

# R-PM-15 Series

## 1550nm Phase Modulator

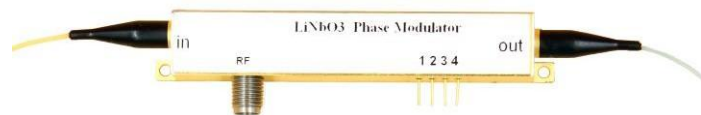
Lithium niobate electro-optical phase modulator based on titanium diffusion process has the characteristics of low insertion loss, high modulation bandwidth, low half wave voltage, high damage optical power, etc. It is mainly used in the fields of optical chirp control in high-speed optical communication systems, phase shift in coherent communication systems, generation of sidebands in ROF systems, and reduction of stimulated Brillouin scattering (SBS) in analog optical fiber communication systems.

### Features

- Bandwidth ~2.5GHz
- Low half-wave voltage
- High damage optical power
- Low insertion loss

### Application

- Optical fiber sensing
- Optical fiber communication
- Laser coherent synthesis
- Phase delay (direction shifter)
- Quantum communication
- ROF system



### Performance

Parameter		Symbol	Min	Typ	Max	Unit
Optical parameters						
Optical parameters		$\lambda$	1530	1550	1565	nm
Optical parameters		IL		4	5	dB
Optical return loss		ORL			-45	dB
Switch extinction ratio		ER@D C	20	23	45	dB
Dynamic extinction ratio		DER		13		dB
Optical fiber	Input port		Panda PM			
	output port		Panda PM or SMF-28			
Optical fiber interface			FC/PC、FC/APC Or user to specify			
Electrical parameters						
Operating bandwidth (-3dB)	R-PM-15-2.5G	2.5	3		GHz	2.5

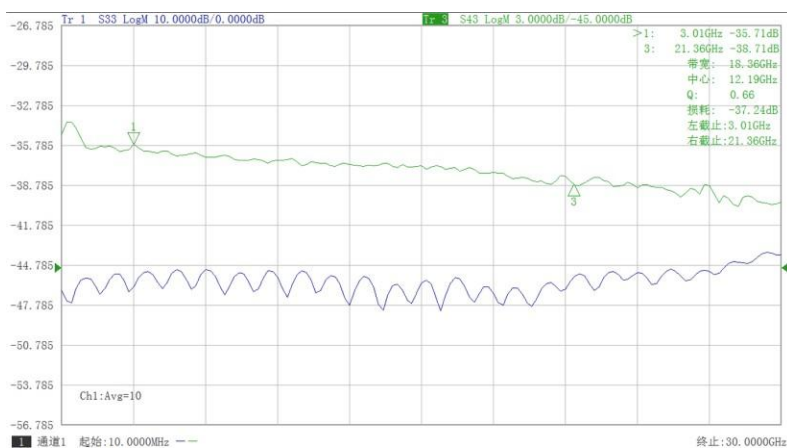


Half-wave voltage	RF	@50KHz		3	3.5	V
	Bias	@Bias		4.5	5	V
Electrical return loss		$S_{11}$		-12	-10	dB
Input impedance	RF	$Z_{RF}$	50			$\Omega$
	Bias	$Z_{BIAS}$	1M			$\Omega$
Electrical interface			SMA(f)			

Limit Conditions

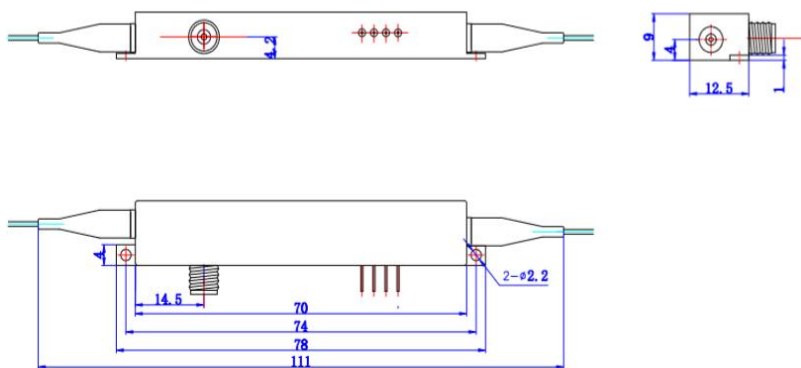
Parameter	Symbol	Min	Typ	Max	Unit
Input optical power @1550nm	$P_{in,Max}$	dBm			20
Input RF power		dBm			28
Operating temperature	Top	°C	-10		60
Storage temperature	Tst	°C	-40		85
Humidity	RH	%	5		90
Bias voltage	Vbias	V	-20		20

Curves



S<sub>11</sub>&S<sub>21</sub> curves

Package ( mm )



R-PM-15-2.5G



**Ordering**

R	PM	W	B	F	C
	Modulator Type: PM---Phase modulator	Wavelength: 15---1550nm	Bandwidth: 2.5G---2.5GHz	Fiber: PP---PM/PMF	Connector: FA---FC/APC FP---FC/PC SP--- User specified

\* If you have special requirements, please contact our sales staff