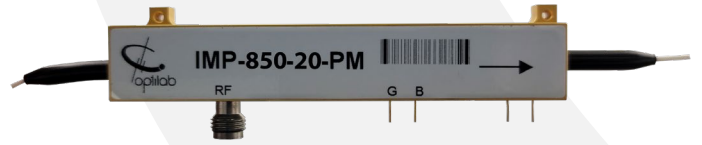


IMP-850-20-PM



DEVICE

850 nm, 20 GHz Intensity Modulator, PM Output

OVERVIEW

The Optilab IMP-850-20-PM Intensity Modulator is designed for analog modulation of up to 20 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 -10 °C to +55 °C, and superior insertion loss provides for its maximum transmission power. The IMP-850-20-PM uses Polarization Maintaining (PM) input and output fibers. Contact Optilab for more information.

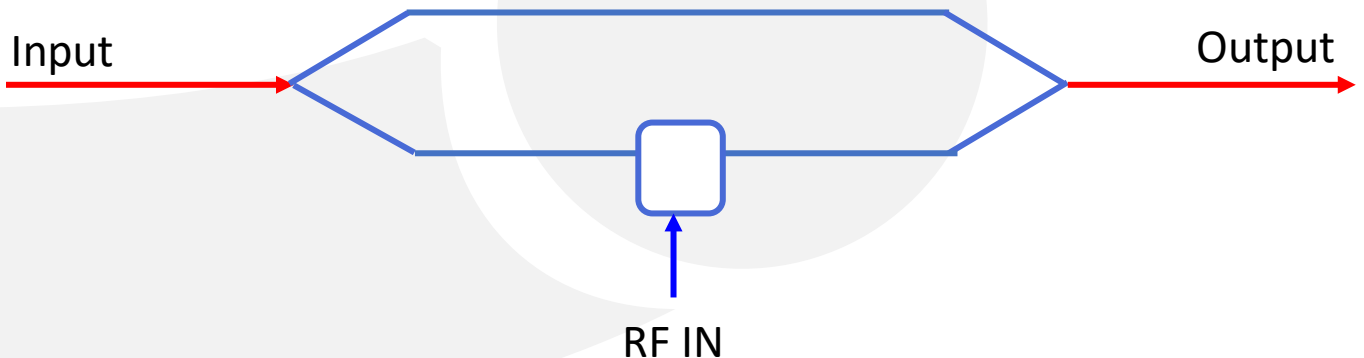
FEATURES

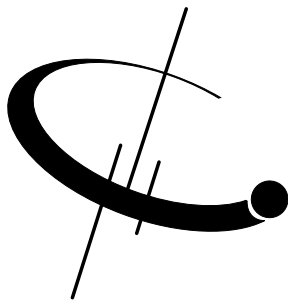
- 20 GHz Bandwidth
- Polarization Maintaining output
- 850 nm operating wavelength
- Low insertion loss, low Vpi
- High input power handling capability
- Push-Pull Electrode design

USE IN

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

FUNCTIONAL DIAGRAM





IMP-850-20-PM

SPECIFICATIONS

Material	LiNbO3
Crystal Orientation	X-cut, Y-propagating
Waveguide Process	Annealed Proton Exchange
Input Optical Power	20 mW max.
Operating Wavelength	850 +/- 20 nm
S21 Bandwidth, 3 dB drop	15 GHz min.
Electrical Return Loss S11	≤ -9 dB up to 10 GHz
Chirp Value	< ± 0.2 (zero chirp design)
Insertion Loss	4.2 dB typ., 5 dB max.
Extinction Ratio	≥ 20 dB min. (≥ 30 dB min. HER version)
Optical Return Loss	≤ -45 dB
V _π (RF Port)	≤ 5.2 V @ 1 GHz
V _π (Bias Port)	≤ 7 V @ 1 kHz

