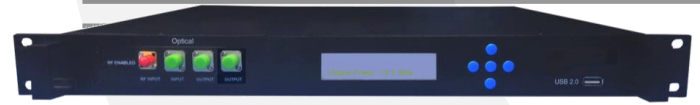




# LMD-43



## DEVICE

# 43 Gb/s C+L Band Lightwave Modulator

## OVERVIEW

The Optilab LMD-43 is a high performance digital lightwave transmitter designed for broad bandwidth applications up to 43 Gb/s. This rackmount unit includes an internal Lithium Niobate (LN) optical intensity modulator, and an ultra-broadband RF 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.

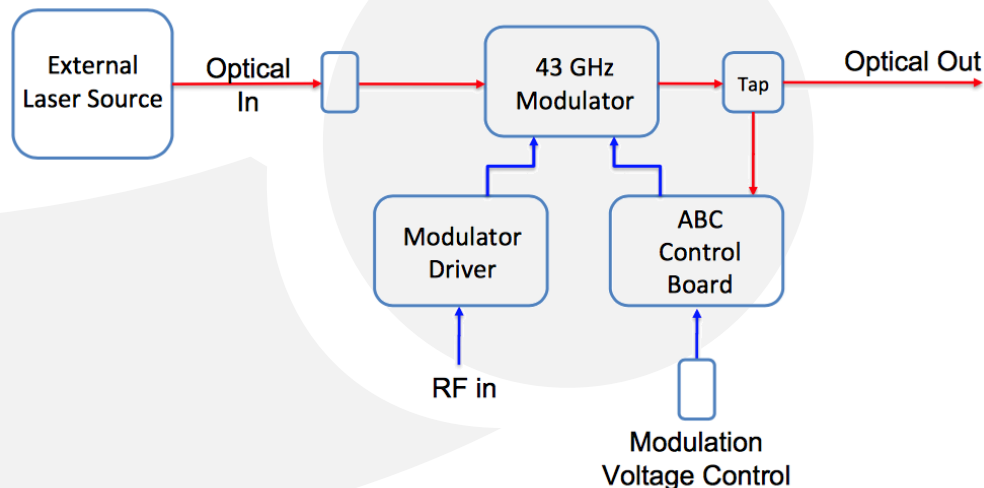
## FEATURES

- 40 GHz Modulator
- Internal Modulator Driver
- Built-In Automatic Bias Control
- Accepts C+L Band DFB Laser Sources
- Accepts Tunable Laser Input
- Variable Gain Adjustment
- 1 Year Warranty

## USE IN

- C-Band Lightwave Modulation
- Wideband RfOF Transmission
- RF/IF Signal Distribution
- Satellite Communication
- Optical Communications
- OC-192, STM-64, and 10 G Enet

## FUNCTIONAL DIAGRAM





# LMD-43

## SPECIFICATIONS

Operating Wavelength	1530 nm to 1600 nm (C+L optional)
Laser Source	User's External Input
Optical Input Level	+20 dBm max.
Vpp Modulation Adjustment	4.5 – 7.5 V
RF Return Loss	> 15 dB @ 10 GHz, > 12 dB @ 15 GHz
Impedance	50 $\Omega$
Digital Bandwidth	50 Mb/s to 43 Gb/s
Input RF Voltage	> 0.5 Vpp
Optical Output Level	> 6 dBm @ +13 dBm optical input

## GENERAL

Modulator Bandwidth	40 GHz typ.
Modulator Bias Mode	Automatic Bias Control
Extinction Ratio	> 13 dB @ 10 Gb/s, > 23 dB @ 500 Mb/s
Modulator Voltage Range	7.0 Vpp @ 40 Gb/s

## MODULATOR

Modulator Driver Type	High Gain, Single-ended, 40 GHz
Rise/Fall Time	18 ps max.
Optical Return Loss	50 dB min.

## DRIVER

Operating Temperature	0 °C to +40 °C
Storage Temperature	-10 °C to +70 °C
Power Supply Requirements	80 V – 240 V AC, 48 to 70 Hz, 1A
Optical Connector	FC/APC (Input/Output)
Fiber Type	PANDA Input, SMF-28 Output
RF Input Connector	2.4 mm (V compatible)
Control	Modulation Voltage
Alarm	LED: Optional Input Power Detector
Dimensions	1U Rack: 19" x 16" x 1.75"

## MECHANICAL





# LMD-43

## ORDERING OPTIONS

### LMD-x-43

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

## TYPICAL S21 BANDWIDTH

