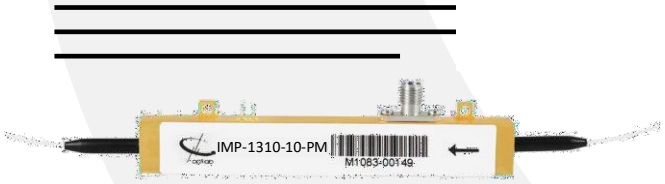
IMP-1310-10-PM



DEVICE

1310 nm, 10 GHz Intensity Modulator w/PM Output

OVERVIEW

The Optilab IMP-1310-10-PM is a 10 GHz Intensity Modulator that is manufactured with Annealed Proton Exchange(APE) process, it features a zero-chirp design and Polarization Maintaining(PM) fiber output. IMP-1310-10-PM features 10GHz E/O bandwidth, a highly linear transfer function and excellent extinction ratio. Applications include digital transmission up to 10 Gb/s, analog RFoF transmission to 10 GHz, optical pulse generation, mode-locked fiber laser and microwave optical link. The IMP-1310-10-PM is compatible with a wide variety of modulator drivers, and a separate bias port allows the modulator to operate at specific points of the transfer function. The IMP-1310-10-PM Modulator is designed for external modulation of 1310 nm laser up to 10 GHz or 12.5 Gb/s. It is also applicable for pulse generation for Master Oscillator Power Amplifier(MOPA) configuration. Due to proprietary APE technology, IMP-1310-10-PM can handle input power beyond 100mW and is a bias-stabilized modulator. It has a wide operating temperature tolerance ranging from -25°C to +70°C. Contact Optilab for more information.

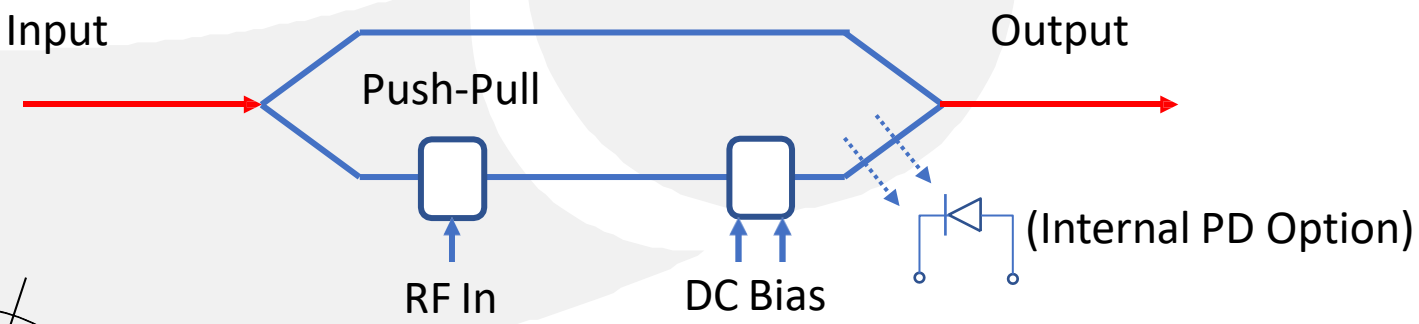
FEATURES

- PM fiber output
- High input power
- Zero chirp design
- Internal PD option
- 1270-1330nm operating wavelength
- High Extinction Ratio (HER) Available
- Temperature range of -25°C to 70°C

USE IN

- RF over fiber
- Pulse generation
- MOPA
- Analog modulation up to 10 GHz
- Active mode locked laser
- Satellite Link

FUNCTIONAL DIAGRAM



IMP-1310-10-PM

SPECIFICATIONS

GENERAL

Maximum Input Power	100 mW
Operating Wavelength	1270 nm to 1330 nm
Chirp Value	± 0.1 max.
Insertion Loss	4 dB typ., 5.0 dB max.
Extinction Ratio	> 20 dB min
Optical Return Loss	< -45 dB
S21 3 dB Bandwidth	10 GHz typ., 8 GHz min
S11 Return Loss	< -10 dB min up to 10 GHz
Vπ (RF Port)	< 6.6V typ @ 10 GHz.
RF Input Power	27 dBm
Impedance (RF Port)	50 Ω typ.
Vπ (DC Port)	< 6 V @ DC
Impedance (Bias Port)	1 MΩ min.
Internal PD Responsivity	> 10 mA/W

