

# PM-1550-5-LD



## DEVICE

## 5 GHz 1550 nm Phase Modulator

## OVERVIEW

The Optilab PM-1550-5-LD phase modulator is a high performance, 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-1550-5-LD modulator uses polarization maintaining (PM) input and output fibers, making it easy to integrate with other optical components. Contact Optilab for more information.

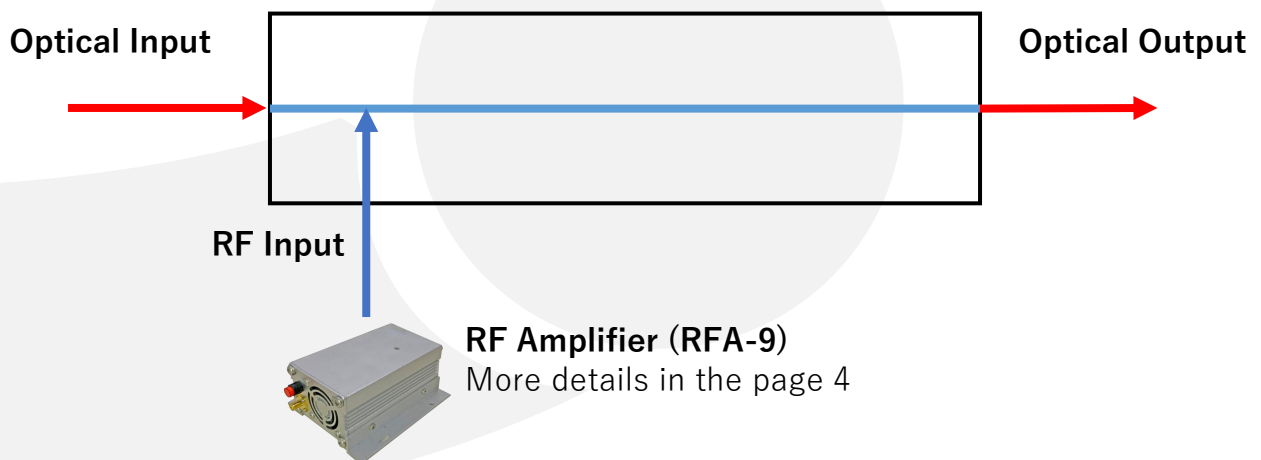
## FEATURES

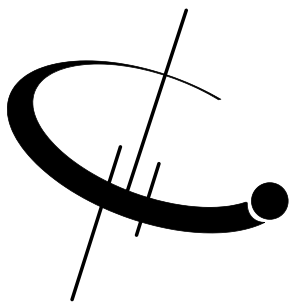
- 5 GHz Bandwidth
- Low Optical Loss
- Low Drive Voltage
- 1525 nm to 1565 nm
- Minimal Back Reflections
- Polarization Maintaining

## USE IN

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

## FUNCTIONAL DIAGRAM





# PM-1550-5-LD

## SPECIFICATIONS

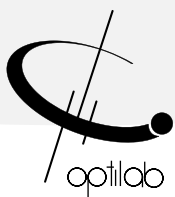
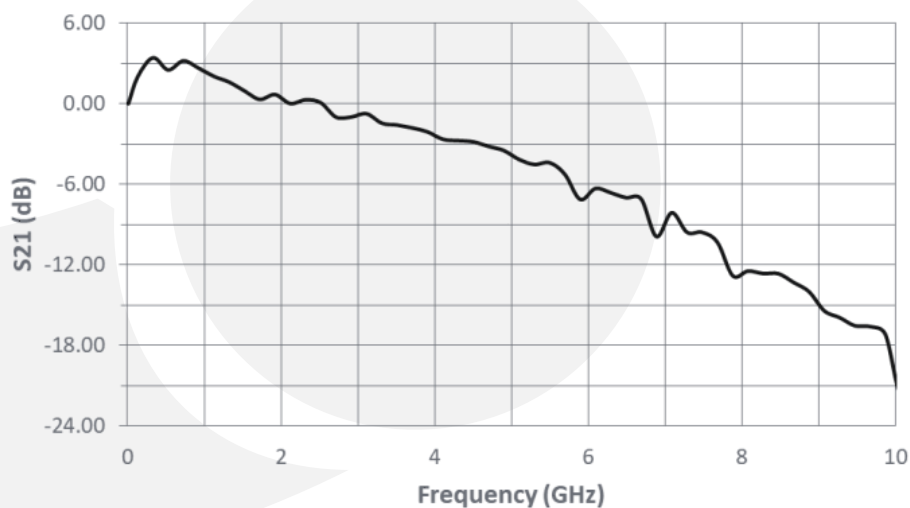
|                               |                        |
|-------------------------------|------------------------|
| Input Optical Power           | 40 mW max.             |
| Operating Wavelength          | 1525 nm to 1570 nm     |
| Insertion Loss                | 3 dB typ., 3.5 dB max. |
| Polarization Extinction Ratio | $\geq 21$ dB           |
| Optical Return Loss           | $\geq 30$ dB           |
| S21 Bandwidth                 | 5 GHz typ. @ -3 dB     |
| S11 Return Loss               | $\leq -10$ dB @ 5 GHz  |
| $V\pi$                        | 5 V typ. @ 1 GHz       |
| RF Input Power                | +30 dBm max.           |
| Impedance                     | 50 $\Omega$ typ.       |

