



# PM-1550-5

## DEVICE

# 5 GHz 1550 nm Phase Modulator

## OVERVIEW

The Optilab PM-1550-5 phase modulator is a high performance, 5 GHz LiNbO<sub>3</sub> modulator. This modulator can provide phase modulation with a low driving voltage. Its low insertion loss provides for its maximum transmission power. The PM-1550-5 modulator uses polarization maintaining (PM) input and output fibers, making it easy to integrate with other optical components.

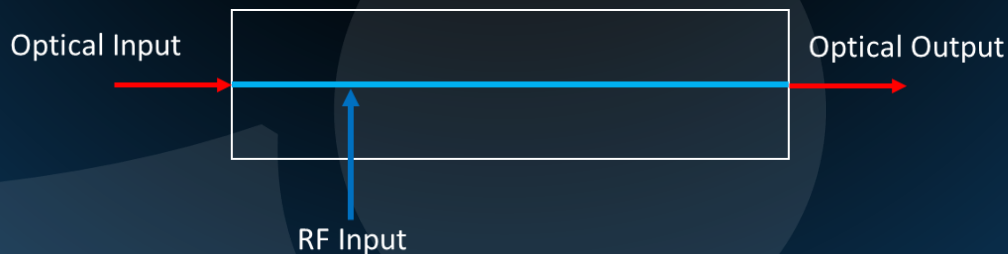
## FEATURES

- 5 GHz Bandwidth
- Low Optical Loss
- Low Drive Voltage
- 1525 nm to 1565 nm
- Minimal Back Reflections
- Polarization Maintaining

## USE IN

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

## FUNCTION DIAGRAM





# PM-1550-5

## SPECIFICATIONS

Input Optical Power	40 mW max
Operating Wavelength	1525 nm to 1570 nm
Insertion Loss	3 dB typical, 3.5 dB max
Polarization Extinction Ratio	$\geq 21$ dB
Optical Return Loss	$\geq 30$ dB
$S_{21}$ Bandwidth	5 GHz typical @ -3 dB
$S_{11}$ Return Loss	$\leq -10$ dB @ 5 GHz
$V_{\pi}$	5 V typical @ 1 GHz 7.5 V typical @ 5 GHz
RF Input Power	+30 dBm max
Impedance	50 $\Omega$ typical

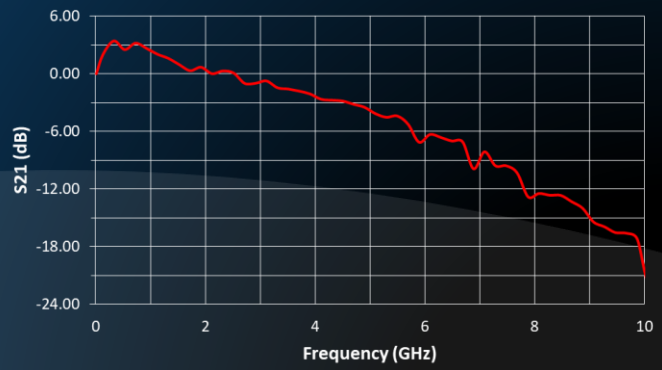
## GENERAL

## MECHANICAL

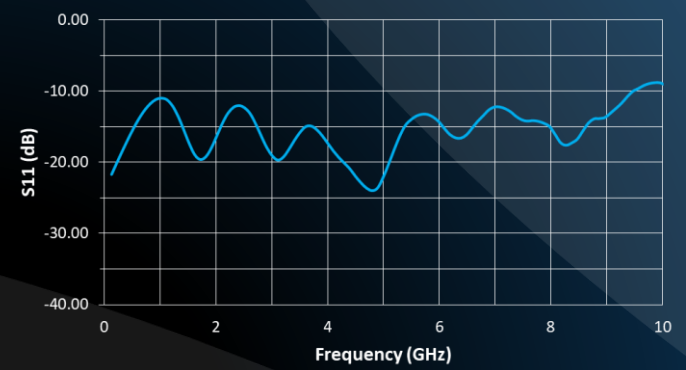
Operating Temperature	-55°C to +75°C
Storage Temperature	-60 °C to +90 °C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber	Panda - PM 1550
Output Fiber Type	Panda - PM 1550
Input Connector	PM FC/APC; request for others
Output Connector	PM FC/APC; request for others
RF Port Connectors	K Connector
Cabling	900 $\mu$ m tubing
Dimension	3.783" x 0.981" x 0.640"



S21 Characteristics



S11 Characteristics



MECHANICAL DRAWING

