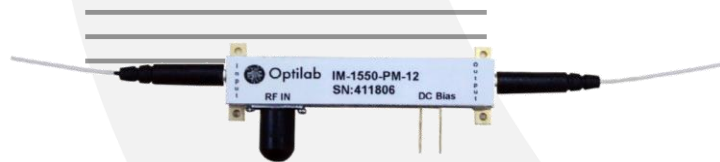


IM-1550-12-PM



DEVICE

1550 nm, 12 GHz Intensity Modulator w/ PM input/output

OVERVIEW

The Optilab IM-1550-12-PM is a 12 GHz Intensity Modulator that is manufactured with both PM (Polarization Maintaining) fiber on input and output ports, incorporating a zero-chirp design for ultra long haul transmission. Covering full C-band and L-band, it can be used for any ITU grid DWDM channel, with exceptional E/O bandwidth and a highly linear transfer function. Applications include digital transmission up to 15 Gb/s, analog RFOF transmission to 12 GHz, optical pulse generation, mode-locked fiber laser and microwave optical link. The Optilab IM-1550-12-PM operates with low drive voltage, making it compatible with a wide variety of modulator drivers, and a separate bias port allows the modulator to operate at specific points of the transfer function. Supplied in a hermetic package, qualified to TelcordiaTM GR-468-CORE, this product assures high reliability and performance at all times. Contact Optilab for more information.

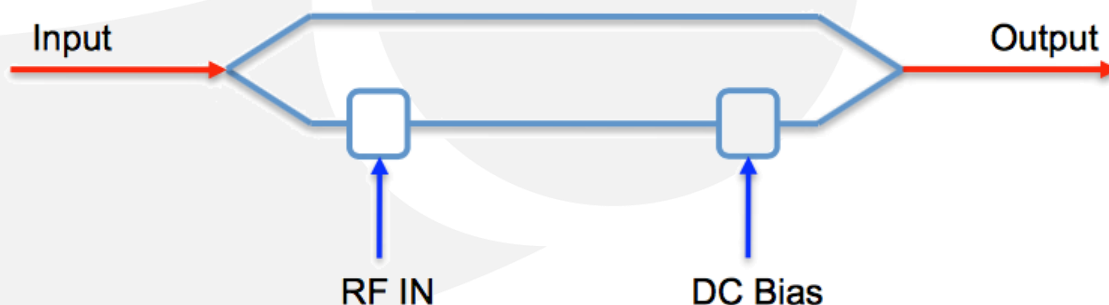
FEATURES

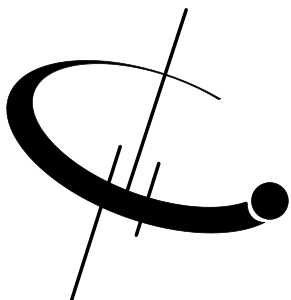
- PM input and output port
- Low drive voltage
- Zero chirp design
- Low insertion loss
- 1530-1610nm operating wavelength
- Temp. Range of -30°C to 75°C
- High Extinction Ratio
- Useful bandwidth up to 15 GHz

USE IN

- Satellite Link
- Antenna remote
- RF over fiber
- Pulse generation
- OC 192 C-band & L-band
- TDM and WDM up to 15 Gb/s
- Analog transmission up to 12 GHz
- Active mode laser

FUNCTIONAL DIAGRAM





IM-1550-12-PM

SPECIFICATIONS

Input Optical Power	70 mW typ., 100 mW max.
Operating Wavelength	1530 nm to 1610 nm
Chirp Value	± 0.2 (zero chirp design)
Insertion Loss	4 dB typ., 4.5 dB max.
Extinction Ratio	> 30 dB typ. @ DC
Optical Return Loss	< -45 dB max.
PRBS Electrical Drive Voltage	5.0 Vpp typ. @ 1 GHz
S21 3 dB Bandwidth (RF Port)	10 GHz min., 12 GHz typ.
S11 Return Loss (RF Port)	< -13 dB min up to 9 GHz
V_{π} (RF Port)	< 6.1 V @ 10 Gb/s
RF Input Power	26 dBm
Impedance (RF Port)	50 Ω typ.
S21 Bandwidth (Bias Port)	200 MHz min.
V_{π} (RF Port)	< 10 V @ DC
Impedance (Bias Port)	100 k Ω min.

