

LTB-12-VOA



12 GHz Lightwave Transmitter with Variable Optical Attenuator

The Optilab LTB-12-VOA is a Versatile Lightwave Transmitter with a integrated Variable Optical Attenuator (VOA) designed for analog photonics applications from 2GHz to 15 GHz. This unit features a built in VOA for optical output power balancing, ideal for multichannel DWDM networks for intuitive gain balancing. This unit includes a narrow linewidth DFB laser, an optical intensity modulator, and an Automatic Bias Control (ABC) board. Contact Optilab for more information.

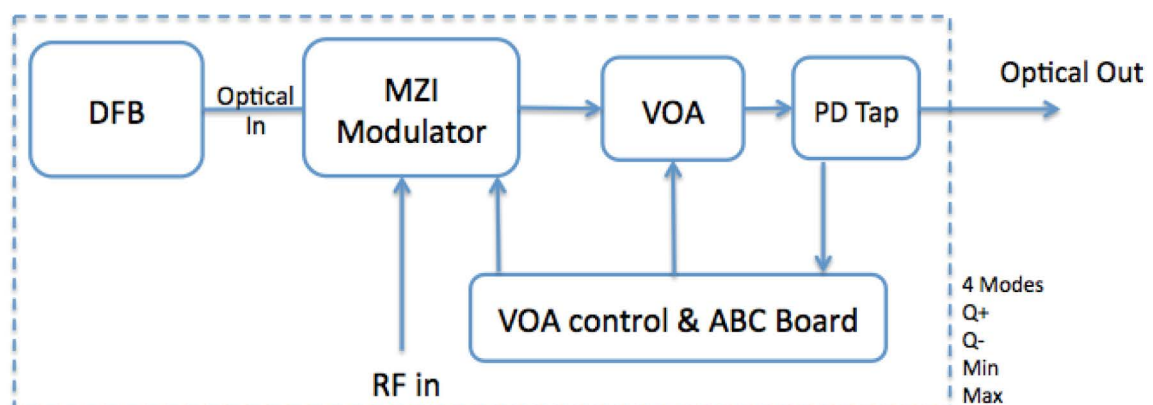
Features

- Up to 15 GHz operating range
- Built in VOA
- 10 dB attenuation range
- Internal DFB laser
- Automatic Bias, Q+ mode or 4 modes
- Remote access Via USB

Applications

- Analog photonics
- 15 GHz RFoF transmission
- Satellite communication
- Optical communications to 15 Gb/s
- Sub-nanosecond pulse generation
- DWDM network

Functional Diagram



12 GHz Lightwave Transmitter with Variable Optical Attenuator

OPTIONS

LTB-12-VOA-X

1: Q+ bias mode only

X:

4: 4 bias modes

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

General Specifications	
Operating Wavelength	1520 nm to 1560 nm
Laser Source	Internal DFB laser, 1550nm±10 nm; or customized
Laser Power Level	20 mW typ.
RF Return Loss	>10 dB @ 10 GHz; >10 dB @ 12 GHz
Impedance	50 Ω
Operating Frequency Range	2 GHz to 15 GHz
Input RF Voltage	27 dBm max.
Optical Output Level	5 dBm min
Modulator Bias Mode	Q+ mode standard; 4 Automatic bias control modes (optional).
Modulator Voltage V_{PI}	7 V typ. @ 10 GHz

WEB ORDER

To order, please click below.



Variable Optical Attenuator	
Range	10 dBm min
Step Attenuator	0.1 dB resolution
Analog Link Performance	
IIP3 @7 GHz	32 dBm typ.
1 dB Compression Point @10 GHz	16 dBm typ.

