

RFLL-40-M-2



LTA-40-LD-V



EDFA-16-C



PD-40-DC

DEVICE

40 GHz RF over Fiber Lightwave Link, M-2

OVERVIEW

The Optilab RFLL-40-M-2 RF over Fiber Lightwave Link is composed of a LTA-A-LD-V lightwave transmitter module, EDFA-16-C low drive consumption and a PD-40 receiver to form a high-performance RFoF link for up to 40 GHz applications.

FEATURES

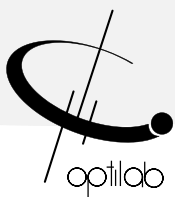
- High Dynamic Range
- DFB low RIN Source Laser
- High Linearity Receiver
- USB Monitor and Control Interface
- RFoF Link up to 40 GHz Bandwidth

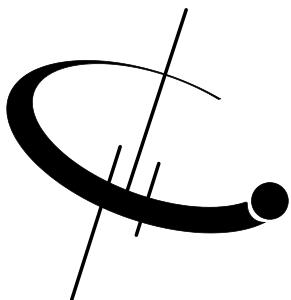
USE IN

- Wideband RF Transmission over Fiber
- RF/IF Signal Distribution
- Satcom microwave antenna signal distribution
- Broadband delay-line and signal processing
- Phased and interferometric array antenna

LINK PERFORMANCE SUMMARY

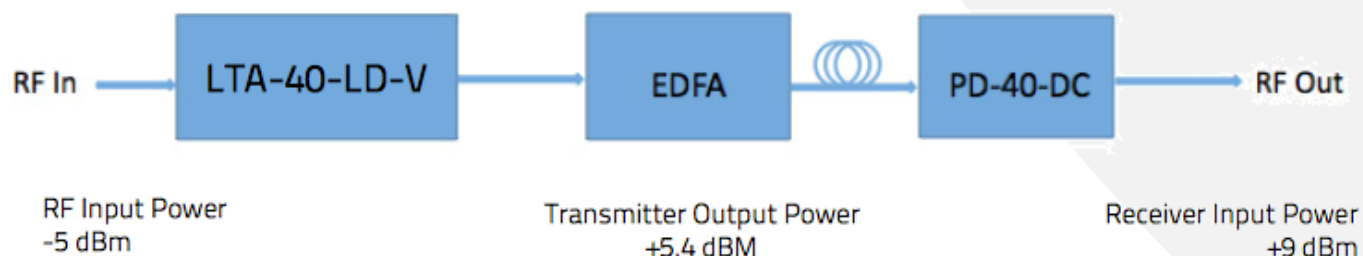
Analog Bandwidth	40 GHz
Link Gain Vs Bandwidth	-18 dB / 20 GHz Typical -25 dB / 32 GHz Typical -32 dB / 40 GHz Typical
Input 1dB Comp	13.7 dBm Typical
Gain Flatness	+/- 0.5 dB over 1 GHz
Noise Figure	29 dB @10 GHz 27 dB @ 30 GHz
SFDR	114.9 dBm x Hz ^{2/3}
IIP3	27.3dBm
Group Delay	+/- 35.7 ps



