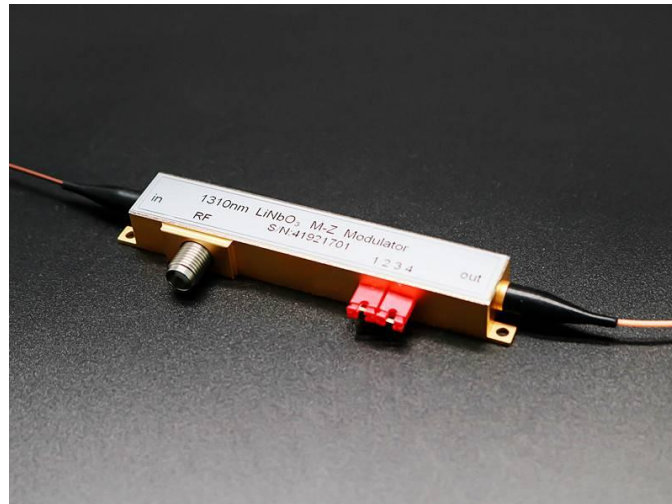


1550nm Lithium Niobate High-Frequency Phase Modulator (40GHz Electro-Optic Bandwidth)



● Product Description

The 1310/1550nm lithium niobate (LiNbO_3) high-frequency phase modulator uses titanium diffusion or proton exchange processes to create optical waveguides. The input and output optical fibers are precisely obliquely coupled with the waveguides, utilizing the electro-optic effect of the lithium niobate material to achieve phase modulation of optical signals. The titanium diffusion (Ti-indiffusion) or proton exchange (APE) waveguide process can respectively achieve birefringence or single polarization phase modulation

● Part Number

PM-1550-40G-PM-FA

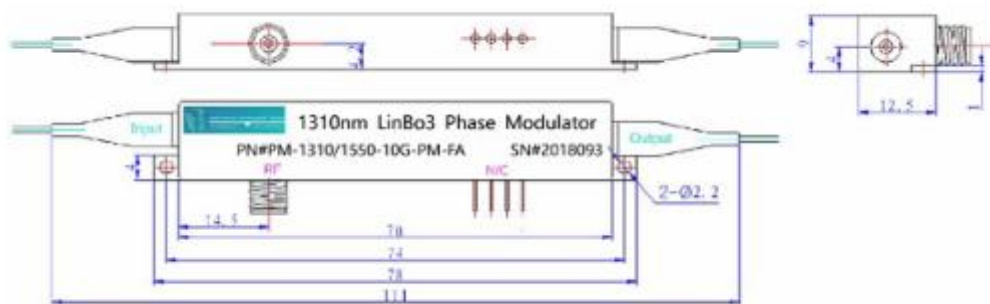
● Product features

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

● Application area

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

Dimensional Drawing



Parameters

Parameter	Unit	Min	Typical	Max
PN#		PM-1064/1310/1550-40G-PM-FA		
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	Ω		40	
Input impedance DC connector	Ω		>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	
Input optical fiber		Panda PM fiber, 1.5m length, 900μm		
Output optical fiber		SSMF-28 SM fiber, 1.5m length, 900μm (PMF optional)		
Input RF connector		SMA		
DC connector		Pin feed-through, diameter: 1.0mm		
Package size	mm	110 x12.5 x9.0		
Operating temperature	°C	0~ +70		
Storage temperature	°C	-40 ~ +85		
Max DC input voltage	V	±20		
Max RF input power	dBm	+28		
Max input optical power	mW	200 (APE Process)		

Ordering Info:

PM-W-BW-Y-Z-AB-CD PM:Phase Modulator

W Wavelength:

0850: 850nm 1064: 1064nm 1310:1310nm 1550: 1550nm

BW: Bandwith

0.3G represents >300MHz

10G represents >10GHz

40G represents >40GHz

Y: Input optical fiber

P: Polarization-maintaining fiber (PMF)

S: Single-mode fiber (SMF)

Z: Output optical fiber

P: Polarization-maintaining fiber (PMF)

S: Single-mode fiber (SMF)

AB: Input optical fiber connector

00: Bare fiber

FA: FC/APC

FC: FC/SPC

CD: Output optical fiber connector

00: Bare fiber

FA: FC/APC

FC: FC/SPC