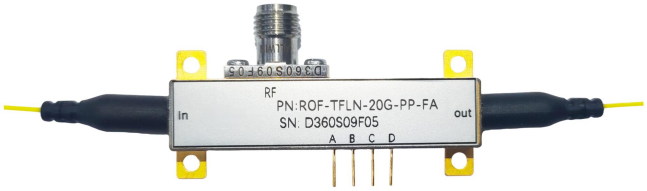
ROF-TFLN-20G Series

Electro-optic intensity modulator

The ROF-TFLN-20G series electro-optic intensity modulator is based on thin film lithium niobate waveguide technology and M-Z push-pull structure, with low half wave voltage and high operating bandwidth. The bias (DC) end adopts thermal tuning method, which can greatly reduce temperature drift and work stably for a long time at any operating point. Compared with bulk modulators, it has a smaller volume, lower power consumption, and better stability.

Feature

- Extinction ratio>25dB (typical value 30dB)
- High stability
- High modulation bandwidth
- Low half wave voltage



Application

- Microwave photons
- High speed optical communication
- Quantum Communication

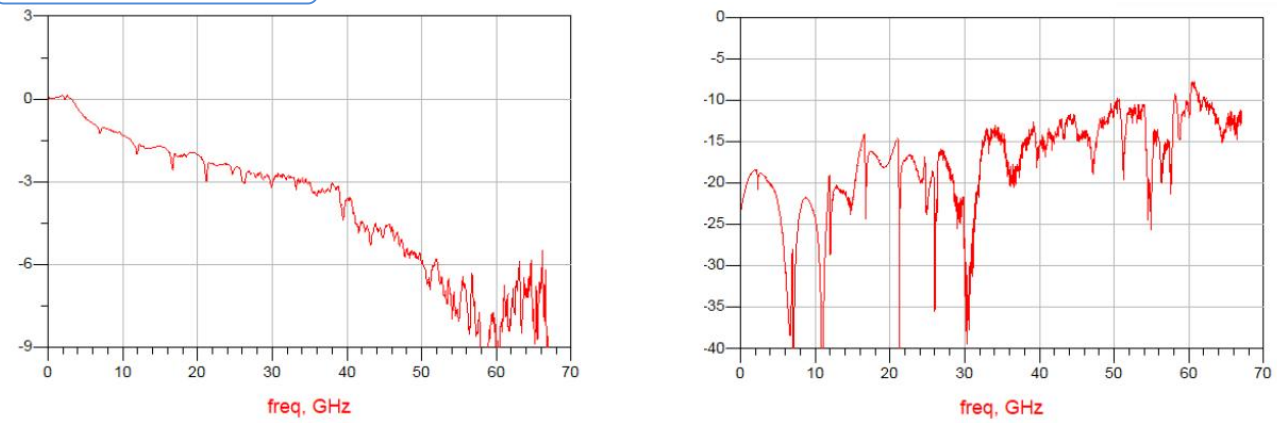
Parameter

Parameter		Symbol	Min	Typ	Max	Unit
optical parameters						
working wavelength		λ	1525		1565	nm
insertion loss		IL		4.5	5.5	dB
Optical Return Loss		ORL			-25	dB
Switch extinction ratio @ DC		ER@DC	25	30		dB
optical fiber	input terminal		Panda PM1550			
	output end		Panda PM1550			
fiber optic interface			FC/PC、FC/APC or user specified			
Electrical parameters						
Working bandwidth (-3dB)		S_{21}	20	25		GHz
RF half wave voltage Vpi		Vπ@1GHz			3.5	V
Biased half wave power Ppi		Pπ@Bias		45	50	mW
Maximum input voltage at the bias end					8	V
Electric return loss		S_{11}		-12	-10	dB
RF input impedance		Z_{RF}		50		Ω
Electrical interface			2.92mm femal			

Extreme conditions

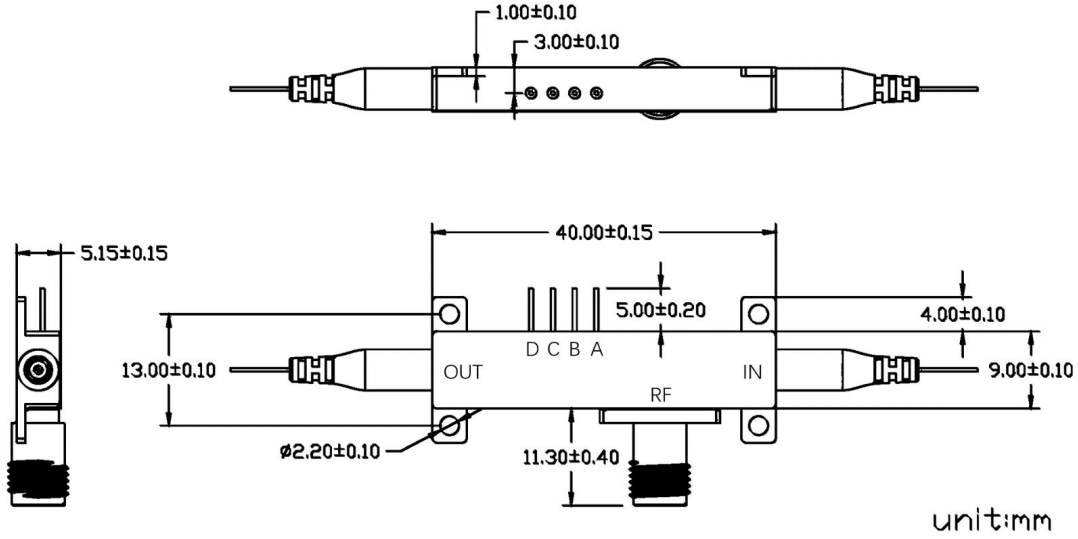
Parameter	Symbol	Unit	Min	Typ	Max
Input optical power @ 1550nm	$P_{in,Max}$	dBm			20
RF input power		dBm			23
Bias end bias voltage	Vbias	V	0		8
Operating Temperature	Top	℃	-10		60
Storage temperature	Tst	℃	-40		85
humidity	RH	%	5		90

Characteristic curve



S_{11}&S_{21} curve

Package size（mm）



Order Information

ROF	TFLN	XX	XX	XX
	Thin film lithium niobate intensity modulator	operating bandwidth： 20G---20GHz	Input/output fiber optic： PP---PMF-PMF	connection： FA---FC/APC FP---FC/PC SP---user specified

*If you have any special requirements, please contact our sales personnel