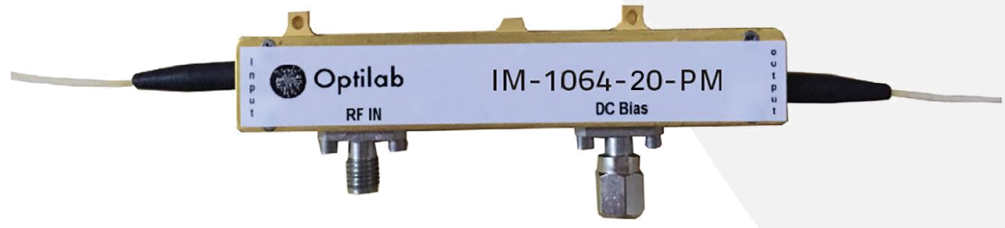


IM-1064-20-PM



DEVICE

1064 nm, 20 GHz Analog Modulator w/ PM output

OVERVIEW

The Optilab IM-1064-20-PM Intensity Modulator is designed for external modulation of 1064 nm laser up to 20 GHz or 25 Gb/s. It is also applicable for pulse generation for Ytterbium-Doped Fiber Amplifier amplification (YDFA) in satellite links and active mode locked laser applications. It is a bias-stabilized lithium modulator that proves to be extremely stable for long periods of time, and features excellent stability in a biased circuit, operating from 1030 nm to 1090 nm. It has an excellent operating temperature tolerance ranging from -30° C to +75° C. The IM-1064-20-PM uses a Polarization Maintaining (PM) input and output fiber, featuring separate RF and bias ports. Contact Optilab for more information.

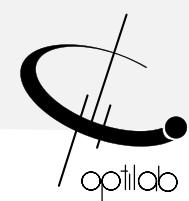
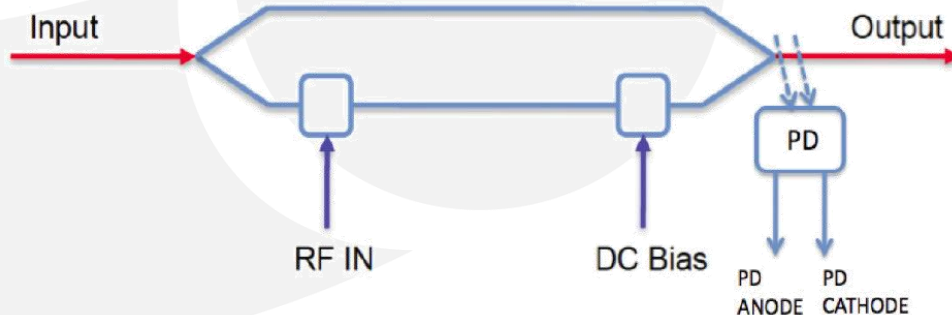
FEATURES

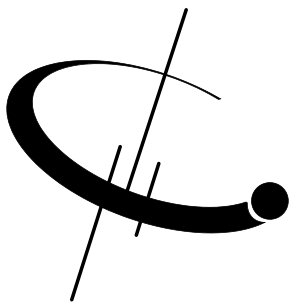
- 1030-1090 nm wavelength
- 3 dB bandwidth up to 20 GHz
- Low drive voltage
- PM input and output
- High extinction ratio

APPLICATIONS

- Pulse generation for YDFA
- Up to 25 Gb/s
- Satellite Link
- Active mode locked laser
- Research and development

FUNCTION DIAGRAM





IM-1064-20-PM

SPECIFICATIONS

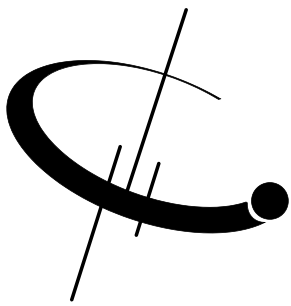
Input Optical Power	100 mW max.
Operating Wavelength	1030 to 1090 nm
Chirp Value	$< \pm 0.2$
Insertion Loss	4.0 dB typ., 4.5 dB max
Extinction Ratio	25 dB min
Optical Return Loss	45 dB min
S21 Bandwidth (RF Port)	18 GHz typ.
S11 Return Loss (RF Port)	≤ 10 dB @ 10 GHz
V_{π} (RF Port)	4.0 V typ. @ 1 GHz 6.2 V typ. @ 18 GHz
RF Input Power	26 dBm max.
Impedance (RF Port)	$50 \pm 5 \Omega$
S21 Bandwidth (Bias Port)	500 MHz typ.
V_{π} (Bias Port)	3.0 V typ.
Impedance (Bias Port)	$> 1 M\Omega$
Rise/Fall Time	< 40 ps

