



# IMP-850-0.5-PM



## DEVICE

### 850 nm, 500 MHz Intensity Modulator, PM Output

## OVERVIEW

The Optilab IMP-850-0.5-PM Intensity Modulator is designed for analog modulation of up to 500 MHz 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-850-0.5-PM uses Polarization Maintaining (PM) input and output fibers. Contact Optilab for more information.

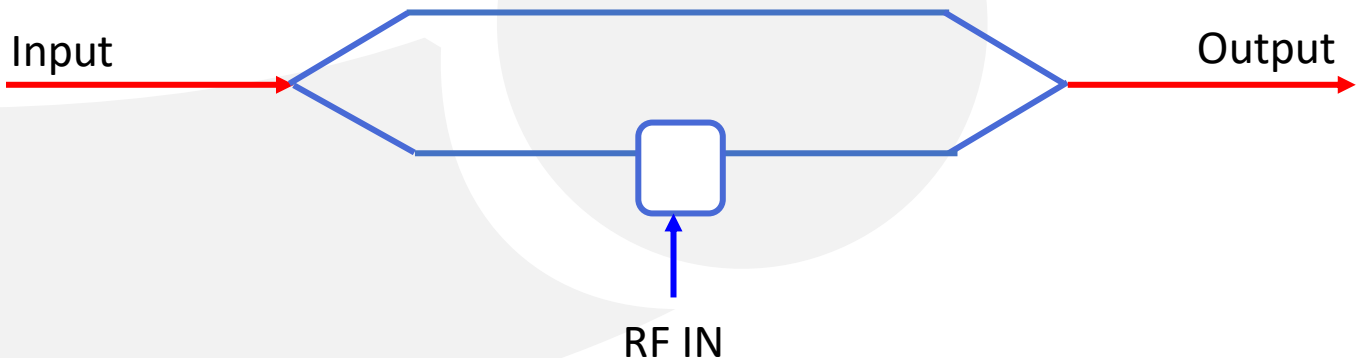
## FEATURES

- Excellent stability in a biased circuit
- Polarization Maintaining output
- 850 nm operating wavelength
- Low insertion loss, low Vpi
- High input power handling capability
- Lump electrode design

## USE IN

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

## FUNCTIONAL DIAGRAM





# IMP-850-0.5-PM

## SPECIFICATIONS

Input Optical Power	20 mW max.
Operating Wavelength	850 +/- 20 nm
Chirp Value	< ± 0.2 (zero chirp design)
Insertion Loss	4.0 dB typ., 4.5 dB max.
Extinction Ratio	≥ 20 dB min. (≥ 30 dB min. HER version)
Optical Return Loss	≤ -45 dB
S21 Bandwidth (RF Port)	300 MHz typ.
V <sub>π</sub> (RF Port)	2.5 V typ., 2.8 V max. @ 1 kHz

## GENERAL

## MECHANICAL

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
Input/Output Connector	FC/APC
Material	LiNbO <sub>3</sub>
Crystal Orientation	X-cut, Y-propagating
Waveguide Process	Annealed Proton Exchange
RF Port Connectors	GPO male
Cabling	900 μm tubing
Dimensions	2.56" x 0.45" x 0.19"

## OPTIONS

**IMP-850-0.5-PM-XXX**

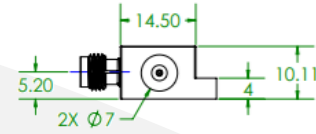
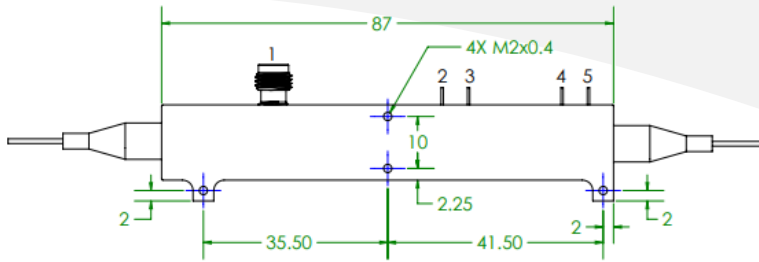
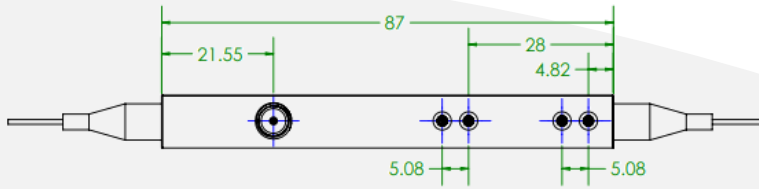
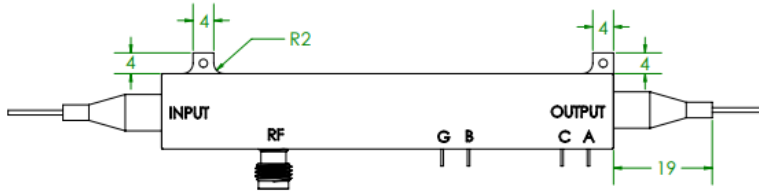
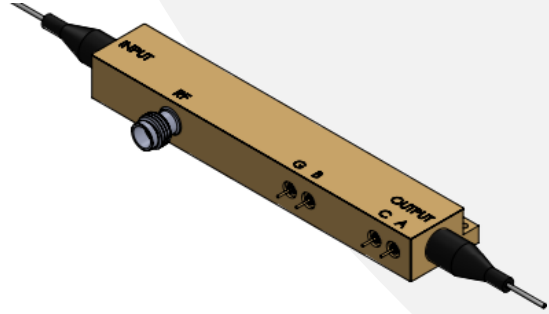
**XXX HER:** High Extinction Ratio





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## MECHANICAL DRAWING



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

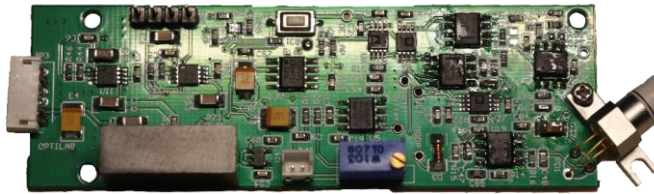




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## Available Accessories

- **BCB-4**



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

