



IM-1064-12-SM



DEVICE

1064 nm, 12 GHz Bandwidth Intensity Modulator, SM Output

OVERVIEW

The Optilab IM-1064-12-SM Intensity Modulator is designed for external modulation of 1064 nm laser; up to 12 GHz or 12.5 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 -30o C to +75o C. The IM-1064-10-SM uses a Polarization Maintaining (PM) input and SM output fiber, featuring separate RF and bias ports. Contact Optilab for more information.

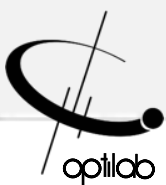
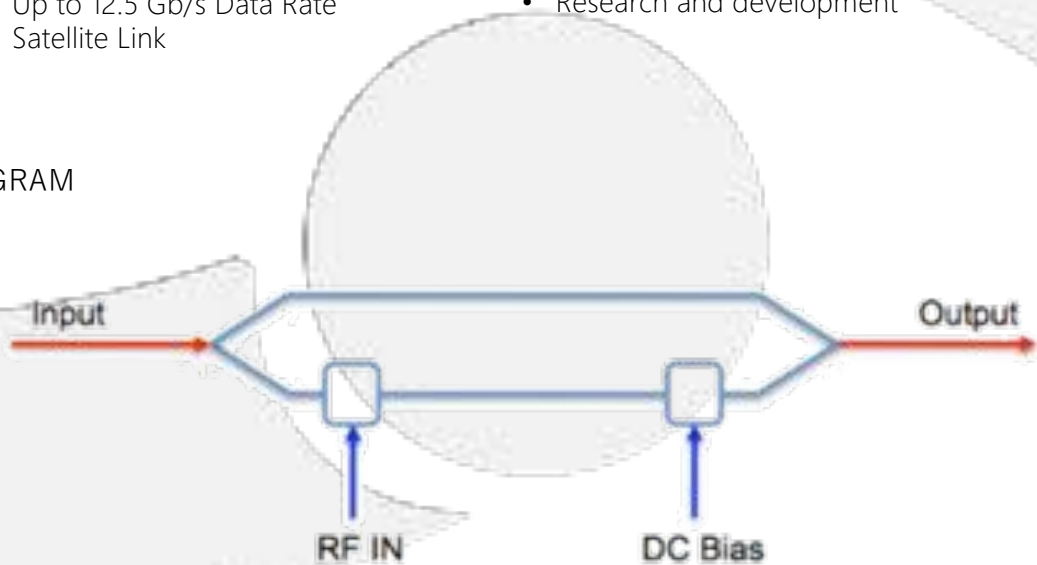
FEATURES

- 1030-1090 nm wavelength
- Low Drive Voltage
- Usable Bandwidth up to 20 GHz
- PM input and output
- High extinction ratio

USE IN

- Pulse generation for YDFA
- Up to 12.5 Gb/s Data Rate
- Satellite Link
- Active mode locked laser
- Research and development

FUNCTIONAL DIAGRAM





IM-1064-12-SM

SPECIFICATIONS

Input Optical Power	100 mW max.
Operating Wavelength	1030 to 1090 nm
Chirp Value	$< \pm 0.2$
Insertion Loss	5.0 dB max., 4.5 dB typ.
Extinction Ratio	25 dB min.
Optical Return Loss	45 dB min.
S21 Bandwidth (RF Port)	12 GHz typ.
S11 Return Loss (RF Port)	≤ 10 dB @ 10 GHz
$V \pi$ (RF Port)	≤ 4.0 V typ. @ DC
RF Input Power	26 dBm Maximum
Impedance (RF Port)	$50 \pm 5 \Omega$
S21 Bandwidth (Bias Port)	500 MHz typ.
$V \pi$ (Bias Port)	3 V typ.
Impedance (Bias Port)	$> 1 M\Omega$
Rise Time/Full Time	< 40 ps

GENERAL

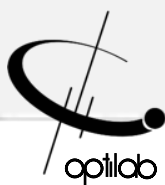
Operating Temperature (Standard)	-30°C to +75 °C
Storage Temperature	-60 °C to +85 °C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber Type	PM 980 - 250
Output Fiber Type	SM 980 - 250
Input Connector	FC/APC (PM)
Output Connector	FC/APC (SM)
Material	LiNbO3
Crystal Orientation	X-cut, y-propagating
Bias Port Connector	Wiltron K-Type Female
RF Port Connectors	SMA Female
Cabling	250 μ m
Dimensions	3.783" x 0.981" x 0.640"

MECHANICAL

OPTIONS

IM-1064-12-SM-x

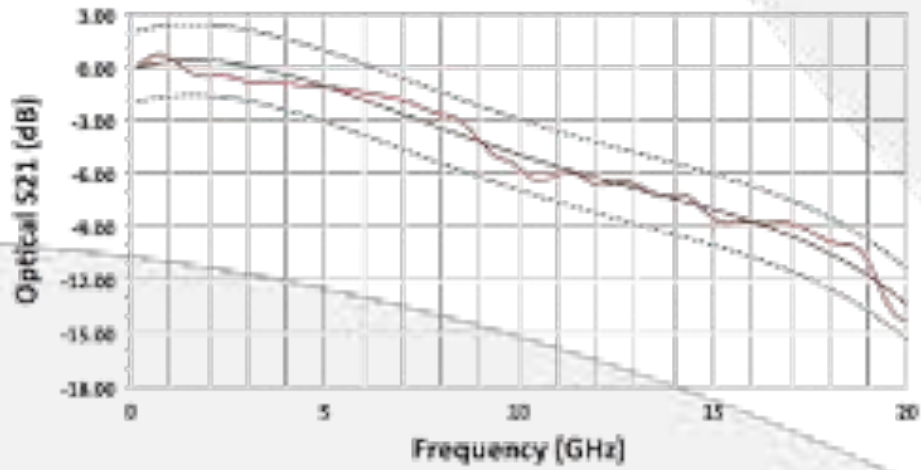
X Connector Type: a, FC/APC





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TYPICAL S21 AND S11 BANDWIDTH



MECHANICAL DRAWING