GENERAL

Operating Temperature (standard)	-30 °C to +75 °C
Storing Temperature	-60 °C to +85 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	PM 980
Input/Output Connector	FC/APC (PM)
Material	LiNbO3
Crystal Orientation	X-cut, Y-propagating
RF Port connectors	K-Type female
Cabling	900 μ m tubing
Dimensions (including boots)	3.783" x 0.981" x 0.640"

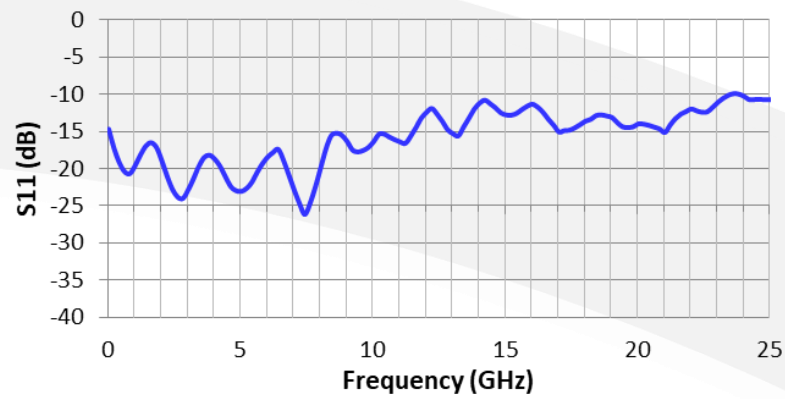
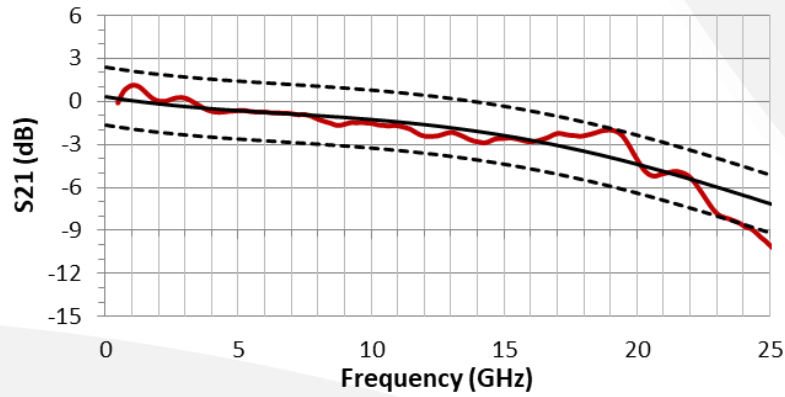
MECHANICAL



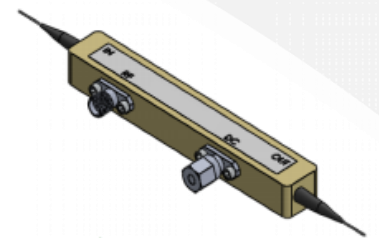
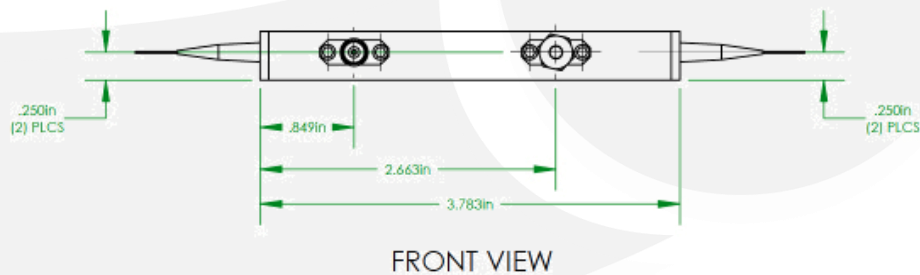
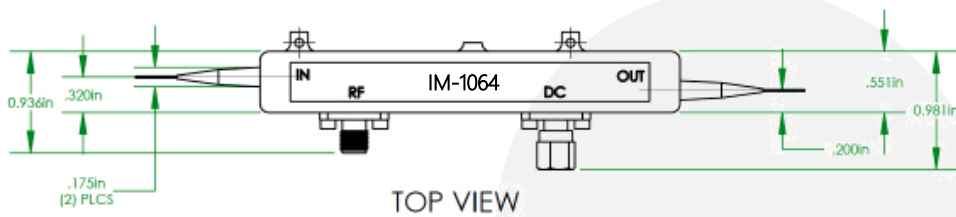


IM-1064-20-PM

TYPICAL S21 & S11 CHARACTERISTICS



MECHANICAL DRAWING



OPTIONS

IM-1064-20-PM-x

X Connector Type:
A, FC/APC

