Thin film lithium niobate intensity modulator

R-TFLN-AM-15-40G-PP-FA

Description

The thin film lithium niobate on insulator (LNOI) material inherits the excellent electro-optic properties of bulk lithium niobate materials, providing a new solution for high-speed electro-optic modulator chips that can be integrated, miniaturized, and have high modulation efficiency. We have developed a wideband, low half wave voltage thin film LiNbO3 electro-optic modulator based on LNOI material. Our product has excellent characteristics of high stability, low insertion loss, and small size, which is more advantageous than traditional bulk material lithium niobate modulators, and has broad application prospects in high-speed optical communication and microwave photonics fields.

Feture

High bandwidth, low loss, low driving voltage, small size, high stability

Field

High speed optical communication, microwave photonics, radar, etc

Ordering Information

R-TFLN-AM-15-40G-PP-FA

Sym	Description	Optional parameter
λ	working wavelength	C (~1550nm)，O (~1310nm)
BW	3dB bandwidth	40(40GHz)
PD	Monitoring PD	1 (integrated), 0 (not integrated)
IF	Input fiber optic	P (polarization maintaining fiber)
OF	Output fiber optic	P (polarization maintaining fiber), S (standard single-mode fiber)
S	Half wave voltage	S standard

Specifications

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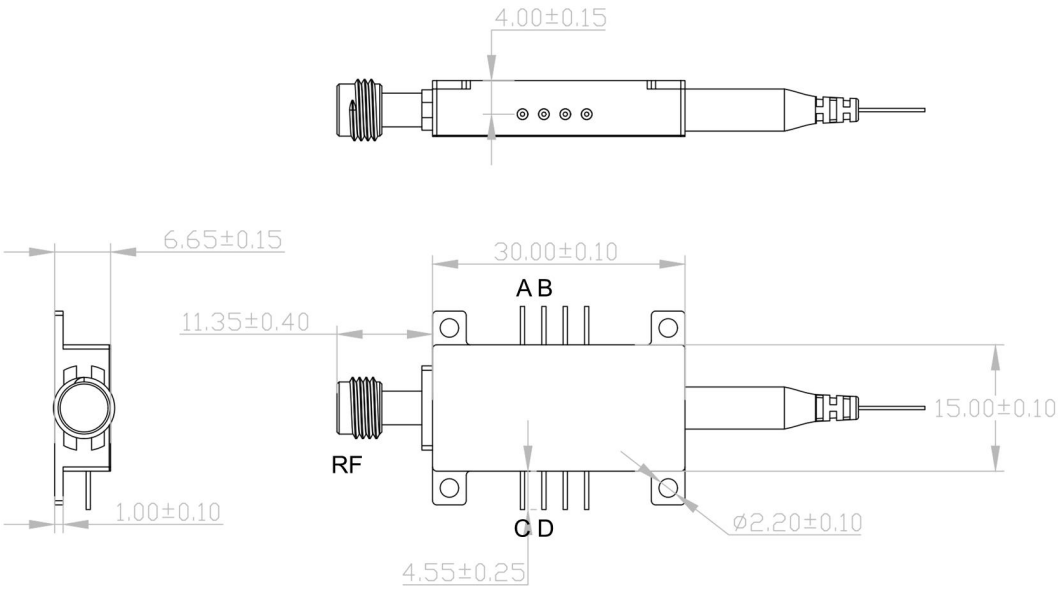
Parameter	Sym	indicator	Unit
working wavelength	λ	1530~1565	nm
Optical insertion loss	IL	≤ 5.5 (Typ 4.5)	dB
extinction ratio	ER	≥ 25	dB
Optical return loss	RL	≤ -30	dB
Maximum input optical power	P_{in}	≤ 200	mW
Electro optic modulation bandwidth (3dB, from 2GHz)	BW	≥ 40	GHz
RF half wave voltage @ 50KHz	Vπ	≤ 3.5	V
RF reflection	S_{11}	≤ -10	dB
Maximum RF input power	S_{in}	≤ 25	dBm
Thermal bias half wave power	Pπ	50	mW
Thermal bias voltage	U_{heater}	< 8	V

Operating Temperature	T_O	-55~85	℃
Storage temperature	T_S	-55~85	℃

Package size and pin definition



Pin definition:

RF

Stitch	Function
RF	RF input, 1.85mm female head
A	Thermostatic bias electrode (positive and negative)
B	Thermostatic bias electrode
C	Backup thermal adjustment bias electrode
D	Backup thermal adjustment bias electrode