

IMC-1550-20-PM



DEVICE

1550 nm, 15 GHz Low Drive Compact Intensity Modulator, PM Output

OVERVIEW

The Optilab IMC-1550-20-PM Intensity Modulator is designed for TDM and WDM up to 25 Gb/s transmission, and can also be incorporated for analog modulation of up to 15 GHz for satellite links, antenna remoting, and RF over Fiber. The very low bias drift property of this modulator enables a stabilized operation when a simple automatic bias controller circuit is used. It has an operating temperature tolerance ranging from -30 oC to +60 oC, and superior insertion loss provides for its maximum transmission power. The IMC-1550-20-PM uses a Polarization Maintaining (PM) input and output fiber, and features separate RF and bias ports. Contact Optilab for more information.

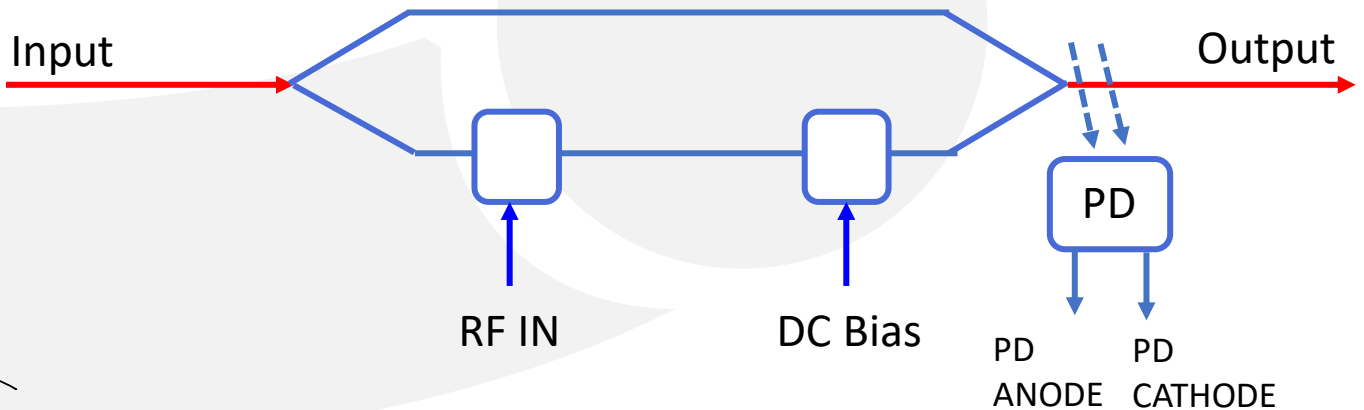
FEATURES

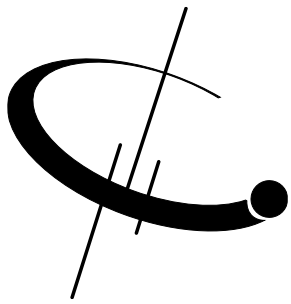
- Excellent stability in a biased circuit
- Polarization Maintaining output
- 1530 nm to 1610 nm operating wavelength
- Low insertion loss
- Useful bandwidth up to 15 GHz
- Wide operating temp. range of -30°C to +60 °C, extended range available

USE IN

- TDM and WDM up to 25 Gb/s
- Analog Transmission up to 15 GHz
- Satellite Link
- Antenna Remote
- RF over Fiber
- Active mode laser

FUNCTIONAL DIAGRAM





IMC-1550-20-PM

SPECIFICATIONS

Input Optical Power	100 mW max. available
Operating Wavelength	1530 to 1610 nm
Chirp Value	< ± 0.2 (zero chirp design)
Insertion Loss	4.0 dB typ., 4.5 dB max.
Extinction Ratio	≥ 25 dB min.

GENERAL

Optical Return Loss	≤ -45 dB
S21 Bandwidth (RF Port)	15 GHz typ.
S11 Return Loss (RF Port)	≤ -10 dB @ 10 GHz
V π (RF Port)	6.0 V typ. @ 10 GHz
RF Input Power	27 dBm max.
Impedance (RF Port)	50Ω typ.
V π (Bias Port)	< 5 V @ DC
Impedance (Bias Port)	> 1 MΩ
Internal Responsivity	20 mA/W min., 30 mA/W typ.

ANALOG LINK PERFORMANCE

IIP3 @ 7 GHz	29 dBm
1 dB Compression Point @ 10 GHz	14.5 dBm typ.

MECHANICAL

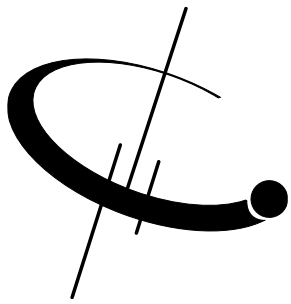
Operating Temperature (Standard)	-30°C to +60 °C
Operating Temperature (TQ Version)	-55°C to +75 °C
Storage Temperature	-60 °C to +90 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	PANDA - PM
Input/Output Connector	PM FC/APC, PM FC/UPC
Material	LiNbO3
Crystal Orientation	X-cut, y-propagating
Waveguide Process	Ti-indiffused
Bias Port Connector	2 Pin electrode
RF Port Connectors	GPO
Cabling	900 μm tubing
Dimensions	2.56" x 0.45" x 0.19"

