## **Fiber Optical Phase Modulator**







DATASHEET





This is a high performance, 20 GHz phase modulator. It can provide phase modulation in a broad operation bandwidth with a low driving voltage. Its low insertion loss and high optical power handling capability provides for maximum transmission power. It is fabricated with Annealed Proton Exchange (APE) optical waveguides on X-cut LiNbO3 material, and uses polarization maintaining input and output fibers, making it easy to integrate with other optical components.

### **Features**

- X-cut APE Process
- High Polarization Extinction Ratio
- High Optical Power Handling
- PM Input & Output

### **Applications**

- Coherent Communications
- Optical Chirping
- Optical Sensing
- FM Spectroscopy
- Frequency Shifting
- Laser Linewidth Broadening

### **Specifications**

Parameter	Min	Typical	Max	Unit
Input Optical Power			300	mW
Operating Wavelength	1030	1080		nm
Insertion Loss		3		dB
Chip Polarization Extinction Ratio	60			dB
Pigtail Polarization Extinction Ratio	20			dB
Optical Return Loss	40			dB
S21 Bandwidth	16	20		GHz
Vπ @10GHz		5.5	6	٧
RF Input Power			27	Ω
Impedance		50		Ω
Operating Temperature	0		70	° C
Storage Temperature	-40		80	° C
Operating Humidity	0		90	%

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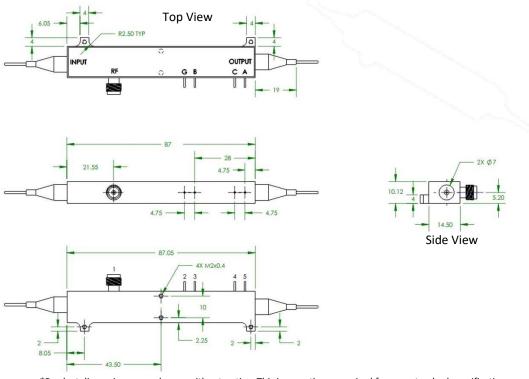
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20GHz, 1064 nm



### **Dimensions (mm)**



\*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

#### **Electrical Connection**

PIN	Symbol	Description				
1	-	N/A				
2	-	N/A				
3	-	N/A				
4	-	N/A				
5	-	N/A				
6	-	N/A				
7	-	N/A				
RF	RF connector*	V female (1.85 mm connector)				

### **Ordering Information**

	2	1							
Prefix	Configuration		Wavelength	Frequency	Input Fiber	Output Fiber	Cable	Fiber Length	Connector
LNPM-	Phase = 2		1060 nm =1	20GHz = 3	PM 980 = 9	PM 980 = 9	0.9mm Tube= 1	0.5m = 1 Special = 0	FC/APC = 3 FC/PC = 2 Special = 0