

# PM-850-5



## DEVICE

# 850 nm, 5 GHz Phase Modulator

## OVERVIEW

The Optilab PM-850-5 phase modulator is a 5 GHz LiNbO3 modulator. This modulator can provide phase modulation with a low driving voltage. Its low insertion loss provides for its maximum transmission power. The PM-850-5 modulator uses polarization maintaining (PM) input and output fibers, making it easy to integrate with other optical components. Contact Optilab for more information.

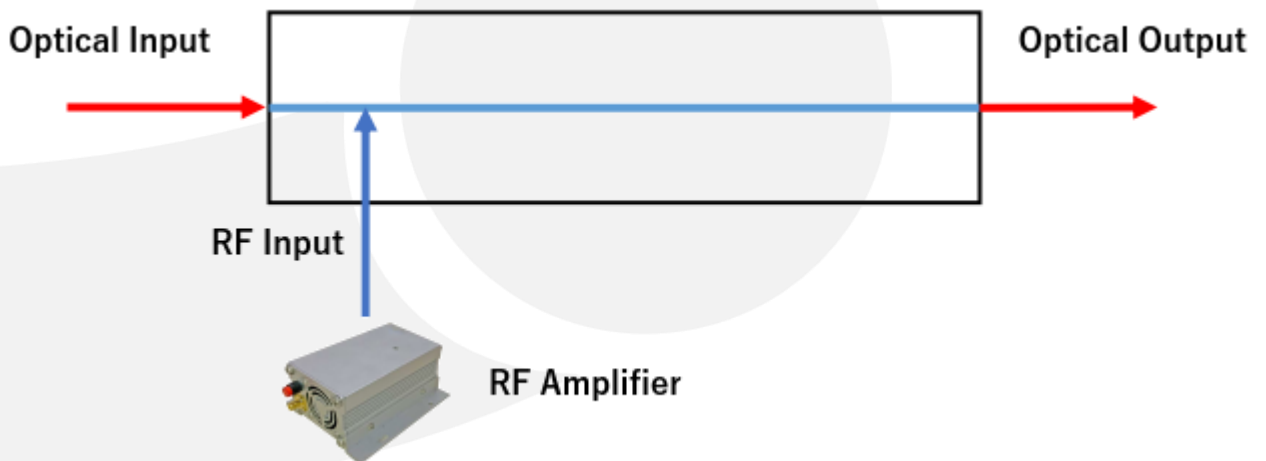
## FEATURES

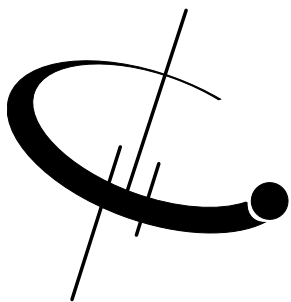
- Up to 5 GHz Bandwidth
- Low Optical Loss
- 850 nm operating wavelength
- Low Drive Voltage
- Minimal Back Reflections
- Polarization Maintaining

## USE IN

- Coherent Communications
- Optical Chirping
- Optical Sensing
- FM Spectroscopy
- Frequency Shifting
- Laser Linewidth Broadening

## FUNCTIONAL DIAGRAM





# PM-850-5

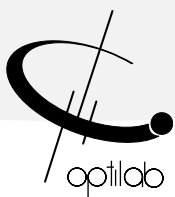
## SPECIFICATIONS

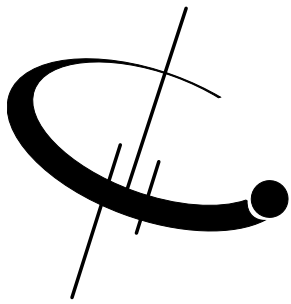
### GENERAL

Input Optical Power	20 mW max.
Operating Wavelength	850 ± 20 nm
Insertion Loss	3.0 dB typ., 3.5 dB max.
Extinction Ratio	≥ 21 dB min
Optical Return Loss	≤ -30 dB
S21 Bandwidth (RF Port)	5 GHz typ. @ -3 dB
S11 Return Loss	≤ -10 dB @ 5 GHz
V <sub>π</sub> (RF Port)	5 V typ. @ 1 GHz
RF Input Power	+30 dBm max.
Impedance	50 Ω typ.

### MECHANICAL

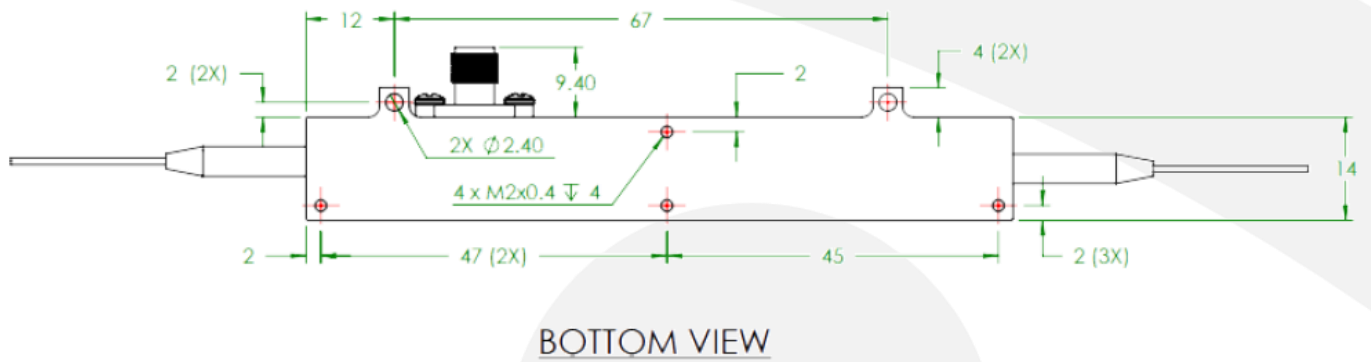
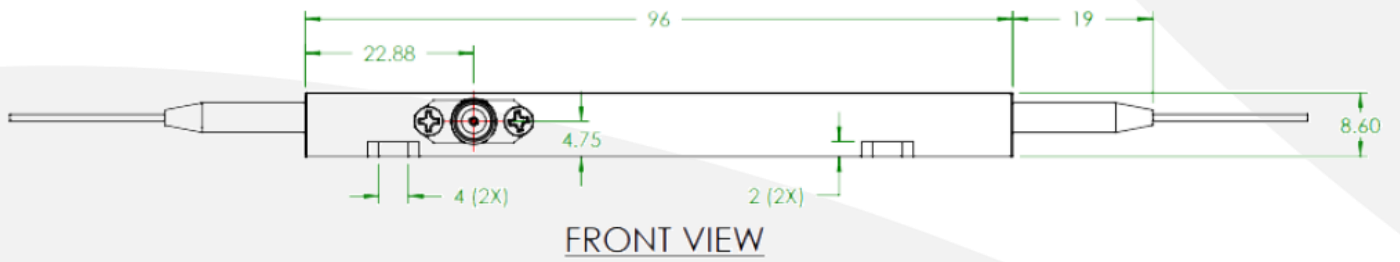
Operating Temperature (Standard)	-55 °C to +75 °C
Storage Temperature	-60 °C to +90 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	Panda – PM 850
Input/Output Connector	PM FC/APC, request for others
Material	LiNbO <sub>3</sub>
RF Port Connectors	K Connector
Cabling	900 μm tubing
Dimensions	3.783" x 0.981" x 0.640"





# PM-850-5

## MECHANICAL DRAWING



Unit: mm

