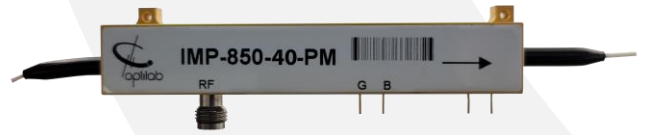


IMP-850-40-PM



DEVICE

850 nm, 40 GHz Intensity Modulator, PM Output

OVERVIEW

The Optilab IMP-850-40-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 V_{pi}, and high-power handling capability. It has an operating temperature tolerance ranging from -10 °C to +55 °C, and superior insertion loss provides for its maximum transmission power. The IMP-850-40-PM uses Polarization Maintaining (PM) input and output fibers. Contact Optilab for more information.

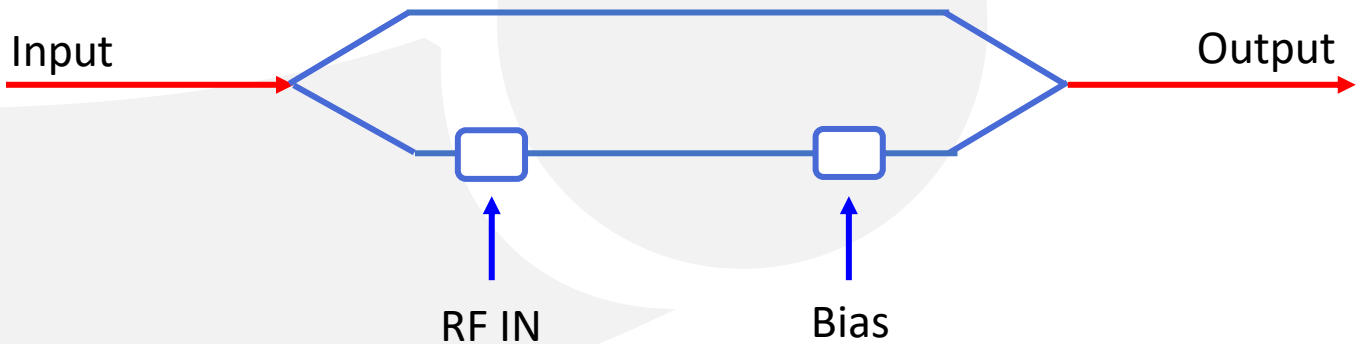
FEATURES

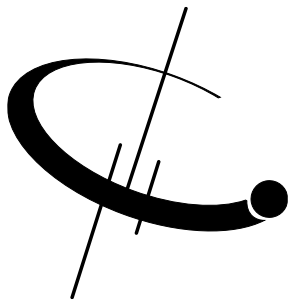
- 40 GHz Bandwidth
- Polarization Maintaining output
- 850 nm operating wavelength
- Low insertion loss, low V_{pi}
- High input power handling capability
- Push-Pull Electrode design

USE IN

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

FUNCTIONAL DIAGRAM





IMP-850-40-PM

SPECIFICATIONS

Material	LiNbO3
Crystal Orientation	X-cut, Y-propagating
Waveguide Process	Annealed Proton Exchange
Operating Wavelength	850 +/- 20 nm
Optical Input Power	20 mW max.
Insertion Loss	4.2 dB typ., 5 dB max.
Extinction Ratio	≥ 20 dB min. (≥ 30 dB min. HER version)
S21 Bandwidth, 3 dB drop	35 GHz Min.
Electrical Return Loss S11	≤ -10 dB up to 10 GHz
RF Port Vpi	≤ 6.5 V @ 20 GHz
Bias Port Vpi	≤ 7 V @ 1 kHz
Chirp Value	< ± 0.2 (zero chirp design)
Optical Return Loss	≤ -45 dB
RF Port Connectors	1.85 mm female (V)

MECHANICAL & Environment

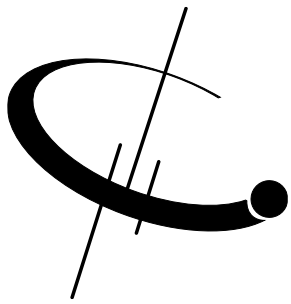
Operating Temperature (Standard)	-10 °C to +55 °C
Storage Temperature	-30 °C to +80 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	Corning PM85-U400
Cabling	900 μm loose tube
Input/Output Connector	FC/APC
Dimensions	87mm x 14.5 mm x 10 mm