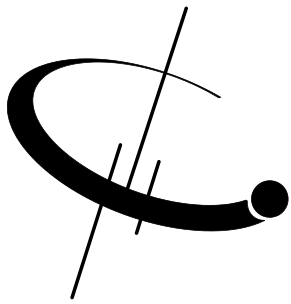
## GENERAL

|                        |                               |
|------------------------|-------------------------------|
| Operating Temperature  | -55°C to +75°C                |
| Storage Temperature    | -60°C to +90°C                |
| Operating Humidity     | 0% to 90% Relative Humidity   |
| Input/Output Fiber     | Panda - PM1550                |
| Input/Output Connector | PM FC/APC, request for others |
| RF Port Connectors     | K Connector                   |
| Cabling                | 900 $\mu$ m tubing            |
| Dimensions             | 3.783" x 0.981" x 0.640"      |

## MECHANICAL

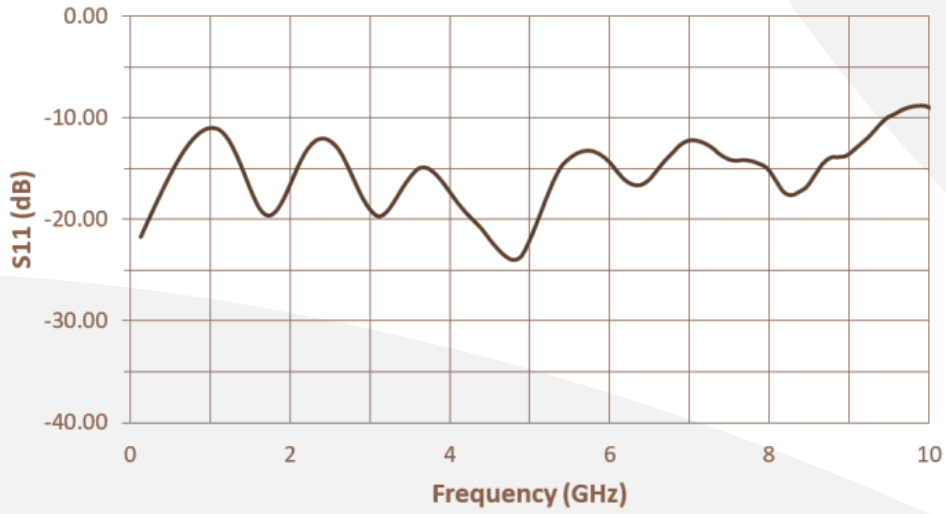
## S21 CHARACTERISTICS



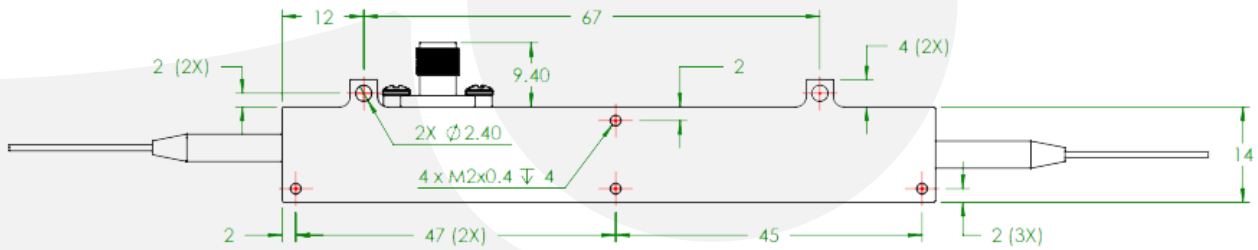
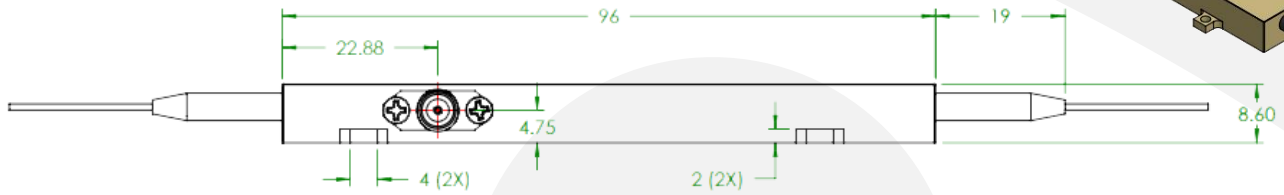
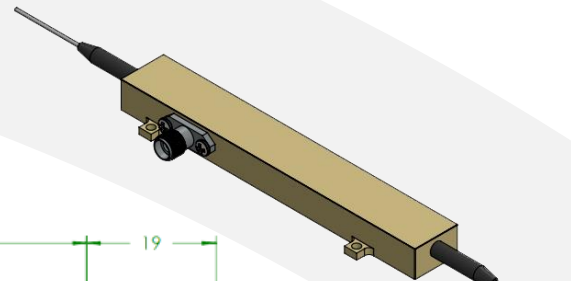


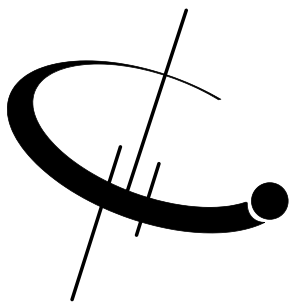
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## S11 CHARACTERISTICS



## MECHANICAL DRAWING





# PM-1550-5-LD

Relevant Driver

- **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.

