

LTA-1064-40



DEVICE

1064 nm 40 GHz Lightwave Transmitter Module

OVERVIEW

The Optilab LTA-1064-40 is a high-performance 1064 nm lightwave transmitter module designed for operating frequency up to 40 GHz. This module includes a 40 GHz lithium niobate MZI intensity modulator seeded with a CW DFB laser. The internal optical modulator is automatic biased to one of the operating modes: Q+, Q-, MIN and MAX. Contact Optilab for more information.

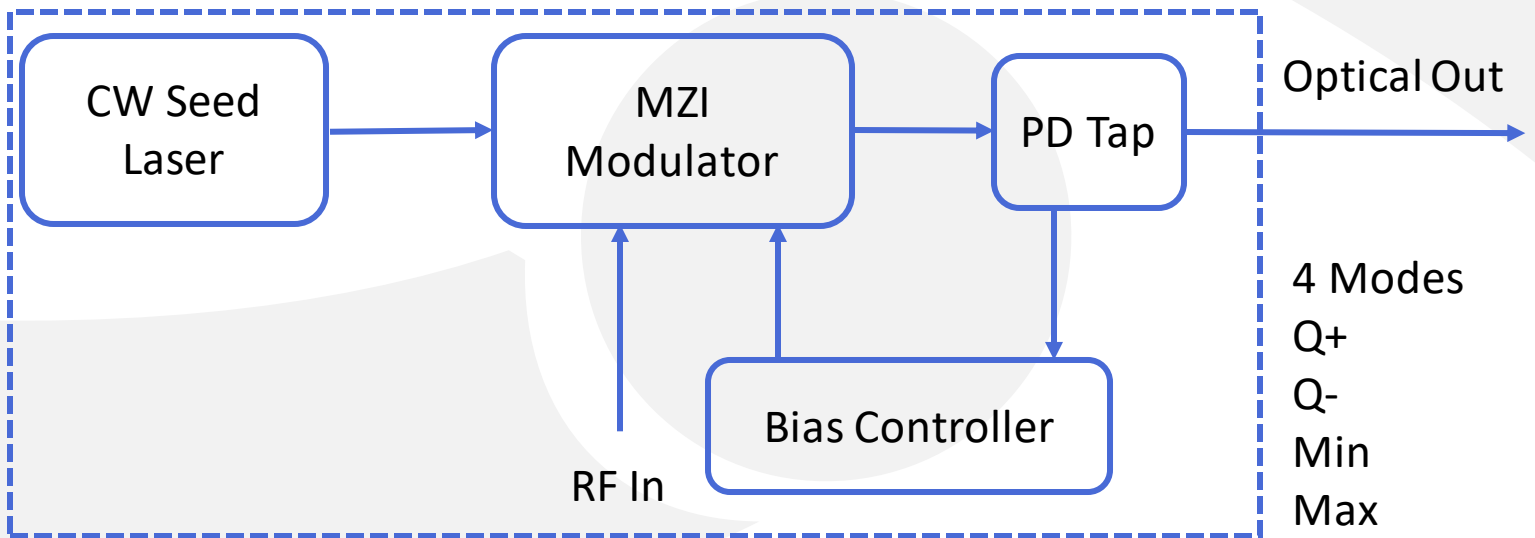
FEATURES

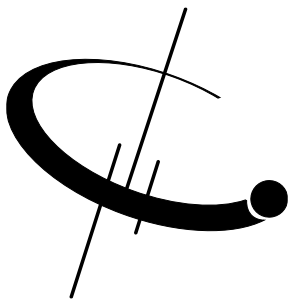
- Automatic Bias Control with 4-mode operation
- High Optical Output Power
- PM Output Option Available
- High Extinction Ratio Available

USE IN

- Analog photonics
- 40 GHz RFoF transmission
- RF/IF signal distribution
- Free Space Optics Communication
- Fiber Optical Communication
- Picosecond Pulse Generation

FUNCTIONAL DIAGRAM





LTA-1064-40

SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS

RF Input Power	25 dBm max.
Operating Temperature	-10°C to +40°C
Storage Temperature	-40°C to +75°C

