



# PM-1064-20



## DEVICE

# 20 GHz, 1064 nm Phase Modulator

## OVERVIEW

The Optilab PM-1064-20 is a high performance, 20 GHz phase modulator. PM-1064-20 can provide phase modulation in a broad operation bandwidth with a low driving voltage. Its low insertion loss and high optical power handling capability provides for maximum transmission power. The PM-1064-20 is fabricated with Annealed Proton Exchange (APE) optical waveguides on X-cut LiNbO<sub>3</sub> material, and uses polarization maintaining input and output fibers, making it easy to integrate with other optical components. Contact Optilab for more information.

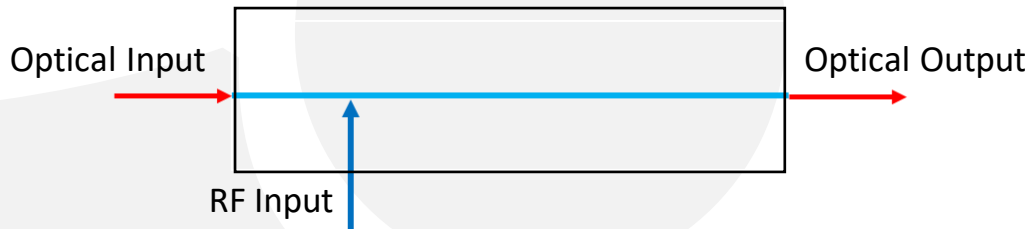
## FEATURES

- X-cut APE Process
- High Polarization Extinction Ratio
- High Optical Power Handling
- PM Input & Output

## USE IN

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

## FUNCTION DIAGRAM





# PM-1064-20



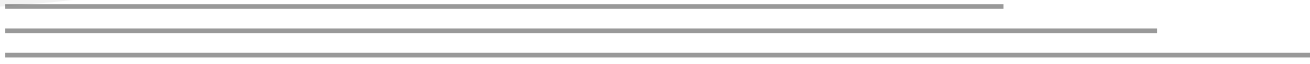
## SPECIFICATIONS

### GENERAL

Input Optical Power	300 mW max
Operating Wavelength	1030 nm to 1080 nm
Insertion Loss	3.0 dB typical, 4.0 dB max.
Chip Polarization Extinction Ratio	> 60 dB
Pigtail Polarization Extinction Ratio	≥ 20 dB
Process	Annealed Proton Exchange
Optical Return Loss	≥ 40 dB
S <sub>21</sub> Bandwidth	20 GHz typical, 16 GHz min.
S <sub>11</sub> Return Loss	≤ -9 dB
V <sub>π</sub>	5.5 V typical @ 1 GHz, 6V max
RF Input Power	+27 dBm max
Impedance	50 Ω

### MECHANICAL

Operating Temperature	0°C to +70°C
Storage Temperature	-40°C to +80°C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber	Panda, PM 980
Output Fiber Type	Panda, PM 980
Input Connector	PM FC/APC, key aligned to slow axis
Output Connector	PM FC/APC, key aligned to slow axis
RF Port Connectors	V female (1.85 mm connector)
Cabling	900 μm tubing
Dimension	87 mm x 14.5 mm x 10.1 mm

