



IM-1550-12-B



DEVICE

1550 nm, 12 GHz Compact Intensity Modulator, SM Output

OVERVIEW

The Optilab IM-1550-12-B is a 12 GHz Intensity Modulator, 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, and microwave optical link. The Optilab IM-1550-12-B operates with standard drive voltage, making it compatible with a wide variety of modulator drivers, and a diplexed bias port allows the modulator to operate at specific points of the transfer function. Supplied in a hermetic package, qualified to Telcordia™ GR-468-CORE, this product assures high reliability and performance at all times. Contact Optilab for more information.

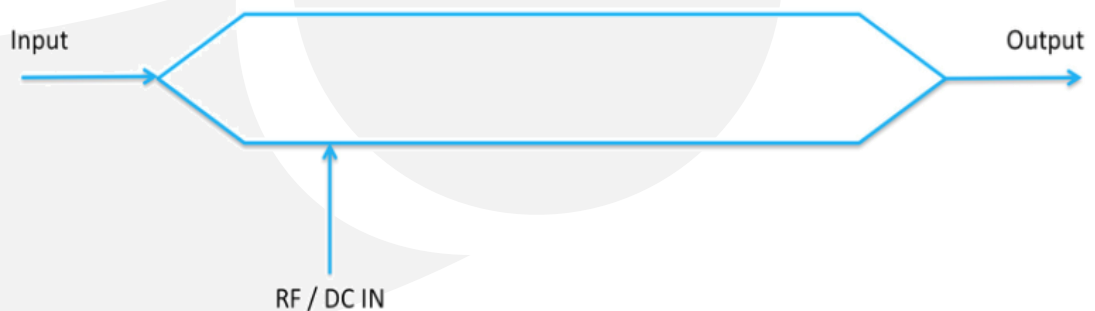
FEATURES

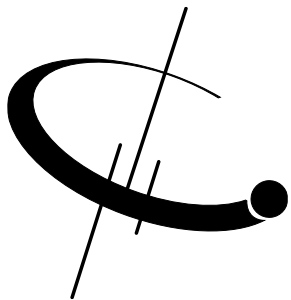
- SM Output Port
- Standard Drive Voltage
- 1530 nm to 1610 nm Operating Wavelength
- Low Insertion Loss
- Useful Bandwidth up to 12 GHz
- High Extinction Ratio
- Zero Chirp Design

APPLICATIONS

- OC192 C-Band & L-Band
- TDM & WDM up to 15 Gb/s
- Analog Transmission up to 12 GHz
- Satellite Link
- Antenna Remote
- RF over Fiber
- Pulse Generation

FUNCTION DIAGRAM





IM-1550-12-B

SPECIFICATIONS

Input Optical Power	100 mW max.
Operating Wavelength	1525 to 1620 nm
Chirp Value	< 0.2 (zero chirp design)
Insertion Loss	4 dB typ., 5 dB max.
Extinction Ratio	≥ 27 dB type. @ DC
Optical Return Loss	≤ -35 dB max.
PRBS Electrical Drive Voltage	5.0 Vpp typ. @ 1 GHz
S21 3 dB Bandwidth	10 GHz min., 12 GHz typ.
S11 Return Loss	≤ -14 dB typ. Up to 9 GHz
V π	≤ 5 V @ 1 GHz
Max RF Input Power	10 V
Impedance	43 Ω typ.

GENERAL

Operating Temperature (Standard)	0°C to +70°C
Storage Temperature	-40°C to +85°C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber Type	PM PANDA
Output Fiber Type	SMF-28
Input Connector	PM FC/APC, PM FC/UPC Optional
Output Connector	SMF FC/APC, FC/UPC Optional
Material	LiNbO3
Crystal Orientation	X cut, y-propagating
Waveguide Process	Ti-indiffused
RF Port Connectors	SMA
Optical Cabling	900 μm tubing
Dimensions	117.9mm x 15.2mm x 9.8mm

