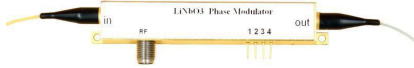




# R-PM Series Phase Modulator



## Description

The LiNbO<sub>3</sub> phase modulator is widely used in high-speed optical communication system, laser sensing and ROF systems because of well electro-optic effect. The R-PM series based on Ti-diffused and APE technology, has stable physical and chemical characteristics, which can meet requirement of the most applications in laboratory experiments and industrial systems.

### Features

- Low insertion loss
- Polarization-maintaining
- Low half-wave voltage
- Dual-polarization option

### Applications

- Optical communication
- Quantum key distribution
- Laser sensing systems
- Frequency shifting

### Wavelength

- 780nm
- 850nm
- 1064nm
- 1310nm
- 1550nm

### Bandwidth

- 300MHz
- 10GHz
- 20GHz
- 40GHz
- 

Rof-PM Series	Rof-PM-07	Rof-PM-08	Rof-PM-10	Rof-PM-13	Rof-PM-15
Operating wavelength	780nm	850nm	1064nm	1310nm	1550nm
3dB Bandwidth	~10GHz	~10GHz	~10GHz	~10GHz	~10/20/40GHz
Insertion Loss	<3.5dB	<3.5dB	< 3.5dB	< 3.5dB	< 3.5dB
PER	> 20dB	> 20dB	> 20dB	> 20dB	> 20dB
V <sub>π</sub> @RF (50KHz)	< 3V	< 3V	< 2.0V / <4.0V	< 3V	< 4V

### Ordering Information

Rof	PM	15	10G	XX	XX
	Type: PM---Phase Modulator	Wavelength: 07---780nm 08---850nm 10---1060nm 13---1310nm 15---1550nm	Operating bandwidth: 300M---300MHz 10G---10GHz 20G---20GHz 40G---40GHz	In-Out Fiber type: PP---PM/PM PS---PM/SMF SS---SMF/SMF	Optical connector: FA---FC/APC FP---FC/PC SP---Customization

**R-PM-10-10G****Wavelength 1064nm 10GHz Phase modulator**

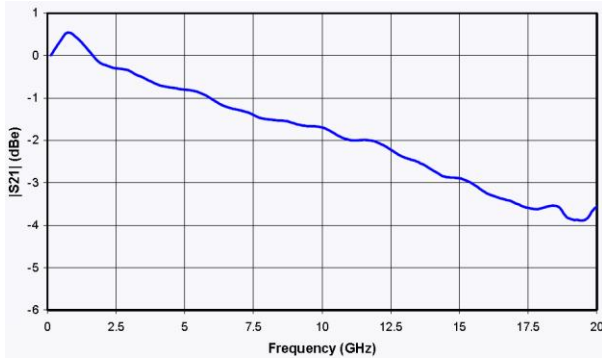
Parameter	Symbol	Min	Typ	Max	Unit
<b>Optical parameters</b>					
Operating wavelength	$\lambda$	1030	1060	1100	nm
Insertion loss	IL		3	3.5	dB
Optical return loss	ORL			-45	dB
Polarization extinction ratio	PER	20			dB
Optical fiber	Input port	980nm PM fiber(125/250 $\mu$ m)			
	output port	980nm PM fiber(125/250 $\mu$ m)			
Optical fiber interface		FC/PC、FC/APC Or Customization			
<b>Electrical parameters</b>					
Operating bandwidth (-3dB)	$S_{21}$	10	12		GHz
Half-wave voltage @50KHz	$V_{\Pi}$		3.5	4.0	V
Electrical return loss	$S_{11}$		-12	-10	dB
Input impedance	$Z_{RF}$	50			$\Omega$
Electrical interface		K(f)			

**Limit Conditions**

Parameter	Symbol	Unit	Min	Typ	Max
Input optical power	$P_{in,Max}$	dBm			20
Input RF power		dBm			33
Operating temperature	$T_{op}$	$^{\circ}C$	-10		60
Storage temperature	$T_{st}$	$^{\circ}C$	-40		85
Humidity	RH	%	5		90

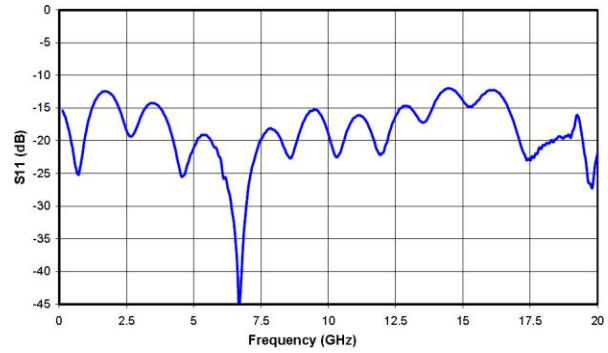


**S21 Curve**



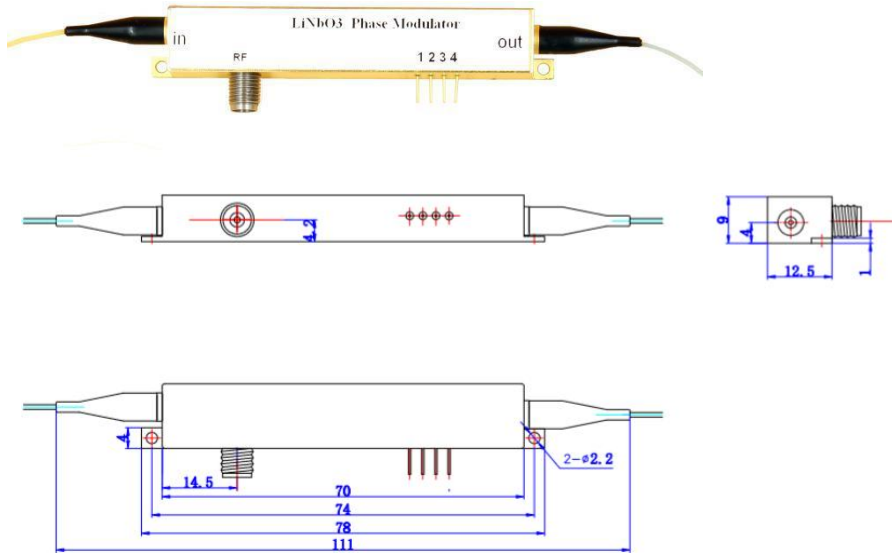
**S21 Curve**

**&S11 Curve**



**S11 Curve**

**Mechanical Diagram**



PORT	Symbol	Note
In	Optical input port	PM Fiber and SM Fiber option
Out	Optical output port	PM Fiber and SM Fiber option
RF	RF input port	K(f)
Bias	Bias control port	1,2,3,4-N/C (Bias option)

RF Driver and Bias control circuit board information are provided on website ([www.bjrofofoc.com](http://www.bjrofofoc.com)), you can also contact us for more information by email ([bjrofofoc@rof-oc.com](mailto:bjrofofoc@rof-oc.com)) or WhatsApp (+86-18978968297)