

# 1550nm PM Lithium Niobate 10Gb/s Intensity Modulator



## ● Product Description

The Lithium Niobate ( $\text{LiNbO}_3$ ) intensity modulator is made using titanium diffusion or proton exchange techniques to create a Mach-Zehnder type optical waveguide. The input and output optical fibers are precisely coupled to the waveguide, and the electro-optic effect of the lithium niobate material is used to achieve intensity modulation of the optical signal.

## ● Product features

X-cut and Y-propagating Lithium Niobate, Titanium diffusion or proton

exchange waveguide、 Low drive voltage、 Independent bias electrodes、 Zero chirp、 Precise diagonal coupling of the fiber to the chip、 Greatly reducing back-reflection、 Excellent long-term stability

## ● Part Number

MP-EOM-IM-1550-8G-FA

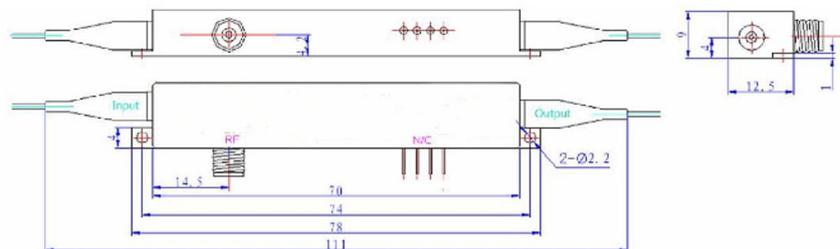
## ● Application area

Fiber optic communication、 Optical sensing、 Optical measurement

## ● Core parameters

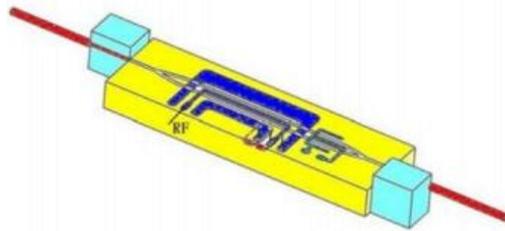
Wavelength	Bandwidth	Half-wave Voltage
1550±20nm	8GHz	≤5.0V

## ● Dimension Drawing



## ● General Parameters

### Structure



### Parameters(23°C)

Parameter		Unit	Value	
			2.5Gb/s	10Gb/s
Optical	Operating Wavelength*	nm	1550±20	
	Insertion Loss	dB	≤4.0	
	Maximum Input Optical Power	mW	≤200(APE process)	
			≤50(Ti process)	
	Optical Return Loss	dB	≥45	
	On-Off Extinction Ratio	dB	≥20	
Electrical	RF Half-Wave Voltage@DC	v	≤4.0	≤5.0
	Bias Half-Wave Voltage	v	≤5.0	≤8.0
	Bandwidth	GHz	≥3	≥8



	<b>Electrical Return Loss</b>	<b>dB</b>	<b>≤-10</b>
<b>Mechanical</b>	<b>RF Connector</b>		<b>SMA</b>
	<b>Bias Connector</b>		<b>PIN</b>
	<b>Input Pigtail Type</b>		<b>PM Fiber</b>
	<b>Output Pigtail Type</b>		<b>PM or SM Fiber</b>
<b>Environmental</b>	<b>Operating Temperature</b>	<b>°C</b>	<b>0~+70</b>
	<b>Storage Temperature</b>	<b>°C</b>	<b>-40~+85</b>

\* The wavelengths of 1310nm, 1064nm, and 850nm are available for customization.