OPTIONS

IMC-1550-20-PM-XX

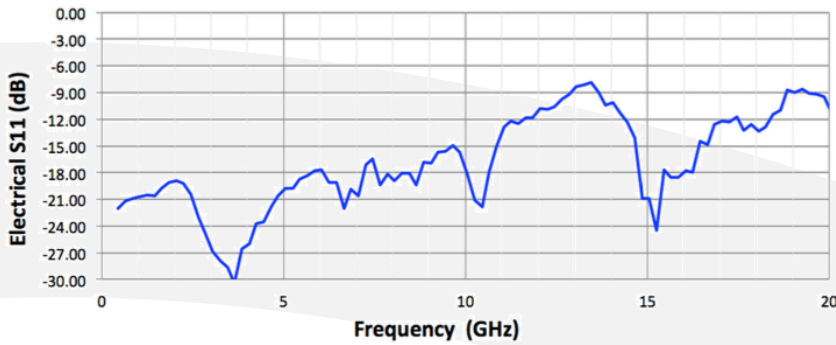
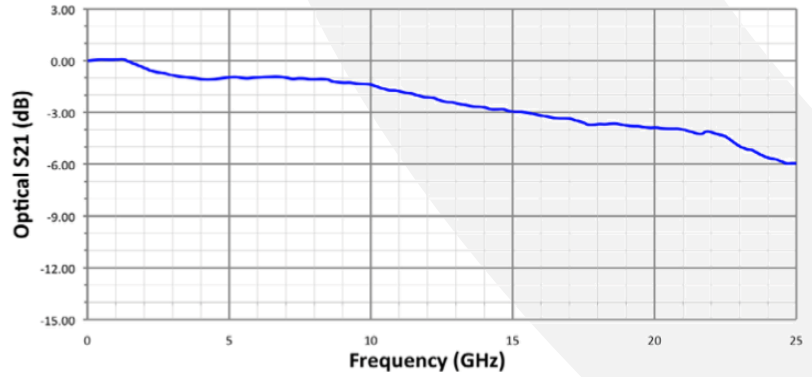
XX TQ: Temperature Qualified



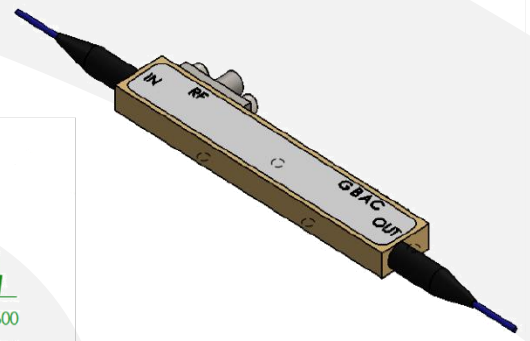
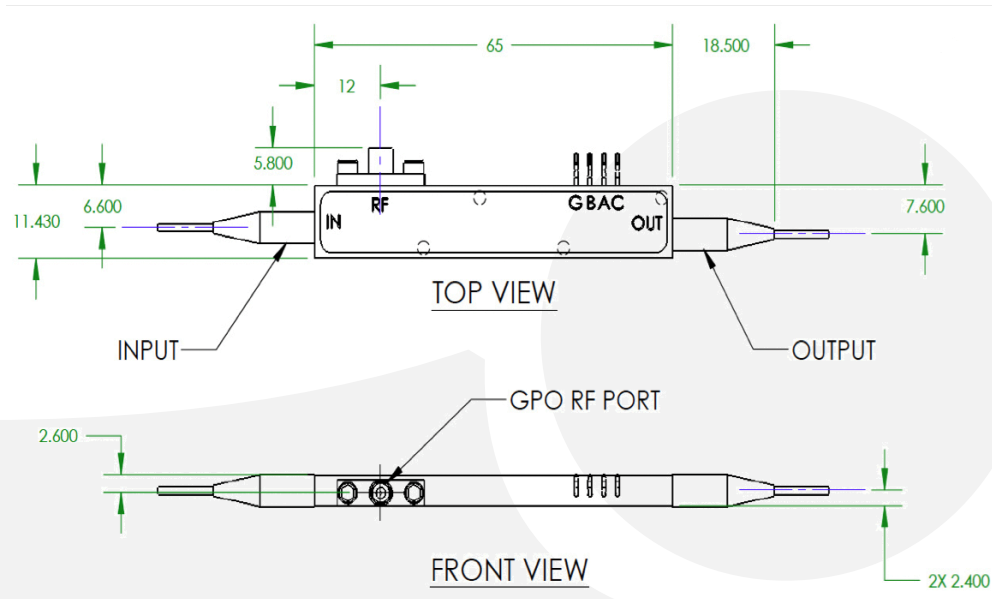


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TYPICAL S21 AND S11 BANDWIDTH

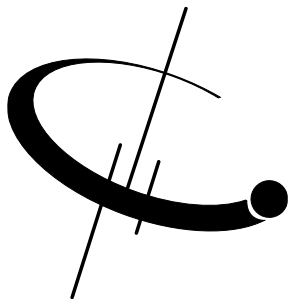


MECHANICAL DRAWING



Pin #	Description
G	GND
B	DC BIAS
A	PD ANODE
C	PD CATHODE





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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.

