



LMD-12.5-PM



DEVICE

12.5 Gb/s C+L Band Lightwave Modulator, w/ PM

OVERVIEW

The Optilab LMD-12.5-PM, utilizing an external Polarization Maintaining (PM) laser source, is a high performance digital lightwave modulator designed for broad bandwidth applications up to 12.5 Gb/s. This rackmount unit includes an internal Lithium Niobate (LN) optical intensity modulator, and a 12 GHz bandwidth RF modulator driver with matched impedance, as well as a built-in Automatic Bias Control (ABC) board which allows a stable operation over long operating periods of time. The external laser source can be any polarization maintaining device, such as a fiber laser, tunable laser, or fixed wavelength Distributed Feedback (DFB) laser, making it a versatile solution. It is compliant with standards such as OC-192, STM-64, and 10G Enet, and optical links can be established quickly and efficiently with its intuitive front panel. For a higher output power version, an optional internal booster EDFA is also available for increased transmission range. Contact Optilab for more information.

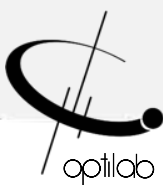
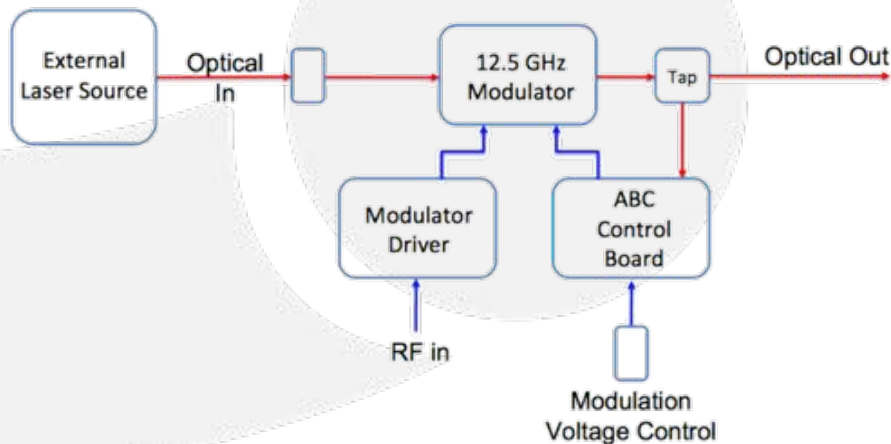
FEATURES

- 12 GHz Optical Modulator
- Integrated Modulator Driver
- Built in Automatic Bias Control
- 1 year warranty
- Accepts C, L, & C+L band laser input
- Compatible Tunable Laser Input
- Variable Modulation Voltage Adjustment
- Polarization Maintaining (PM) output

USE IN

- Satellite Communication
- RF/IF Signal Distribution
- Wideband RFoF transmission
- C+L band Lightwave Modulation
- NRZ Optical Communications
- OC-192, STM-64, and 10G Enet

FUNCTIONAL DIAGRAM





LMD-12.5-PM

SPECIFICATIONS

GENERAL

Operating Wavelength	1530 nm to 1600 nm (C+L option)
Laser Source	External Input, PM
Optical Input Level	+20 dBm max.
Vpp Modulation Adjustment	4.5 – 7.5 V
RF Return Loss	> 15 dB @ 10 GHz
Impedance	50Ω
Digital Bandwidth	50 Mb/s to 12.5 Gb/s
Input RF Voltage	> 0.5 Vpp
Optical Output Level	> 6 dBm @ +13 dBm optical input

MODULATOR

Modulator Bandwidth	12 GHz typ., 15 GHz max.
Modulator Bias Mode	Automatic Bias Control
Extinction Ratio	> 15 dB @ 10 Gb/s
Modulator Voltage Range	7.0 Vpp @ 12.5 Gb/s

DRIVER

Modulator Driver Type	High Gain, Single-ended, 12 GHz
Rise/Fall Time	40 ps max.
Optical Return Loss	50 dB min.

MECHANICAL

Operating Temperature	0 °C to +40 °C
Storage Temperature	-10 °C to +70 °C
Power Supply Requirements	80 V -240 V AC, 48 – 70 Hz, 1A
Optical Connectors	FC/APC (Input/Output)
Fiber Type	PANDA Input, SMF-28 Output
RF Input Connector	SMA Connector Female, 50Ω
Control	Modulation Voltage
Alarms	LED: Optional Input Power Detect
Dimensions	1U Rack: 19" x 16" x 1.75"

ORDERING OPTIONS

LTD-x-12.5-PM

x C: 1530 – 1565 nm, L: 1565 – 1610 nm, C+L: 1530 – 1600 nm

TYPICAL S21 BANDWIDTH

