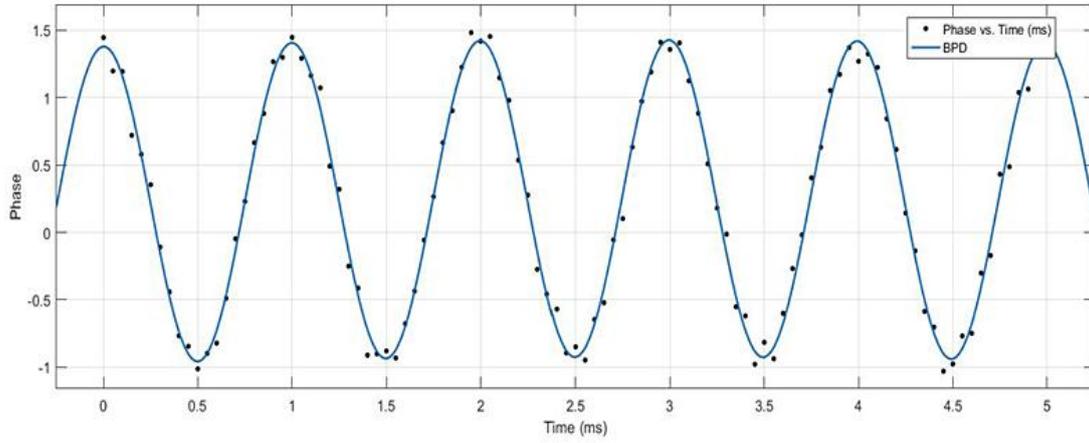


200MHz beat frequency signal (oscilloscope data)

Typical application areas



Coherent detection distributed optical fiber sensing



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