

1550nm 40GHZ Bent-waveguide electro-optic intensity TFLN modulator chip



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Power Next Gen Photon

Overview

UFP offers Thin Film Lithium Niobate (TFLN) modulator chips in different formats and data rate, including DR8 and 2 x FR4 @ 100 Gbps/lane for 800 Gbps applications and DR4 @ 400 Gbps/lane for 1.6 Tbps applications. With experience and know-how, AFR engineers are available to customize our products to meet customers' specific requirements.

Parameters

Product Specifications (Test conditions: 25 °C, unless otherwise specified)

Parameters	Symbol	Test condition	Min.	Typ.	Max.	Unit
Operating Wavelength	λ		1550(C band)			nm
Insertion Loss	IL	1550nm 0dBm CW		4	4.5	dB
RF Half-Wave Voltage	V_{π}	1550nm CW fmod=50kHz		3.3	3.5	V
3 dB Bandwidth	S21		40/60			GHz
Modulation Extinction Ratio (ER)	ER		20			dB
RF Return Loss	S11				-10	dB
Thermal Tuning Resistance	R			80		Ω
Thermal Tuning P_{π}	P_{π}			50		mW
Input/Output Waveguide Mode Field	MFD		4/9			μm
Input/Output Waveguide Spacing	Pitch		1600			μm

Maximum Absolute Ratings

Parameter Name	Symbol	Rated Value	Unit
Input Optical Power	$P_{s,o}$	23	dBm
Input Optical Return Loss	$P_{s,rf}$	23	dBm
Thermoelectric Cooler Voltage	VH	± 8	V
Operating Temperature	TW	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature	TS	-40 ~ +85	$^{\circ}\text{C}$