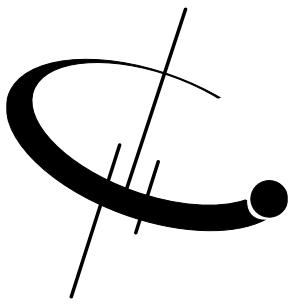
E/O SPECIFICATIONS

Optical Output Wavelength	1064 +/- 2 nm
Optical Output Power @ MAX	≥ 25 mW, 40 mW typical
Pulse On/Off Ratio	≥ 20 dB, ≥ 30 dB for HE version
Operating Frequency Range	10 MHz to 40 GHz
E to O S21 3dB Drop from 2 GHz	35 GHz typ., 30 GHz min.
RF Halfwave Voltage @ 1 GHz	3.9 V typ., 4.3V max
RF Return Loss	≤ -7 dB up to 30 GHz
RF Impedance	50 Ω
Auto Bias Mode	Q+/Q-/MIN/MAX, selectable by software
Bias Dither Signal	1 kHz
Power Supply Requirements	+/- 5V DC, 2A Max

MECHANICAL

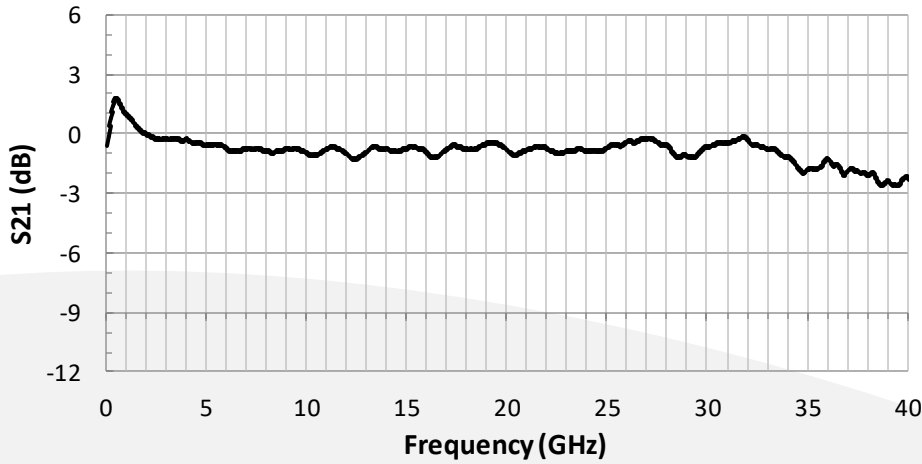
Optical Connectors	FC/APC, Narrow Key slow axis aligned to key for PM model
Fiber Type	H11060 for SM model, PM980 for PM model
RF Input Connector	2.4 mm female
Power Connector	4 Pin Molex
Remote Control	RS232 commands via USB 2.0 port
Dimensions	197mm x 118mm x 27mm





LTA-1064-40

Typical E to O S21 Response



ORDERING OPTIONS

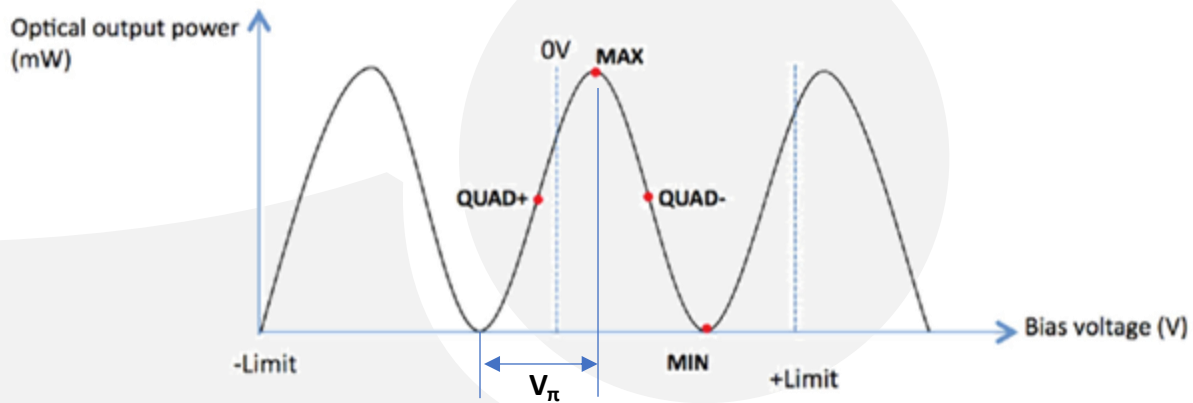
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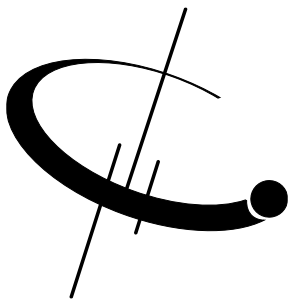
XX:

PM: Polarization Maintained Output
HE: High Extinction Ratio

BIAS SETTING MODES of LTA

LTA-1064-40 provides four selectable bias operating modes: quadrature (Q+), inverted quadrature (Q-), minimum (MIN), or maximum (MAX) points. For optical pulse generation application, use MIN mode for low duty cycle and MAX for high duty cycle; for optical signal transmission application, use Q+ or Q- mode.





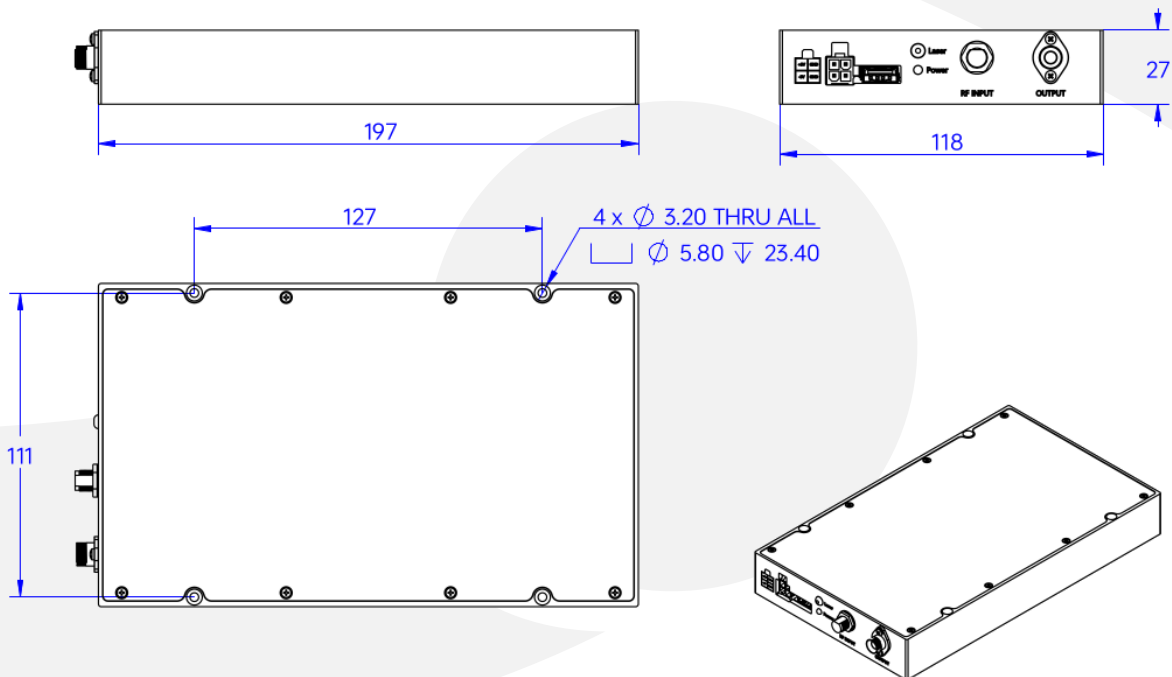
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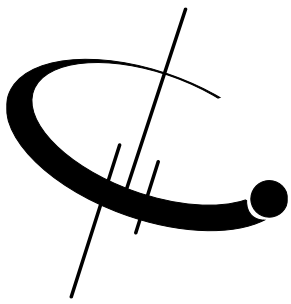
INTERFACE



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

MECHANICAL DRAWING





LTA-1064-40

MATCHING POWER SUPPLY FOR LTA (OPTIONAL)

PS-5-M

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