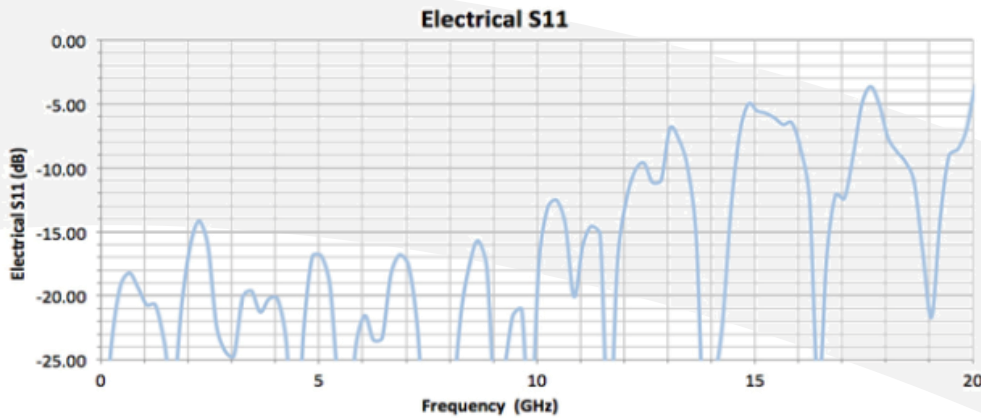
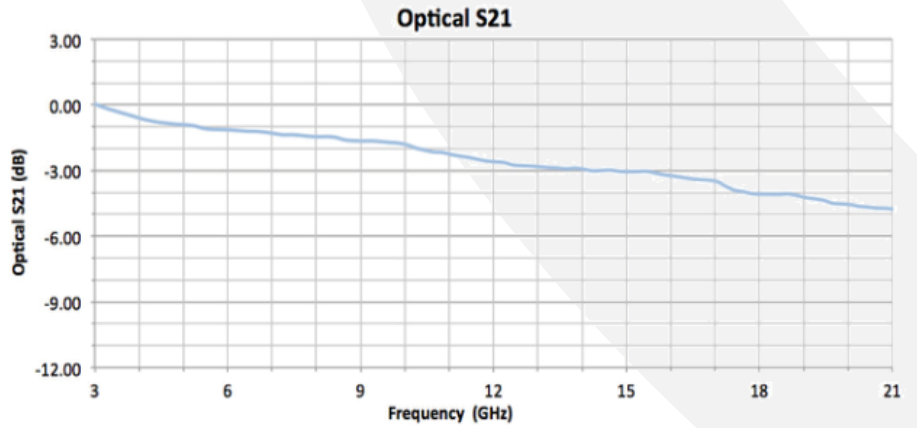
MECHANICAL



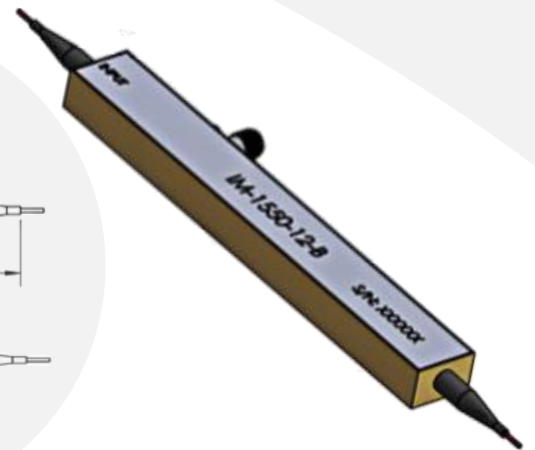
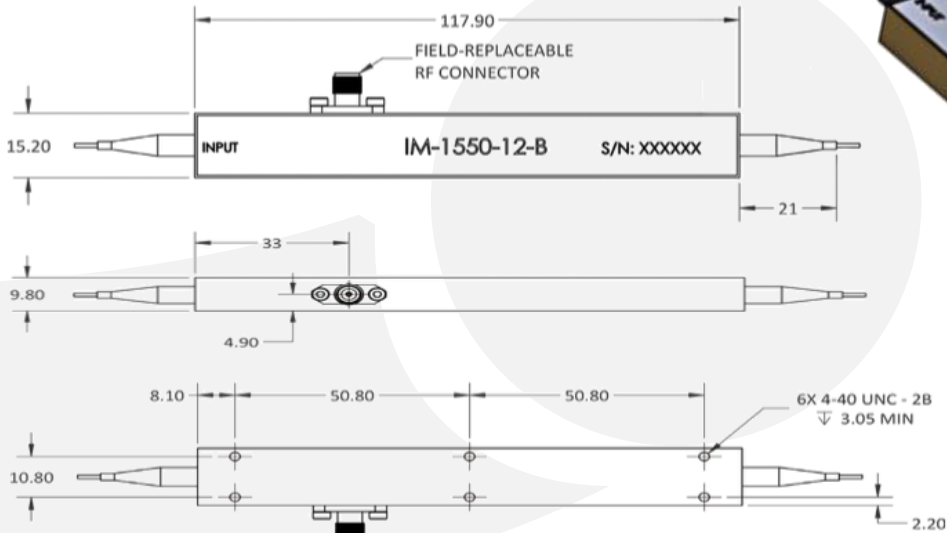


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TYPICAL S21 AND S11 BANDWIDTH



MECHANICAL DRAWING

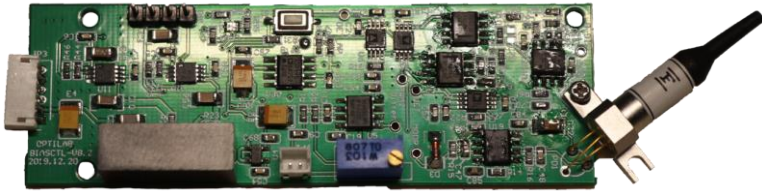




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Available Accessories

- **BCB-4**



The Optilab BCB-4 is a compact bias control board designed to maintain the linear operating point of optical intensity modulators.

Application Diagram

