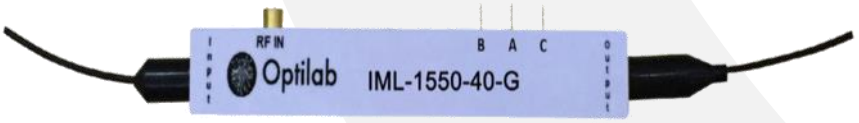
IML-1550-40-G



DEVICE

1550 nm, 40 GHz Compact Intensity Modulator, GPPO Connectors

OVERVIEW

The Optilab IML-1550-40-G Intensity Modulator is designed for analog modulation of up to 40 GHz for satellite links, antenna remoting, and RF over Fiber. It is an ultra low drive voltage lithium modulator with excellent stability in a biased circuit, operating from 1530 nm to 1610 nm. It has an operating temperature tolerance ranging from -30 °C to +60 °C. With low insertion loss, and ultra low RF drive voltage, IML-1550-40-G provides optical transmission performance for analog modulation system. The IML-1550-40-G features a GPPO connector for RF input and three lead pins for bias input, built in PD for bias monitoring, and photodiode (Anode and Cathode).
Contact Optilab for more information

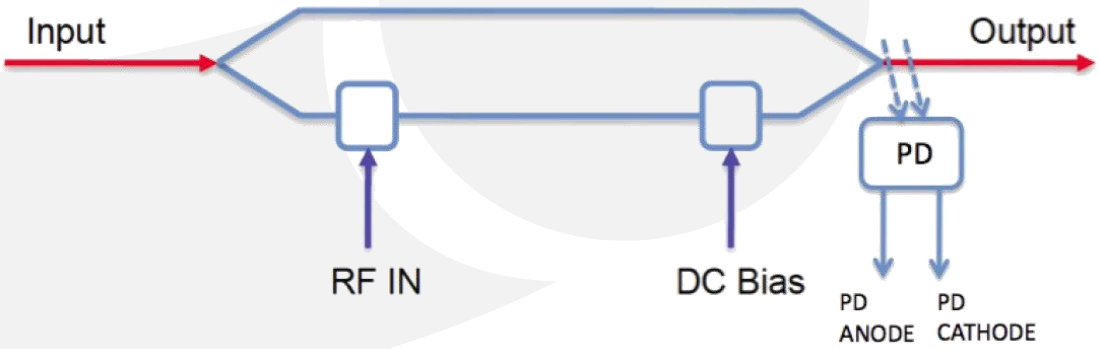
FEATURES

- Excellent stability in a biased circuit
- 1530 nm to 1610 nm operating wavelength
- Low insertion loss < 4.5 dB
- Ultra low drive voltage 2.0 V
- Built in monitor PD

USE IN

- Analog transmission up to 40 GHz
- Satellite Link
- Antenna Remote
- RF over Fiber
- 43 Gb/s systems

FUNCTIONAL DIAGRAM



IML-1550-40-G

SPECIFICATIONS

GENERAL

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., 5 dB max.
Extinction Ratio	≥ 23 dB min., ≥ 30 dB min. (HER version)
Optical Return Loss	≤ -45 dB
S21 Bandwidth (RF Port)	30 GHz typ.
S11 Return Loss (RF Port)	≤ -10 dB @ up to 40 GHz
$V\pi$ (RF Port)	3.0 V typ. @ low frequency, 3.0 V typ. @ 10 GHz, 4.3 V typ. @ 30 GHz
RF Input Power	27 dBm max.
$V\pi$ (Bias Port)	< 2 V @ 1 KHz
PD Responsivity	0.05 ± 0.02 mA/mW

ANALOG LINK PERFORMANCE

IIP3 @ 7 GHz	25 dBm typ.
1 dB Compression Point @ 10 GHz	8.0 dBm typ.

MECHANICAL

Operating Temperature (Standard)	-30 °C to +60 °C
Storage Temperature	-60 °C to +90 °C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber Type	PANDA – PM
Output Fiber Type	SMF-28
Input Connector	PM FC/APC, or other type
Output Connector	SM FC/APC
Material	LiNbO3
Crystal Orientation	X-cut, y-propagating
Waveguide Process	Ti-indiffused
Bias Port Connector	Single Lead Pin
PD Monitor Port	2 Lead Pin
RF Port Connector	GPPO
Cabling	900 µm tubing
Dimensions	70mm x 10mm x 7mm