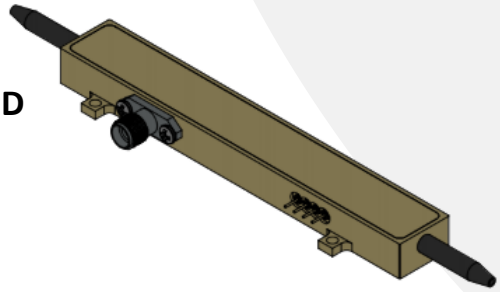
MECHANICAL

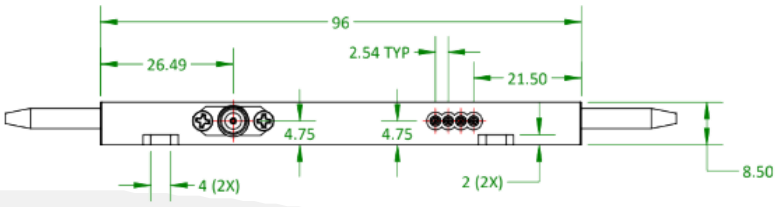
Operating Temperature	-25 °C to +70 °C (standard)
Storage Temperature	-45 °C to +85 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	PANDA – PM 400um buffer
Input Connector	PM FC/APC
Output Connector	PM FC/APC
Crystal Orientation	X-cut, y-propagating
Waveguide Process	Annealed Proton Exchange (APE)
Bias Port Connector	2 Pins/4Pins Optional
RF Port Connectors	Anritsu K female
Cabling	900 um loose tubing
Dimensions	66 mm x 22 mm x 9 mm

IMP-1310-10-PM

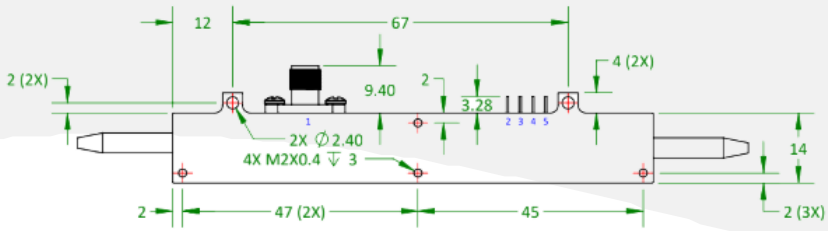
MECHANICAL DRAWING

1. IMP-1310-10-PM-PD Housing, W/Internal PD





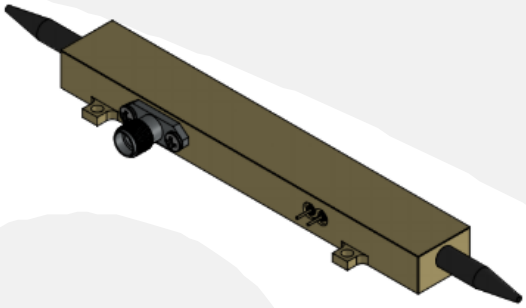
FRONT VIEW

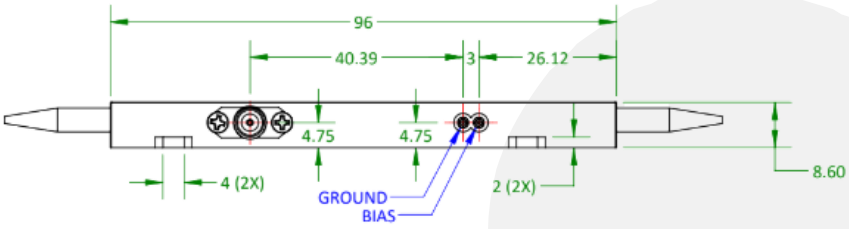


BOTTOM VIEW

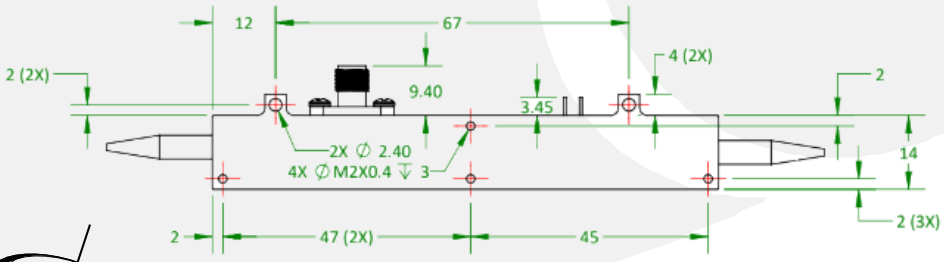
PIN #	Symbol
1	RF
2	GND
3	B
4	PD-A
5	PD-C

2. IMP-1310-10-PM Housing, No Internal PD





FRONT VIEW



BOTTOM VIEW

PIN #	Symbol
G	GND
B	DC BIAS

IMP-1310-10-PM

ORDERING OPTIONS

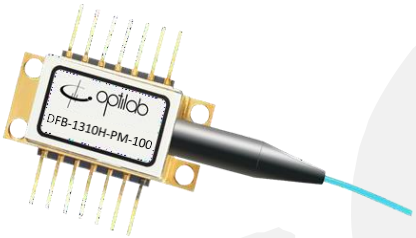
IMP-1310-10-PM-XX
XX PD: Internal PD

Available Accessories

- **BCB-4**

The Optilab BCB-4 is a compact bias control board designed for IMP-1310-10-PM modulator

- **DFB Laser Source**



The Optilab DFB-1310H-PM-100 laser has polarization maintaining high output power up to 100mW