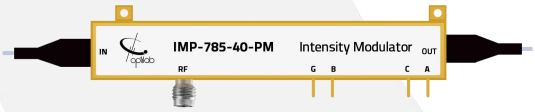
IMP-785-40-PM



DEVICE

785 nm, 40 GHz Intensity Modulator, PM Output

OVERVIEW

The Optilab IMP-785-40-PM Intensity Modulator is designed for analog modulation of up to 40 GHz for satellite links, antenna remoting, and RF over Fiber. Featuring an Annealed Proton Exchange (APE) waveguide, this modulator provides low insertion loss, low Vpi, and high-power handling capability. It has an operating temperature tolerance ranging from 0 °C to +60 °C, and superior insertion loss provides for its maximum transmission power. The IMP-785-40-PM uses Polarization Maintaining (PM) input and output fibers. Contact Optilab for more information.

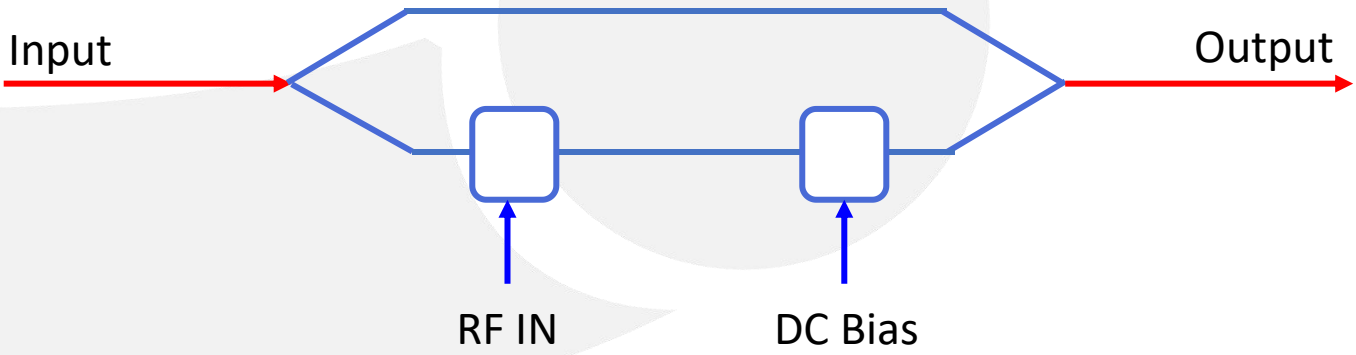
FEATURES

- 40 GHz Bandwidth
- Polarization Maintaining output
- 785 nm operating wavelength
- Low insertion loss, low Vpi
- High input power handling capability
- Push-Pull Electrode design

USE IN

- Analog Modulation
- Pulse Generation
- Research & Development
- Quantum Photonics
- Active Mode Locking Laser

FUNCTIONAL DIAGRAM



IMP-785-40-PM

SPECIFICATIONS

GENERAL

Material	$LiNbO_3$
Crystal Orientation	X-cut, Y-propagating
Waveguide Process	Annealed Proton Exchange
Operating Wavelength	780 nm to 805 nm
Maximum Input Optical Power	7 mW min. , 10 mW typ.
Insertion Loss	4.2 dB typ., 5 dB max.
Extinction Ratio	≥ 20 dB min. (≥ 30 dB min. HER version)
S21 Bandwidth, 3 dB drop	26 GHz min.
Electrical Return Loss S11	≤ -9 dB up to 30 GHz
RF Port Vpi	4 V typ.; 4.8 V max, @ 1 GHz
Bias Port Vpi	6 V typ.; 6.5 V max, @ 1 kHz
Chirp Value	< ± 0.1 (zero chirp design)
Optical Return Loss	≤ -45 dB
RF Port Connectors	V or K Female

MECHANICAL

Operating Temperature (Standard)	0°C to +60°C
Storage Temperature	-10°C to +70°C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	SM85-PS-U40D
Cabling	900 µm loose tube
Input/Output Connector	PM FC/APC, Request for Others
Dimensions	87mm x 14.5 mm x 10 mm

