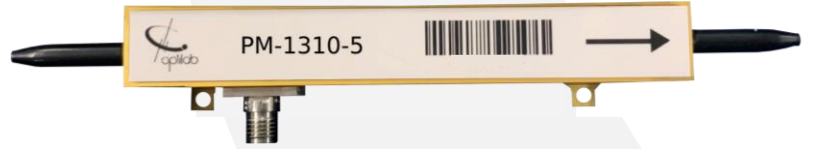




# PM-1310-5



## 5 GHz, 1310 nm Phase Modulator

### OVERVIEW

The Optilab PM-1310-5 is a high performance, 5 GHz LiNbO3 phase modulator. PM-1310-5 can provide phase modulation in a broad operation bandwidth with a low driving voltage. Its low insertion loss provides for maximum transmission power. PM-1310-5 is fabricated with Annealed Proton Exchange (APE) optical waveguides and features a chip Polarization Extinction Ratio (PER) of over 60 dB. The PM-1310-5 phase modulator uses polarization maintaining input and output fibers, making it easy to integrate with other optical components. Contact Optilab for more information.

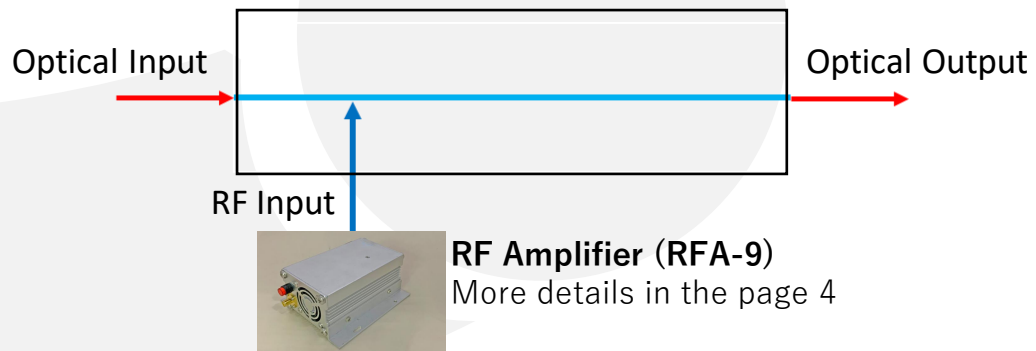
### FEATURES

- 5GHz Bandwidth
- X-cut APE Process
- Low Insertion Loss
- Low Drive Voltage
- 1270 nm to 1370 nm
- Minimal Back Reflections
- Chip PER over 60dB

### USE IN

- Optical Chirping
- Research & Development
- Laser Linewidth Broadening
- FM Spectroscopy
- Frequency Shifting

### FUNCTION DIAGRAM





# PM-1310-5



## SPECIFICATIONS

Input Optical Power	50 mW max
Operating Wavelength	1270 nm to 1370 nm
Insertion Loss	4.0 dB typical
Chip Polarization Extinction Ratio	> 60 dB
Pigtail Polarization Extinction Ratio	≥ 20 dB
Process	Proton Exchange
Optical Return Loss	≥ 30 dB
S <sub>21</sub> Bandwidth	4 GHz typical @ -3 dB
S <sub>11</sub> Return Loss	≤ -15 dB @ 5 GHz
V <sub>π</sub>	6V typ @ 1GHz, 8.2V typ @ 5GHz
RF Input Power	+30 dBm max
Impedance	50 Ω typical

## GENERAL

## MECHANICAL

Operating Temperature	-55°C to +75°C
Storage Temperature	-60°C to +90°C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber	Panda, PM 13-U25D
Output Fiber Type	Panda, PM 13-U25D
Input Connector	PM FC/APC, others available
Output Connector	PM FC/APC; others available
RF Port Connectors	K Connector
Cabling	900 μm tubing
Dimension	3.783" x 0.981" x 0.640"