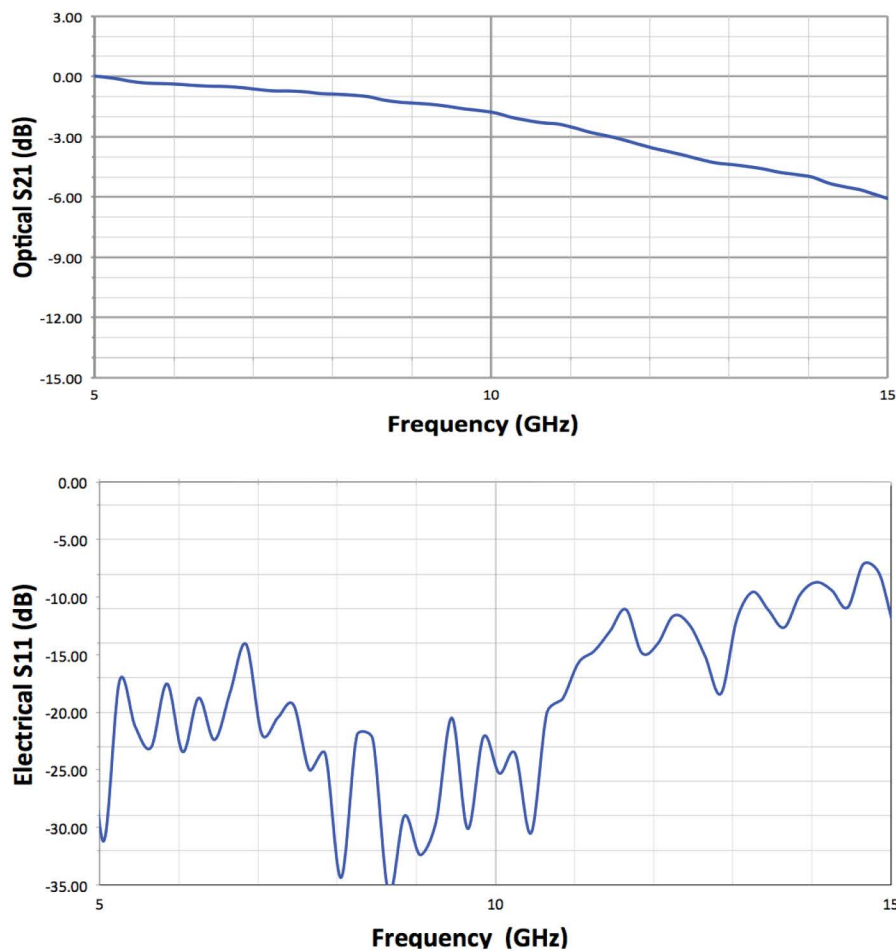
Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

Mechanical Specifications	
Operating Temperature (standard)	-30 °C to +60 °C
Storage Temperature	-60 °C to +90 °C
Power Supply Requirements	±5V, 1A typ.
Optical Connectors	FC/APC
Fiber Type	SMF-28 output
RF Input Connector	SMA female connector
Power Connector	4 Pin Molex
Remote Control	USB 2.0 software included
Alarm	LED bias mode status

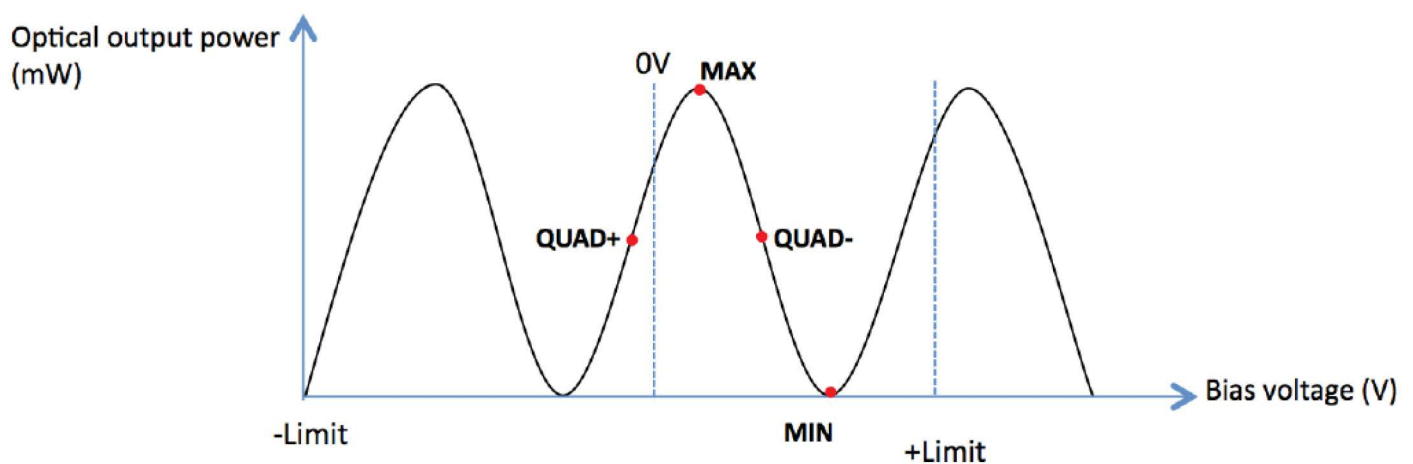
12 GHz Lightwave Transmitter with Variable Optical Attenuator