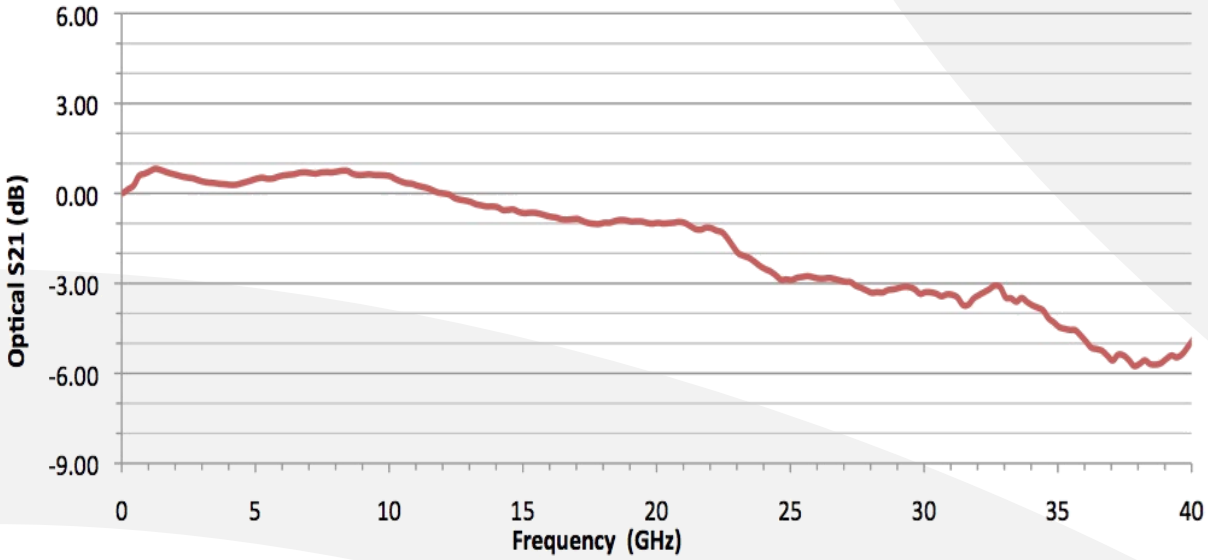
OPTIONS

IML-1550-40-G-XXX

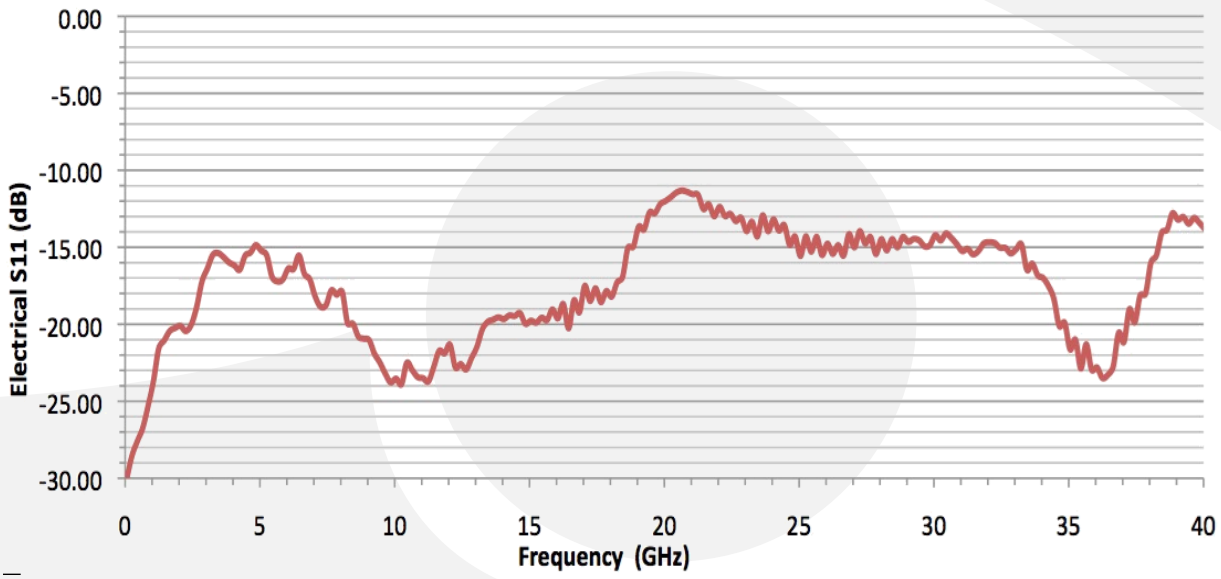
XXX **HER:** High Extinction Ratio

IML-1550-40-G

TYPICAL S21 BANDWIDTH



TYPICAL S11 BANDWIDTH



IML-1550-40-G

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.