GENERAL

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
RF Port Connectors	2.92 mm female (K)
Cabling	900 μm loose tube
Input/Output Connector	FC/APC
Dimensions	87mm x 14.5 mm x 10 mm

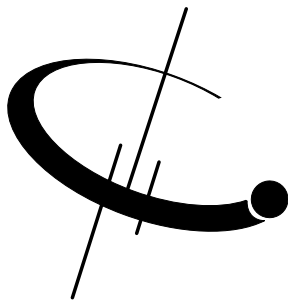
MECHANICAL

OPTIONS

IMP-850-20-PM-XXX

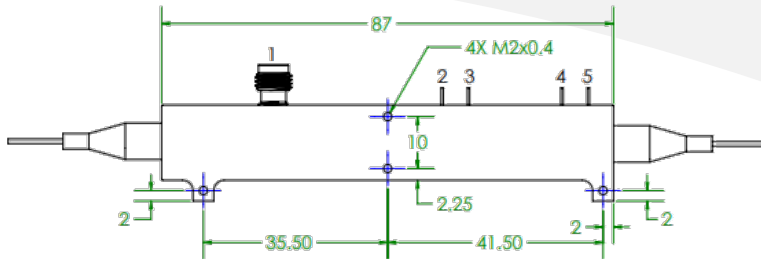
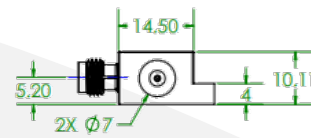
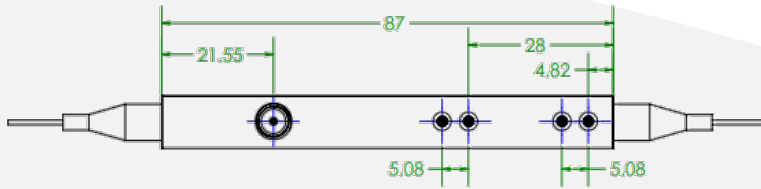
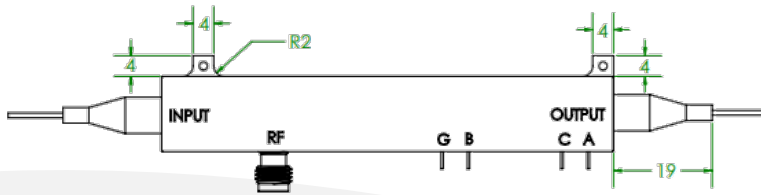
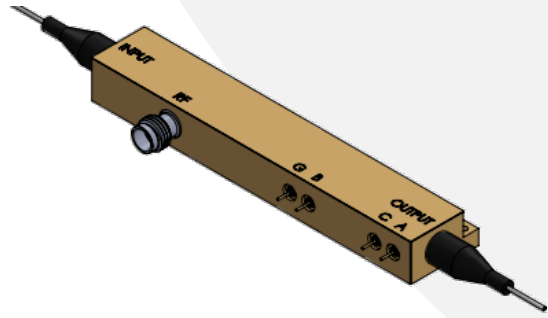
XXX HER: High Extinction Ratio





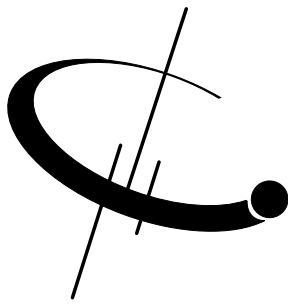
IMP-850-20-PM

MECHANICAL DRAWING



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

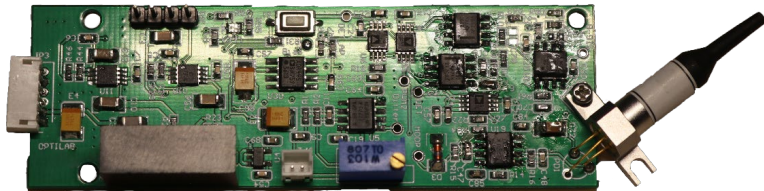




IMP-850-20-PM

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.

