



# PM-850-20



## DEVICE

# 850 nm, 20 GHz Phase Modulator

## OVERVIEW

The Optilab PM-850-20 phase modulator is a 20 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-850-20 modulator uses polarization maintaining (PM) input and output fibers, making it easy to integrate with other optical components. Contact Optilab for more information.

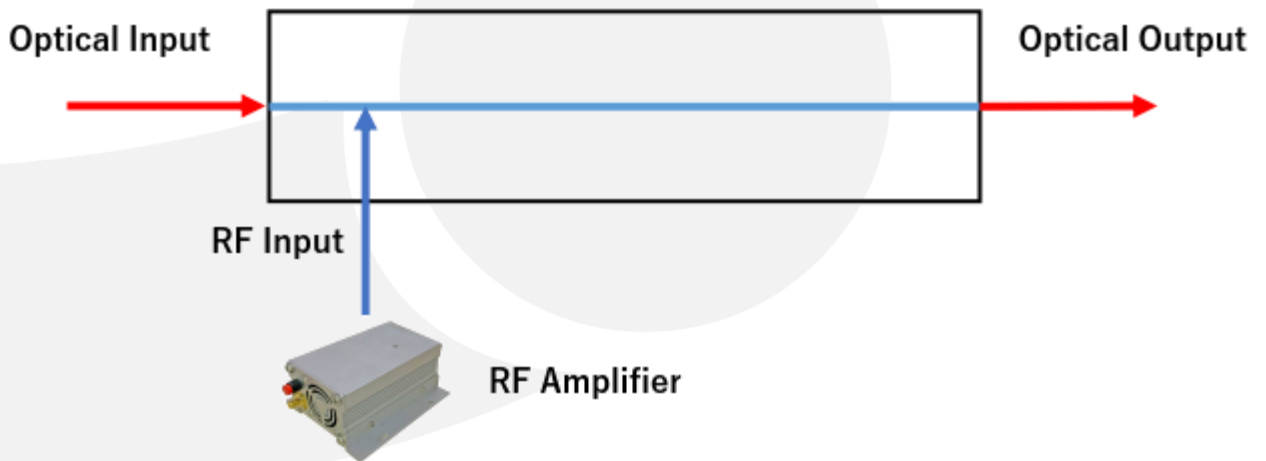
## FEATURES

- Up to 20 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-850-20

## 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	≥ 20 dB min
Optical Return Loss	≤ 30 dB
S21 Bandwidth (RF Port)	7 GHz min, 10 GHz typical @ -3 dB
S11 Return Loss	≤ -10 dB @ 20 GHz
V $\pi$ (RF Port)	6.8 V typ. @ 1 GHz; 10V typ. @ 10 GHz
RF Input Power	+27 dBm max.
Impedance	50 $\Omega$ typ.

### MECHANICAL

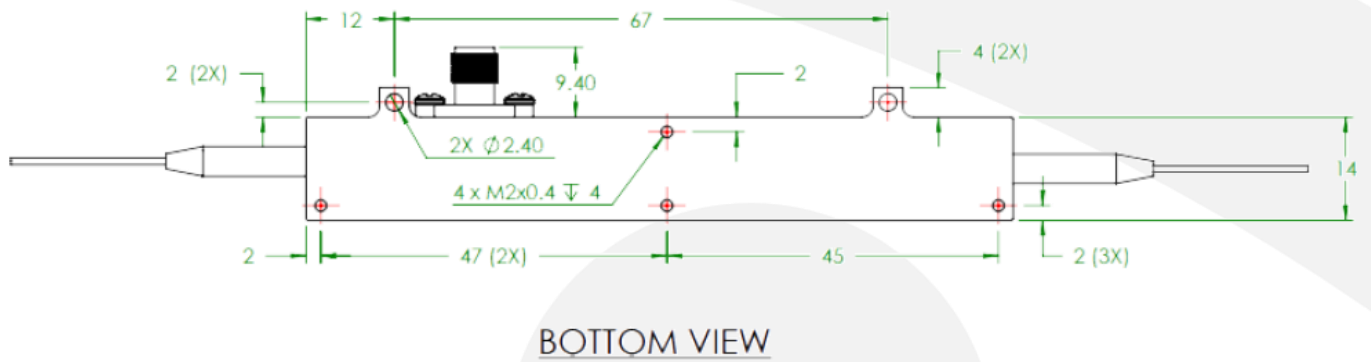
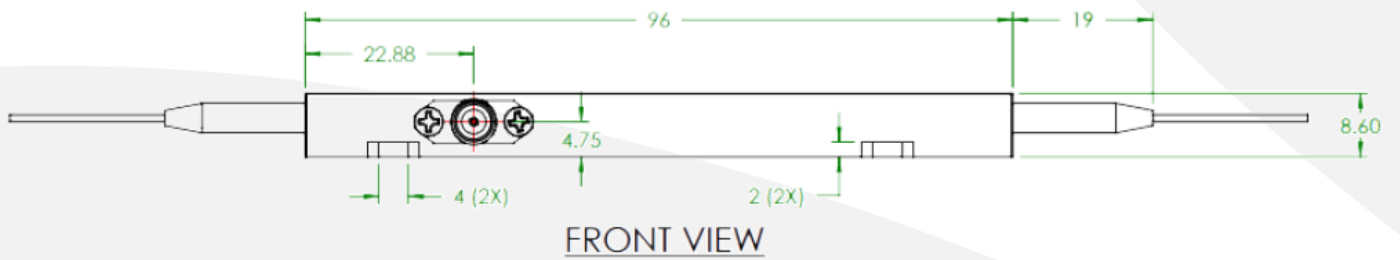
Operating Temperature (Standard)	-55 °C to +75 °C
Storage Temperature	-60 °C to +90 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	Corning PM85-U400
Input/Output Connector	PM FC/APC, request for others
Material	LiNbO <sub>3</sub>
RF Port Connectors	K Connector
Cabling	900 $\mu$ m tubing
Dimensions	3.783" x 0.981" x 0.640"





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## MECHANICAL DRAWING



Unit: mm

