

1550 nm, 2.5 GHz Bandwidth Laser Source Modulator

The Optilab LM-1550-2.5-M Series Laser Source Modulator is designed for TDM and WDM 3.0 Gb/s transmission. The LM-1550-2.5-M can also be incorporated for analog modulation up to 2.5 GHz for satellite links, antennae remoting, and RF over Fiber.

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Product Description

The Optilab LM-1550-2.5-M Series Laser Source Modulator is designed for digital modulation of up to 3.0 Gb/s transmission and analog modulation up to 2.5 GHz for satellite links, antennae remoting, and RF over Fiber. It is an internally biased lithium modulator that proves to be extremely stable for long periods of time. It features excellent stability in a biased circuit and operates from 1530 to 1600 nm. It has an excellent operating temperature tolerance ranging from -30° C to +85° C. Its low insertion loss provides for its maximum transmission power. LM-1550-2.5-M uses a Polarization Maintaining (PM) input fiber and a Single Mode (SM) output fiber. The LM-1550-2.5-M is a self-bias modulator, requiring no external bias control voltage.

Features

- Requires no bias control circuit
- Single Polarization Waveguide
- Low Drive Voltage
- 1530 nm to 1600 nm operation
- Low insertion loss
- Wide Operating Temperature Range of -30° C to +85° C

Applications

- Digital modulation up to 3.0 Gb/s
- Analog Modulation up to 2.5 GHz
 - Satellite Link
 - Antenna Remote
 - RF over Fiber
- Test and measurement
- Modulation for broad light source

PRODUCT SPECIFICATIONS

Mechanical Specifications

Operating Temperature	-30° C to +85° C
Storing Temperature	-40° C to +95° C
Operating Humidity	0% to 90% Relative Humidity
Housing Dimensions	133mm x 91mm x 20mm
Input Fiber Type	PANDA - PM
Output Fiber Type	SMF-28
Input Connector	PM FC/APC, PM FC/UPC
Output Connector	FC/APC, FC/UPC
Material	LiNbO ₃
Crystal orientation	X-cut, y-propagating
Waveguide process	Photon Exchange
RF Port connectors	SMA

Technical Specifications

Input optical power	100 mW max.
Operating wavelength	1530 to 1600 nm
Chirp Value α	< 0.1 (zero chirp design)
Insertion Loss	≤ 5.0 dB max.
Extinction Ratio	≥ 25 dB min.
Optical return loss	≤ -45 dB
Low frequency response	DC
S21 Bandwidth (RF Port)	2 GHz min.
S11 Return Loss (RF Port)	≤ 10 dB @ 1 GHz
V_{π} (RF Port)	≤ 3.5 V typ.
RF Input power	≥ 25 dBm max.

Ordering Information

LM-1550-2.5-M-x

Connector Type:
a, FC/APC;
u, FC/UPC

x



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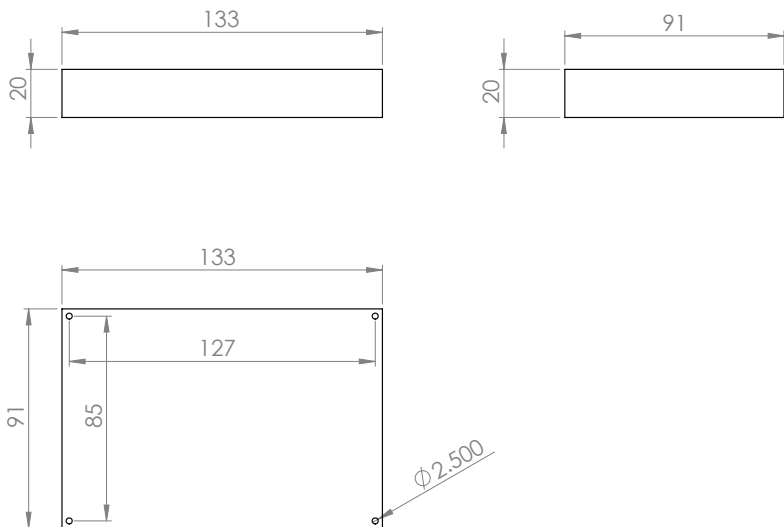
5110 N 44th St, Ste 200L, Phoenix AZ 85018

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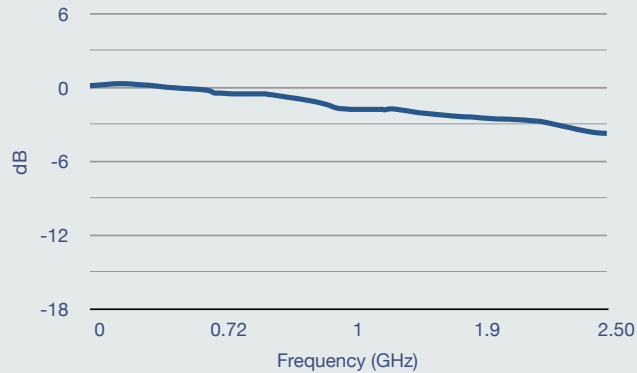
Product specifications and description are subject to change without notice.
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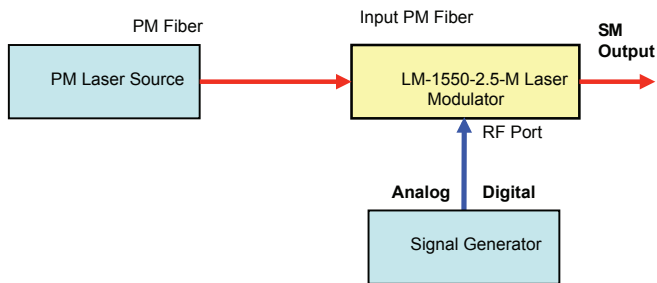
Product Drawings



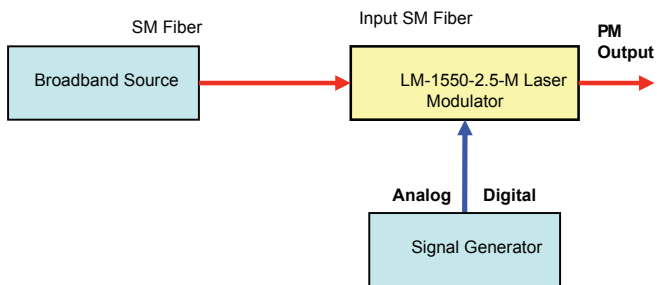
LM-1550-2.5-M S21 Bandwidth



Application Diagram for LM-1550-2.5-M Modulator Series



To be used with a DFB source



To be used with a Broadband Source

Ordering Information

LM-1550-2.5-M-x

Connector Type:
 x a, FC/APC;
 u, FC/UPC