OPTIONS

IMP-850-40-PM-XXX

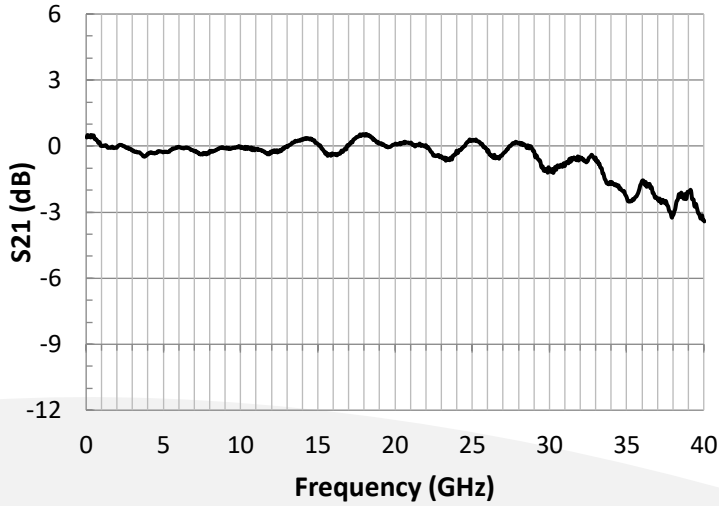
XXX HER: High Extinction Ratio



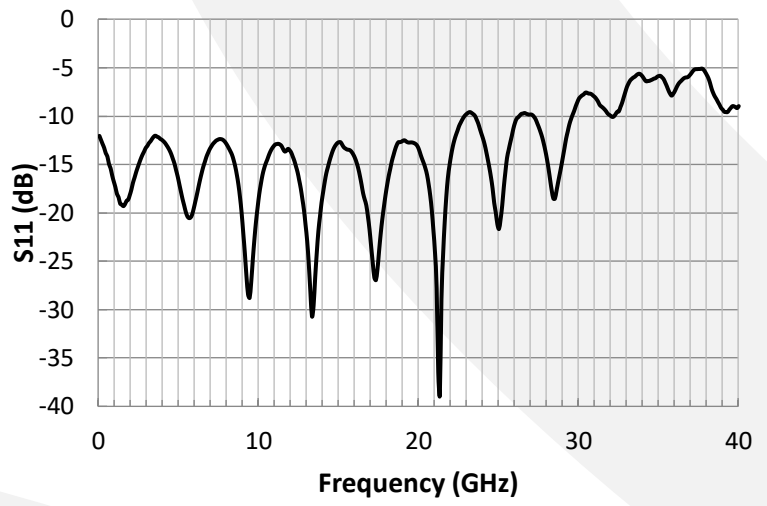


IMP-850-40-PM

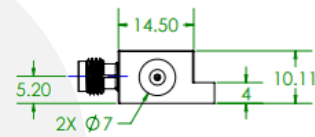
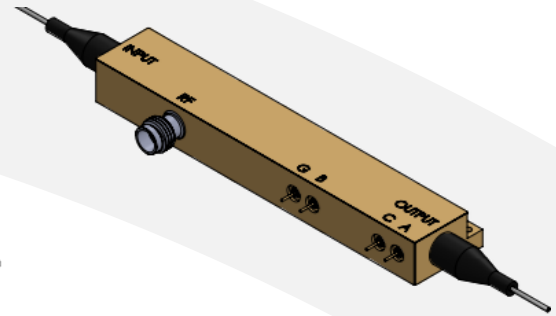
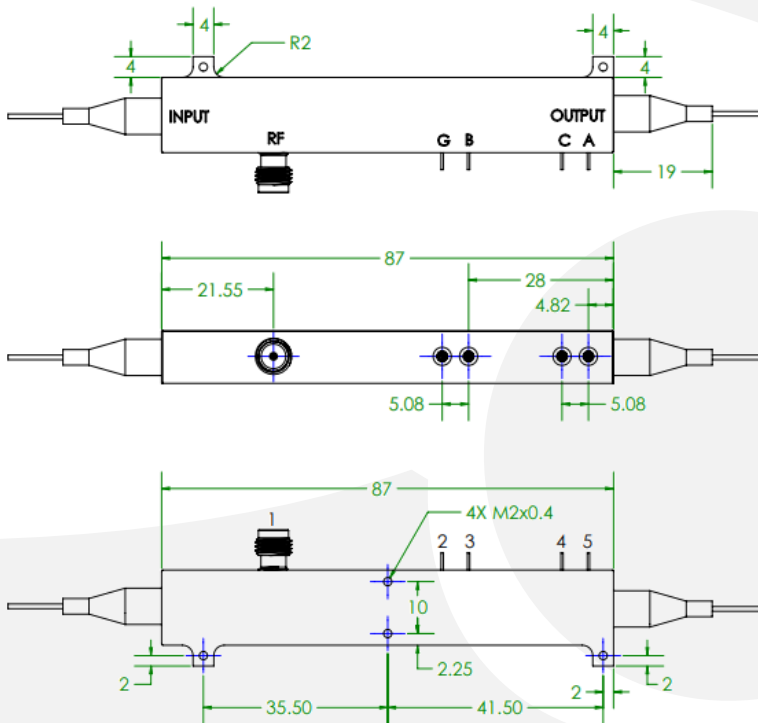
E to O S21



Electrical Return Loss

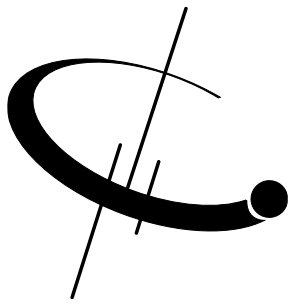


MECHANICAL DRAWING



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





IMP-850-40-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.