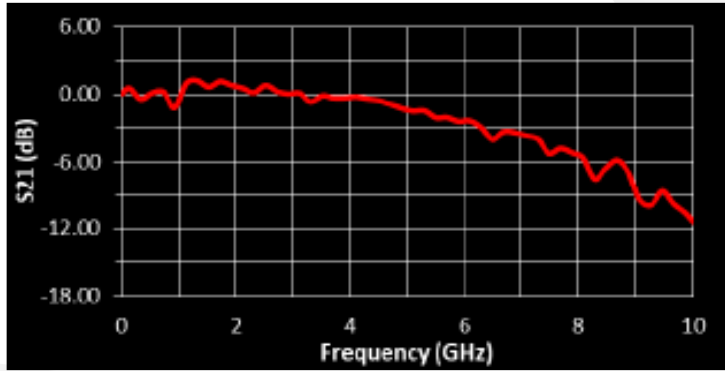




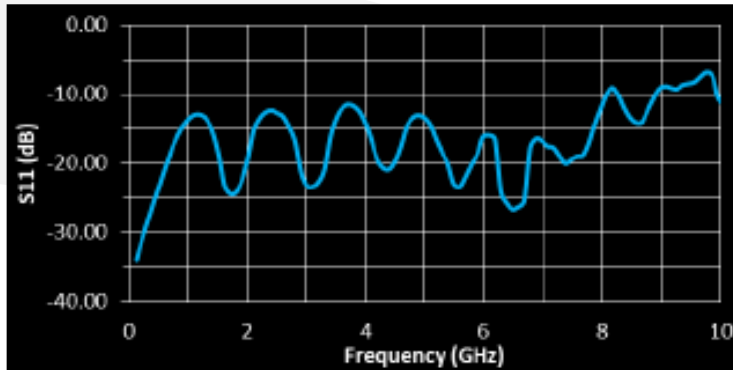
# PM-1310-5



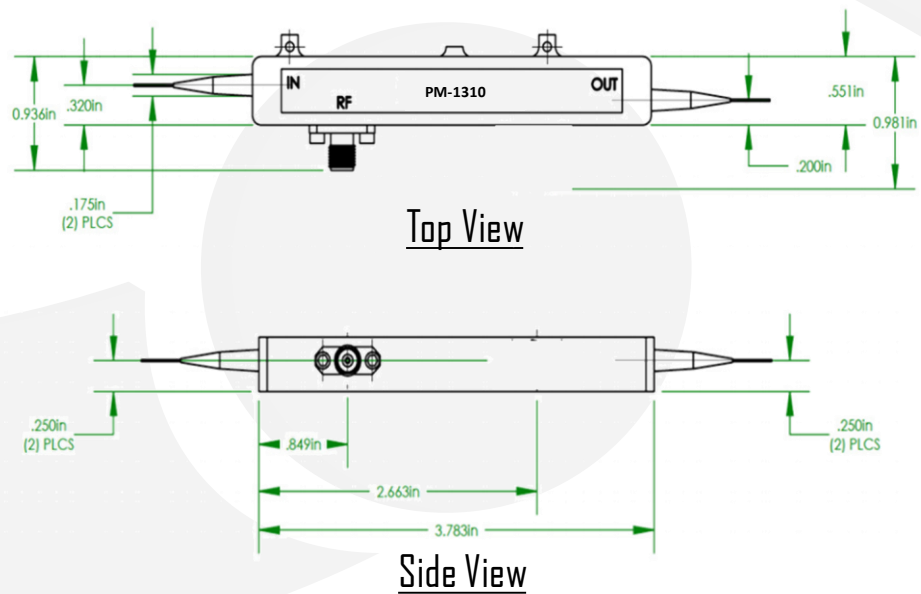
TYPICAL S21 RESPONSE



TYPICAL S11 RESPONSE



MECHANICAL DRAWING





# PM-1310-5



Available  
Accessories

- **RFA-9**



The Optilab RFA-9 is a high gain RF amplifier module with 30dBm output and 10V peak to peak. It offers cost-effective solutions for microwave and analog link. Please contact Optilab for more detail.

