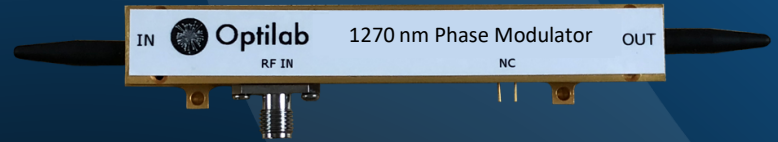




PM-1270-6



DEVICE

6 GHz 1270 nm Phase Modulator

OVERVIEW

The Optilab PM-1270-6 is a high performance, 6 GHz LiNbO₃ phase modulator. PM-1270-6 can provide phase modulation in a broad operation bandwidth with a low driving voltage. Its low insertion loss provides for maximum transmission power. PM-1270-6 is fabricated with Proton Exchange (PE) optical waveguides and features a chip Polarization Extinction Ratio (PER) of over 60 dB. The PM-1270-6 phase modulator uses polarization maintaining input and output fibers, making it easy to integrate with other optical components. Contact Optilab for more information.

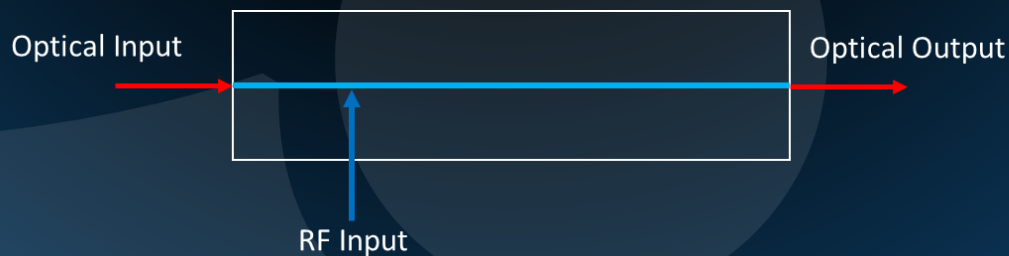
FEATURES

- 6 GHz Bandwidth
- Low Insertion Loss
- Low Drive Voltage
- 1270 nm to 1370 nm
- Minimal Back Reflections
- Chip PER over 60 dB

USE IN

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

FUNCTION DIAGRAM





PM-1270-6

SPECIFICATIONS

| | |
|---------------------------------------|--|
| Input Optical Power | 100 mW max |
| Operating Wavelength | 1270 nm to 1370 nm |
| Insertion Loss | 3 dB typical, 3.5 dB max |
| Chip Polarization Extinction Ratio | > 60 dB |
| Pigtail Polarization Extinction Ratio | ≥ 20 dB |
| Process | Proton Exchange |
| Optical Return Loss | ≥ 30 dB |
| S ₂₁ Bandwidth | 6 GHz typical @ -3 dB |
| S ₁₁ Return Loss | ≤ -15 dB @ 6 GHz |
| V _π | 3.5 V typical @ 1 GHz 5.5 V typical @ 6 GHz |
| RF Input Power | +30 dBm max |
| Impedance | 50 Ω typical |

GENERAL

| | |
|-----------------------|-----------------------------|
| 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 | FC/APC; others available |
| Output Connector | FC/APC; others available |
| RF Port Connectors | K Connector, Female |
| Cabling | 900 μm tubing |
| Dimension | 3.783" x 0.981" x 0.640" |

MECHANICAL

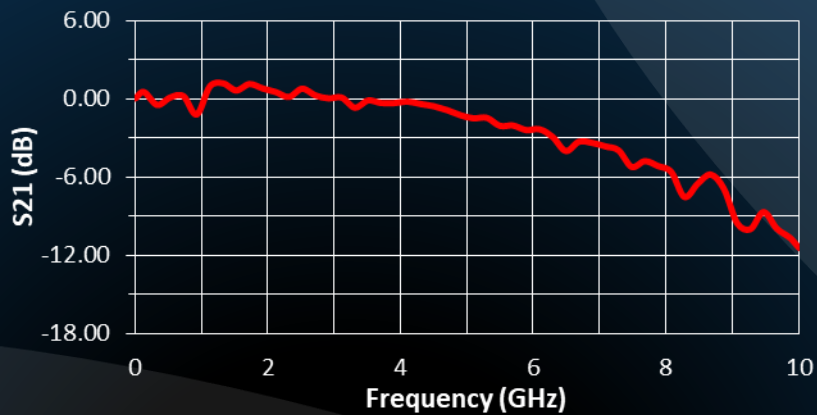


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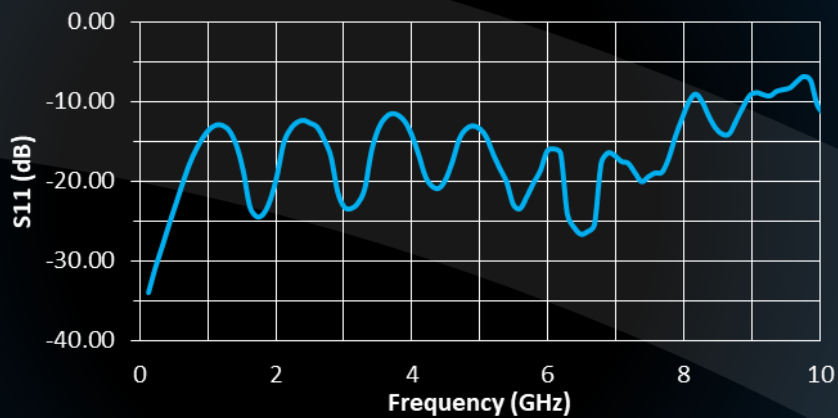


PM-1270-6

TYPICAL S21
RESPONSE



TYPICAL S11
RESPONSE



MECHANICAL
DRAWING