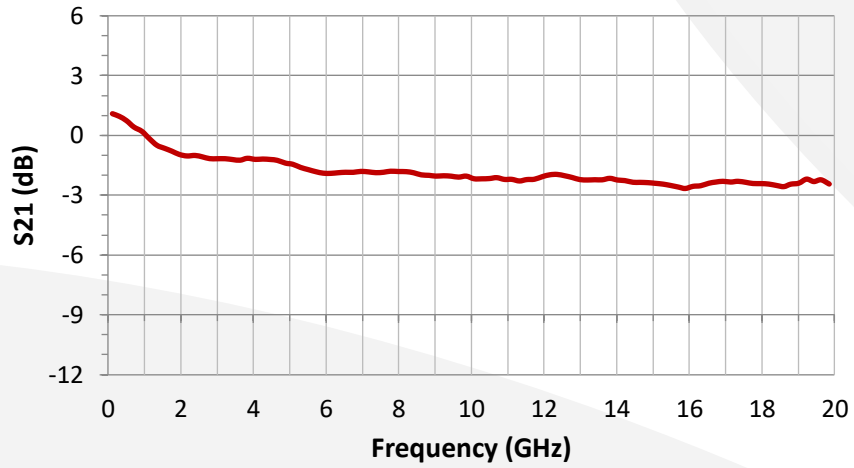




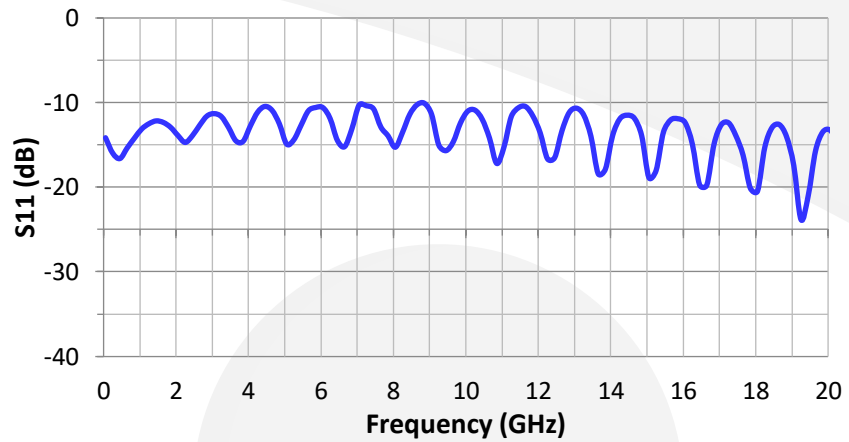
# PM-1064-20



TYPICAL S21  
RESPONSE



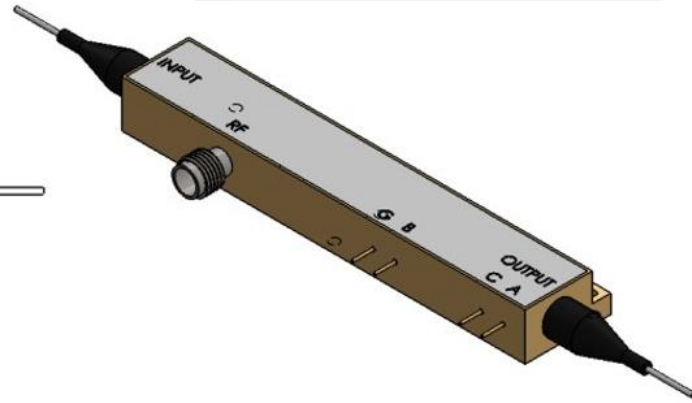
TYPICAL S11  
RESPONSE



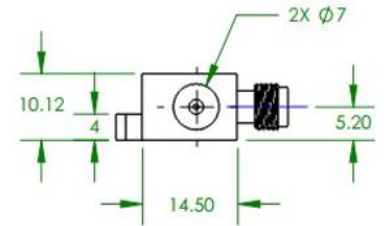
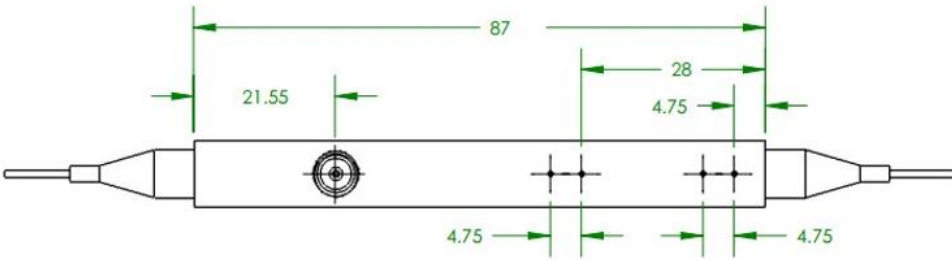
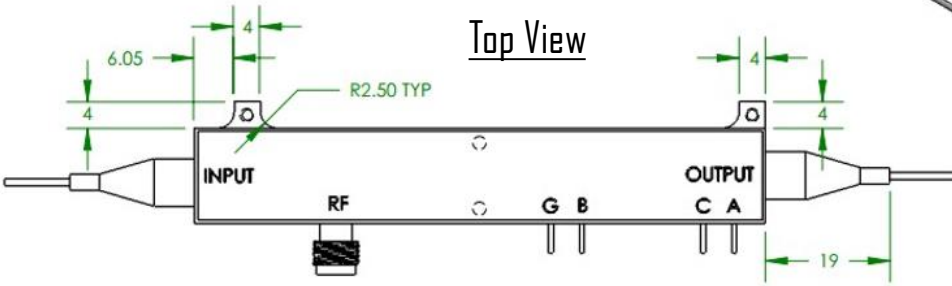


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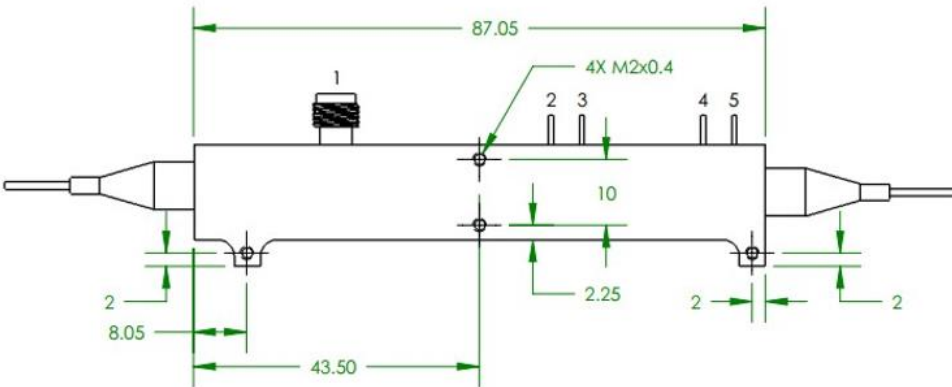
MECHANICAL  
DRAWING



Top View



Side View



Unit: mm