Typical S21 and S11 Bandwidth



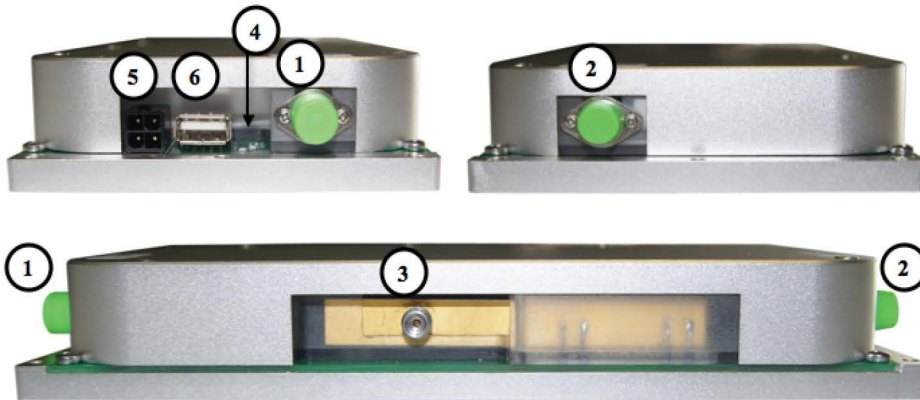
Bias Setting Modes for LTB

Based on sophisticated phase measurement of this small dither signal, LTB-12-VOA can provide four selectable operating modes: quadrature (Quad +), inverted quadrature (Quad -), minimum (Min), or maximum (Max) points.



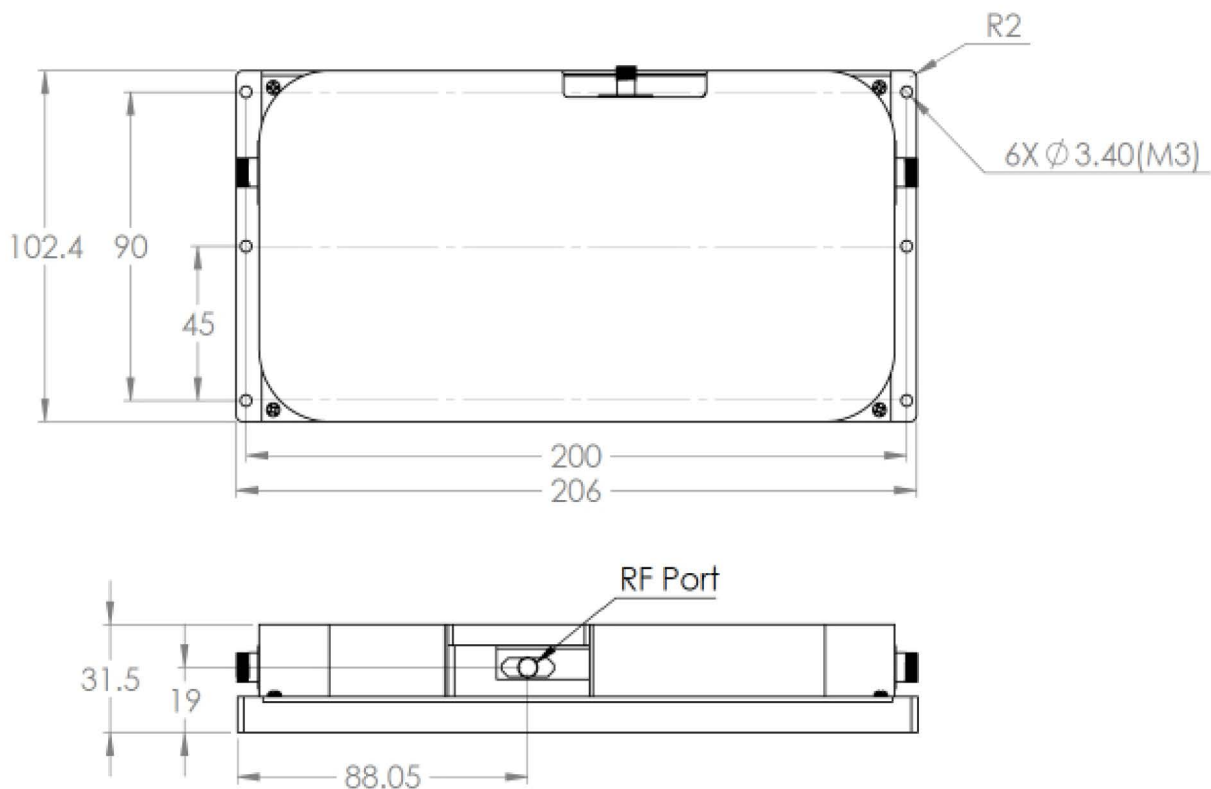
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Detailed Layout



No.	Feature
1	NC
2	Optical Output Port
3	RF Input Port
4	LED Indicators
5	DC Connection Port
6	USB Control and Monitor Port

Mechanical Drawing



Unit: mm

12 GHz Lightwave Transmitter with Variable Optical Attenuator

Precision Power Supply for LTB (optional)

Front



Back



General Specifications	
Parameters	Specifications
Input AC Voltage (VAC)	85-240
Input AC Current (A)	≤0.5
Input AC Frequency (HZ)	50-60
Transfer Efficiency	≤85%
DC Output Current (A)	4 A max.
DC Output Voltage (V)	±5 V
DC Voltage Ripple	≤2%
DC Connectors	Molex 4 Pin
Communication Connectors	DB-9 and USB 2.0
Dimensions (mm)	153x115x33