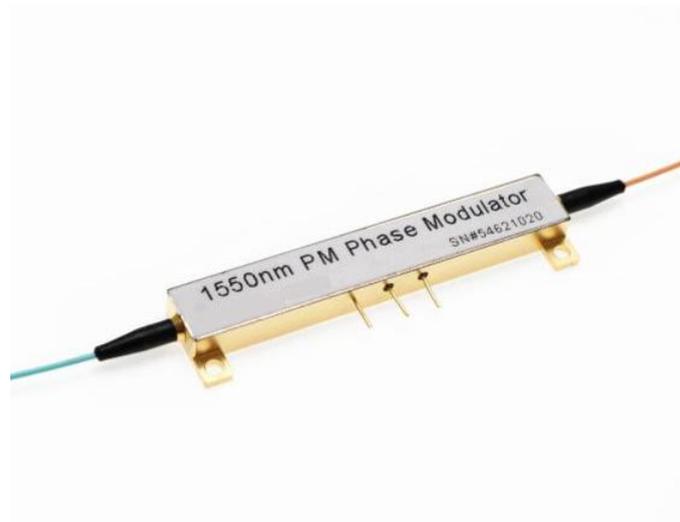


1550nm Phase Modulator 300 MHz



● Product Description

The phase modulator is a high-performance LiNbO₃ modulator with a bandwidth of up to 300 MHz. This modulator provides phase modulation with low driving voltage. Its low insertion loss ensures maximum transmission power. The modulator uses polarization-maintaining (PM) input and output fibers, making it easy to integrate with other optical components.



● Product features

Bandwidth up to 300 MHz 、 Operating range: 1525 nm to 1565 nm 、 Low insertion loss, typical 3 dB 、 Minimal back reflection 、 Drive voltage: 4V @ 1 MHz

● Part Number

MP-EOM-PM-1550-300M-PA

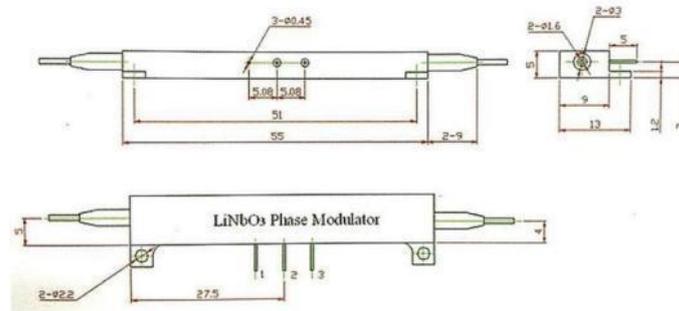
● Application area

Coherent communication 、 Optical chirping 、 Optical sensing 、 FM spectroscopy 、 Frequency shifting 、 Laser linewidth broadening

● Core parameters

Wavelength Range	Bandwidth
1525-1570nm	300MHz

● Dimension Drawing



● General Parameters

Main Parameters

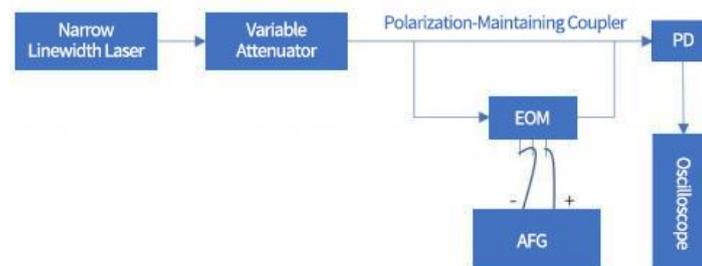
Electro-Optical Characteristics ($T_{sub} = 25^{\circ}\text{C}$, continuous wave bias, unless otherwise specified)

Product Model	MP-EOM-PM-1550-300M-PA
Waveguide Process	Annealed Proton Exchange (APE)
Integrated Photodiode	No
Operating Wavelength Range	1525nm to 1570nm
Insertion Loss	3 dB typical, 3.5 dB max.
On/Off Extinction Ratio	≥ 21 dB min.
Optical Return Loss	≥ 30 dB
Electrical Parameters	
RF Port	
Drive Voltage (V_{π})	8 V typ. @ 1 MHz
Electro-Optic Bandwidth @ -3 dB	300 MHz typ., @ -3 dB

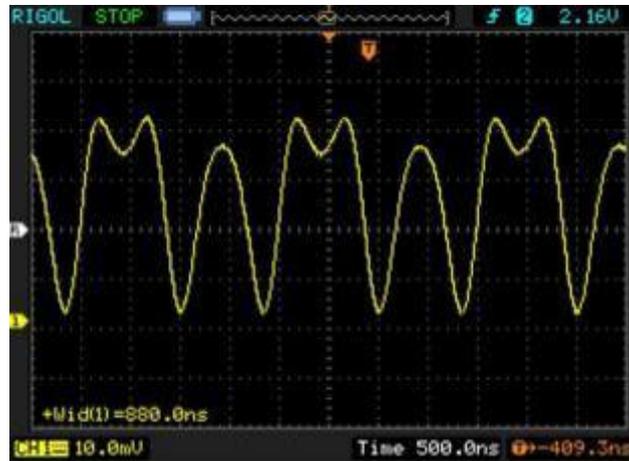
RF Return Loss	
RF Input Power	+30 dBm max.
RF Impedance	
Bias Port	
Bias Drive Voltage (V_{pi})	N/A
Input Impedance	N/A
Environmental/User Interface	
Input Fiber	Panda - PM1550
Output Fiber	Panda - PM1550
Output Fiber Connector	PM FC/APC, can be customized as per client needs
RF Connector	3pin
Bias Connector	
Dimensions	3.783" x 0.981" x 0.640"
Operating Temperature Range	-55 °C to +75 °C
Storage Temperature Range	-60 °C to +90 °C

Phase Modulator Test Report

The test optical path diagram is shown below:



The following results were obtained on the oscilloscope:



The output impedance of the AFG is 50Ω , generating a sine wave signal at 500kHz with an amplitude of 0–3.8V. The 3.8V should represent the half-wave voltage, but a full-wave phase shift is displayed on the oscilloscope, possibly due to an impedance mismatch between the AFG and the product.

Ordering Information

MP-EOM-PM-W□□□□-☆-XX

MP-EOM-PM: Phase

Modulator/IM:

Intensity

Modulator



□□□□:

Wavelength

850: 850nm

1064: 1064nm

1310: 1310nm

1550: 1550nm

☆: Bandwidth

300: 300MHz

10G: 10GHz

XX: Fiber and Connector Type

SA = SMF-28E+ FC/APC

SP = SMF-28E+ FC/PC

PP = PM Fiber+ FC/PC

PA = PM Fiber+ FC/APC