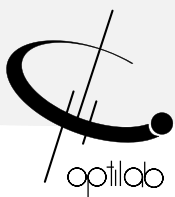
GENERAL

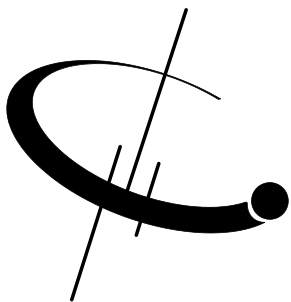
ANALOG LINK PERFORMANCE

IIP3 @ 7 GHz	31 dBm
1 dB Compression Point @ 10 GHz	16.0

MECHANICAL

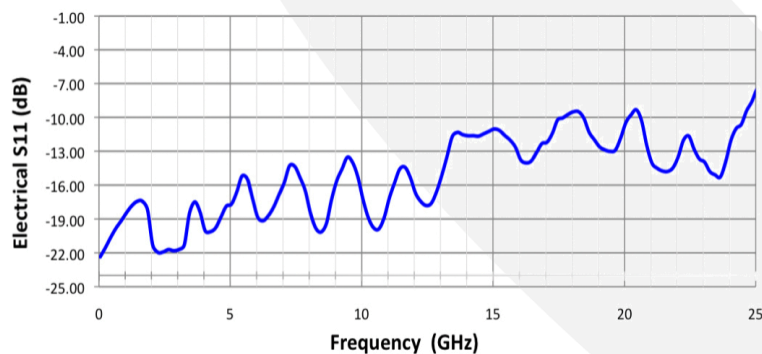
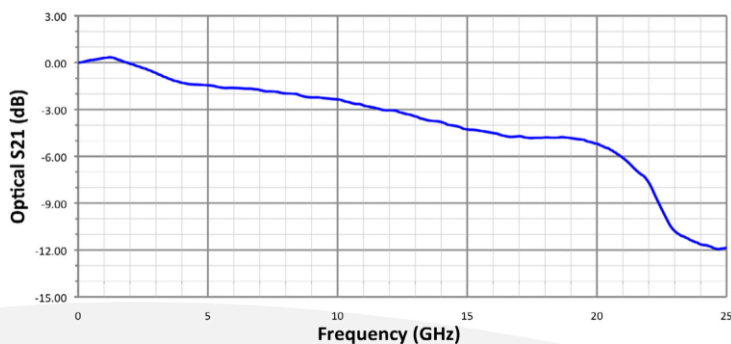
Operating Temperature	-30 °C to +75 °C (standard), -55 °C to +80 °C (optional extended)
Storage Temperature	-60 °C to +85 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	PANDA - PM
Input Connector	PM FC/APC, PM FC/UPC
Output Connector	PM FC/APC, PM FC/UPC optional
Material	LiNbO3
Crystal Orientation	X-cut, y-propagating
Waveguide Process	Ti-indiffused
Bias Port Connector	2 Pins
RF Port Connectors	Anritsu K
Cabling	900 μ m tubing
Dimensions	66 mm x 22 mm x 9 mm





IM-1550-12-PM

TYPICAL S21 AND S11 BANDWIDTH

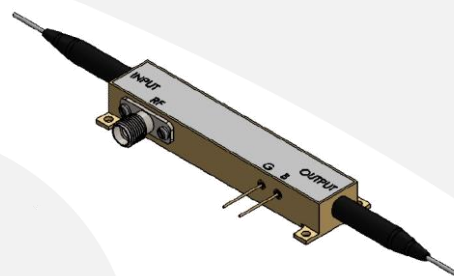
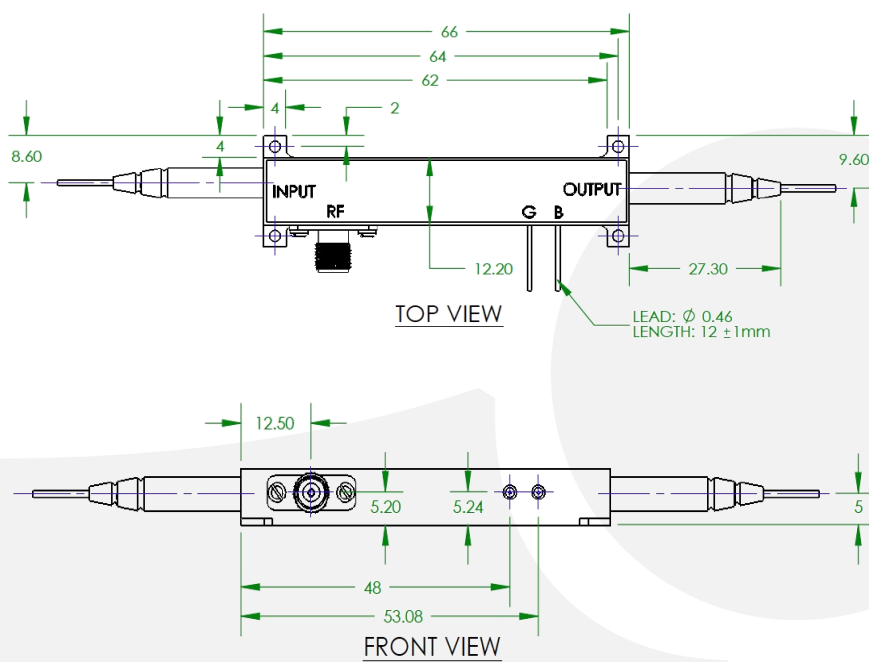


ORDERING OPTIONS

IM-1550-12-PM-XX-y

XX TQ: Temperature Qualified (-55°C to +80°C)
y a, FC/APC; u, FC/UPC

MECHANICAL DRAWING



Pin #	Description
G	GND
B	DC BIAS

