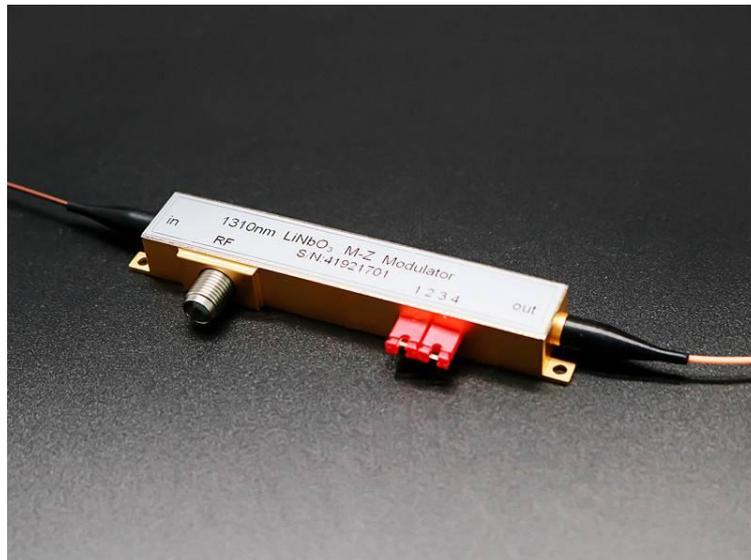


# 1064nm Lithium Niobate High-Frequency Phase Modulator (40GHz Electro-optic Bandwidth)



## ● Product Description

1310/1550nm LiNbO<sub>3</sub> high frequency phase modulator uses titanium diffusion or proton exchange process to make optical waveguide, the input and output optical fiber and waveguide are precisely obliquely coupled, and the electro-optical effect of lithium niobate material is used to realize the phase modulation of optical signal. Titanium diffusion (Ti-indiffusion)



or proton exchange (APE) waveguide process can obtain double refraction or single polarization phase modulation respectively.

## ● Product features

Low Insertion Loss、 Low Drive Voltage、 Titanium Diffusion or Proton Exchange Waveguide、 Excellent Long-Term Stability

## ● Part Number

MP-PMD-1064-40G-PM-FA

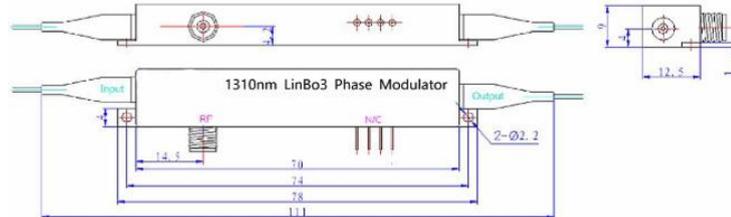
## ● Application area

Fiber Optic Communication 、 Microwave Photonics 、 Quantum Communication、 Optical Sensing、 Optical Chirp

## ● Core parameters

Wavelength	Bandwidth	Connector
1064nm	40GHz	FC/APC

## ● Dimension Drawing



## ● General Parameters

### Parameter

Parameter	Unit	Min	Typical	Max
Half-wave voltage (DC electrode)	V		3.5	5.0
Bandwidth S21@-3dB	GHz	10		40
RF half-wave voltage (DC)	V		3.5	5.0
Bias half-wave voltage	V			5.0
Jitter	dB		0.5	1
Electrical return loss S11-20GHz	dB		-12	-10
RF connector input impedance	$\Omega$		40	
Input impedance DC connector	$\Omega$		>1M	
Crystal: Lithium Niobate (LiNbO3)	.	X-cut Y-propagation		
Waveguide process		APE Process		
Insertion loss	dB		3.0	4.0
Optical return loss	dB		<-45	
Wavelength-dependent loss (1480-1600nm)	dB		0.5	1.0
DC extinction ratio	dB	20	22	



Parameter	Unit	Min	Typical	Max
Input optical fiber		Panda PM fiber, 1.5m length, 900 $\mu$ m		
Output optical fiber		SSMF-28 SM fiber, 1.5m length, 900 $\mu$ m (PMF optional)		
Input RF connector		SMA		
DC connector		Pin feed-through, diameter: 1.0mm		
Package size	mm	110 x12.5 x9.0		
Operating temperature	$^{\circ}$ C	0~+70		
Storage temperature	$^{\circ}$ C	-40~+85		
Max DC input voltage	V	$\pm$ 20		
Max RF input power	dBm	+28		
Max input optical power	mW	200 (APE Process)		

**Order Info:**

**MP-PMD-W-BW-Y-Z-AB-CD**

**PM:Phase Modulator**

**W\_Wavelength:**

**0850: 850nm**

**1064: 1064nm**

**1310:1310nm**

**1550: 1550nm**

**BW: bandwidth**

**0.3G:>300MHz**



**10G:>10GHz**

**Y: Input fiber**

**P: PM fiber**

**S: SM fiber**

**Z: Output fiber**

**P: PM fiber**

**S: SM fiber**

**AB: Input fiber connector**

**00:bare fiber**

**FA: FC/APC**

**FC: FC/SPC**

**CD: Output fiber connector**

**00:bare fiber**

**FA: FC/APC**

**FC: FC/SPC**