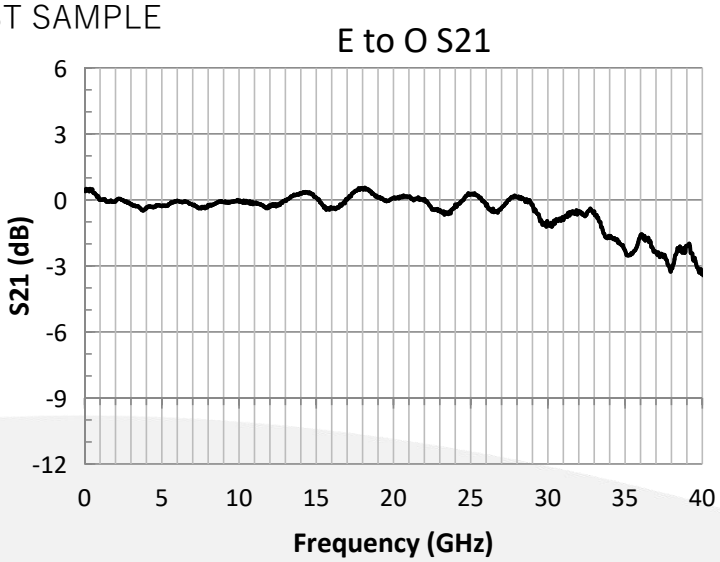
OPTIONS

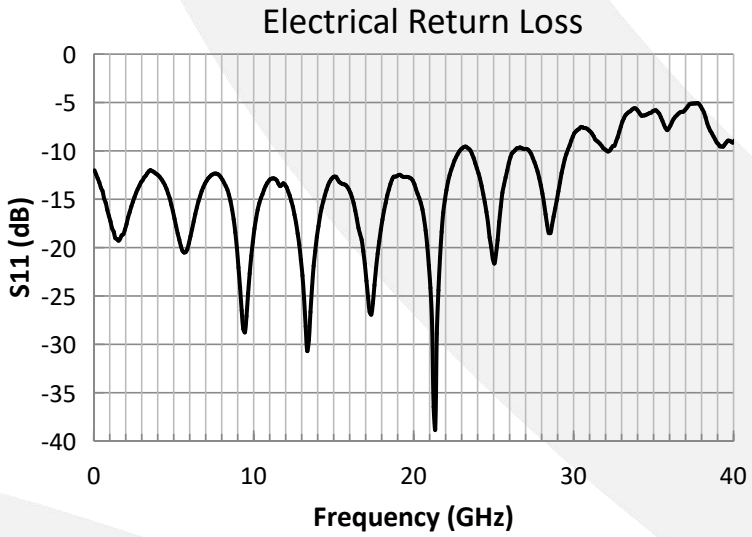
IMP-785-40-PM-XXX

XXX **HER:** High Extinction Ratio

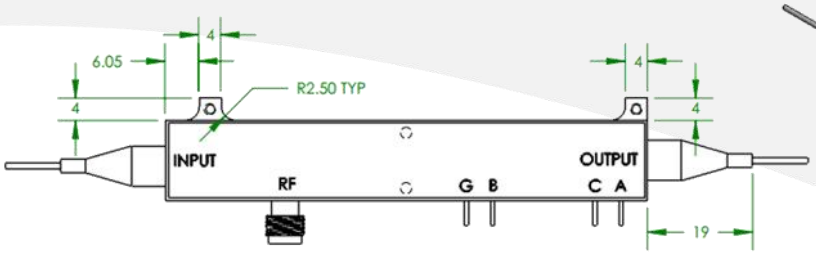
IMP-785-40-PM

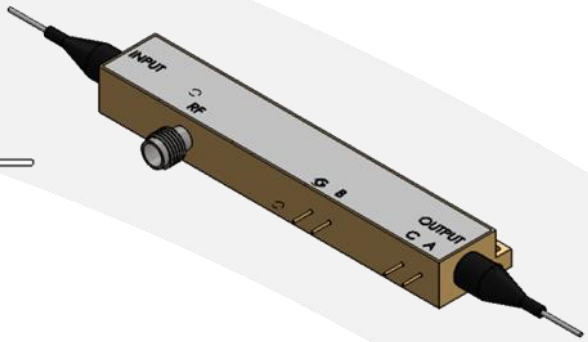
TEST SAMPLE

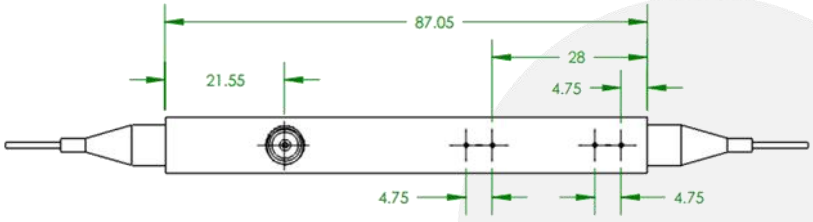


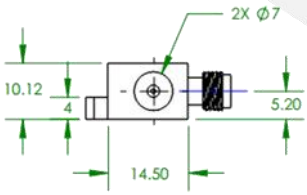


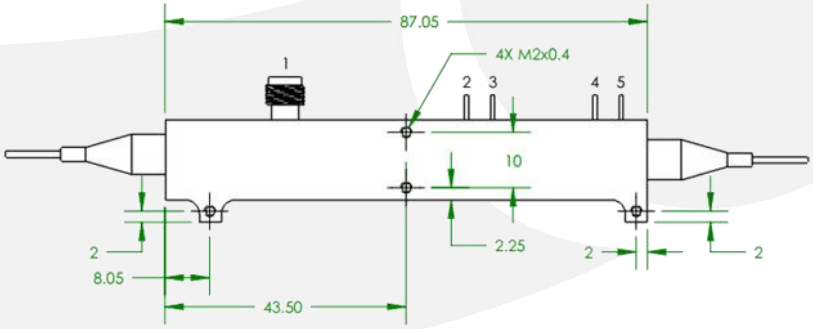
MECHANICAL DRAWING









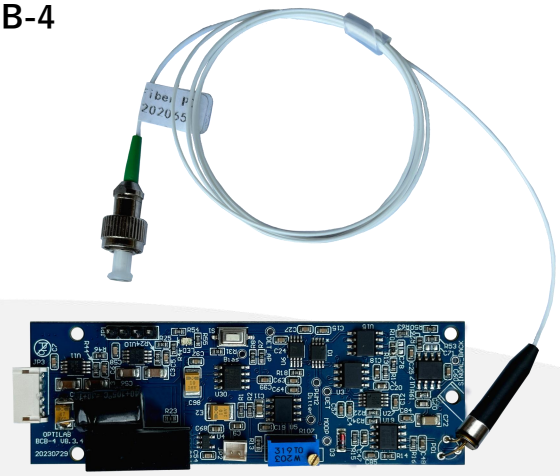


PINOUT	
PIN	DESCRIPTION
1	RF INPUT
2	GROUND
3	DC BIAS
4	PD CATHODE
5	PD ANODE

IMP-785-40-PM

Available Accessories

- **BCB-4**



The Optilab BCB-4 is a compact bias control board designed to maintain the linear operating point of optical intensity modulators.