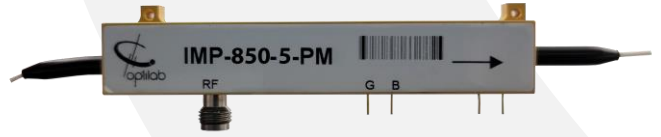




# IMP-850-5-PM



## DEVICE

### 850 nm, 5 GHz Intensity Modulator, PM Output

## OVERVIEW

The Optilab IMP-850-5-PM Intensity Modulator is designed for analog modulation of up to 5 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<sub>pi</sub>, 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-850-5-PM uses Polarization Maintaining (PM) input and output fibers. Contact Optilab for more information.

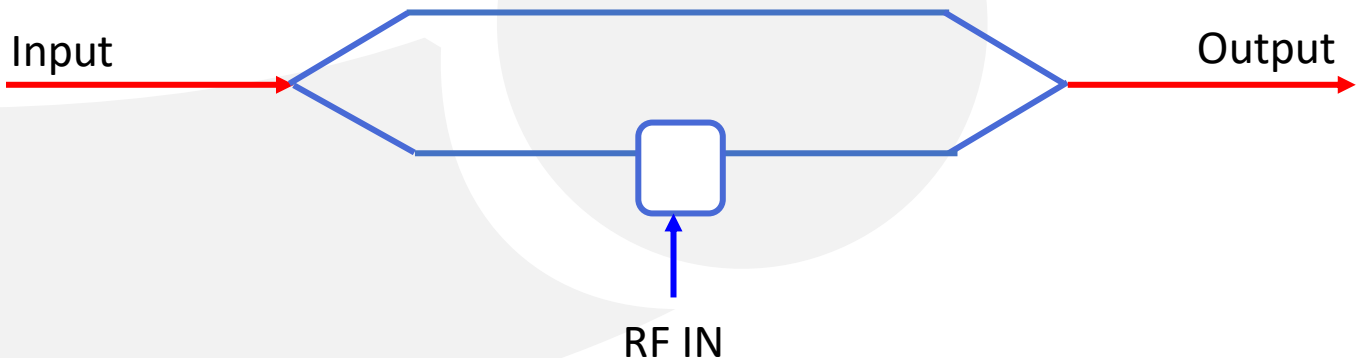
## FEATURES

- 5 GHz Bandwidth
- Polarization Maintaining output
- 850 nm operating wavelength
- Low insertion loss, low V<sub>pi</sub>
- 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-850-5-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	3 GHz min.
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
Vπ (RF Port)	5.0 V typ., 5.5 V max. @ 1 GHz

## 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	1.85 mm female (V)
Cabling	900 μm loose tube
Input/Output Connector	FC/APC
Dimensions	87mm x 14.5 mm x 10 mm

## MECHANICAL

## OPTIONS

**IMP-850-5-PM-XXX**

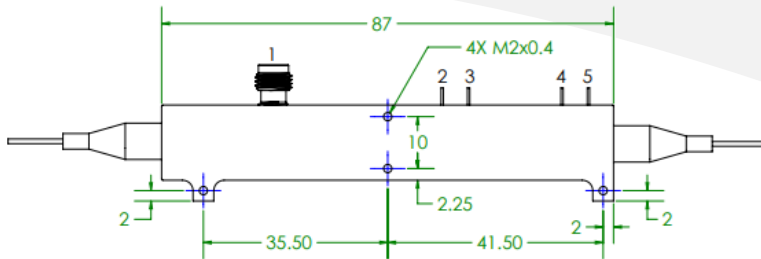
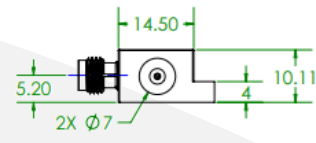
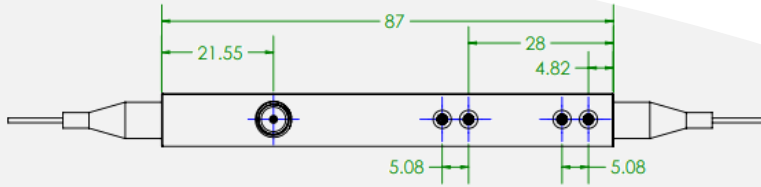
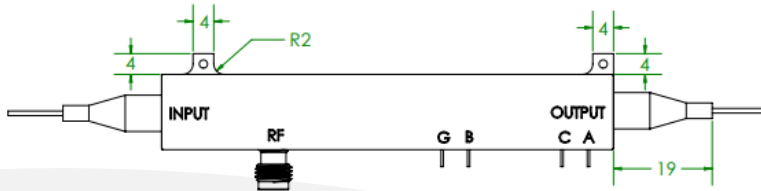
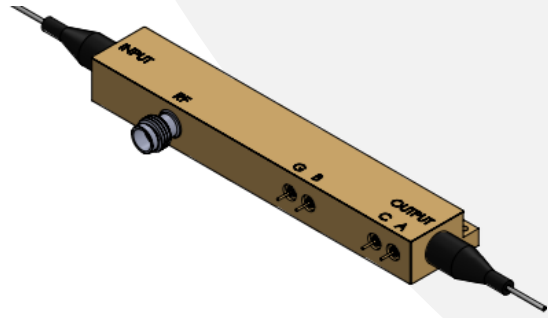
**XXX HER:** High Extinction Ratio





# IMP-850-5-PM

## MECHANICAL DRAWING



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





# IMP-850-5-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.