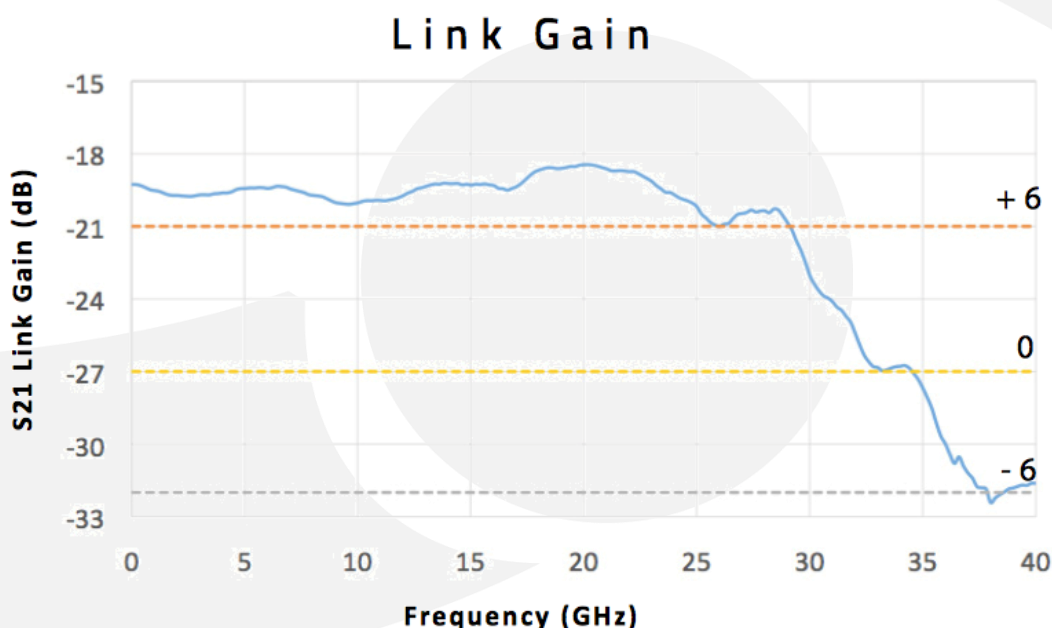


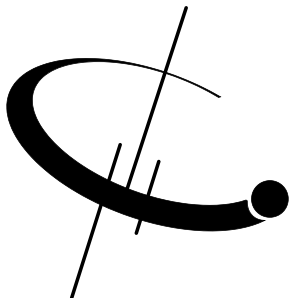
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CONFIGURATION DRAWING



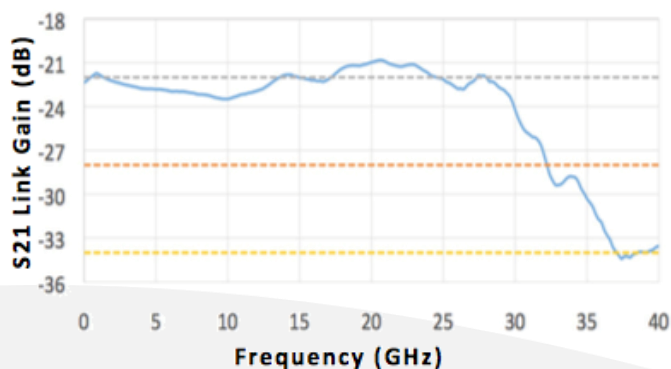
- **LTA-40-LD-V**, 40 GHz Lightwave Transmitter Board for OEM
The unit is a high performance Lightwave Transmitter Board designed for analog photonics applications from DC to 40 GHz.
- **EDFA-16-C**, EDFA Module with Low Current Consumption
The EDFA-16-C with a Low Drive Consumption (LD) is an ideal building block for photonic subsystems and OEM system integration.
- **PD-40-DC**, 40 GHz Linear InGaAs PIN Photodetector, Module
The Optilab PD-40-M is a 40 GHz bandwidth PIN receiver module designed for RF over Fiber, antenna remoting, and broadband analog photonics link.



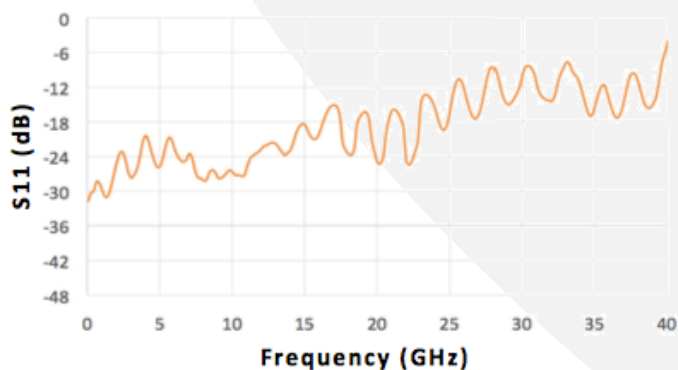


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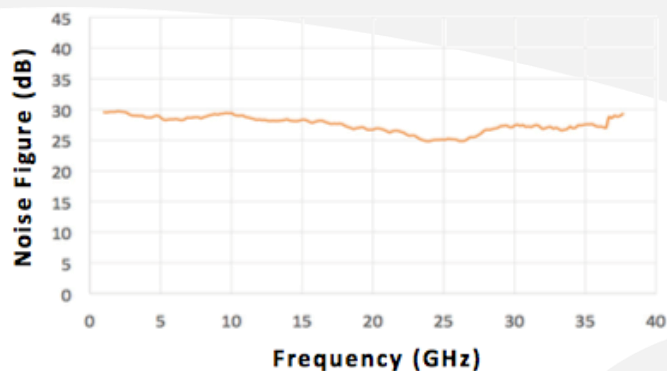
S21 Bandwidth



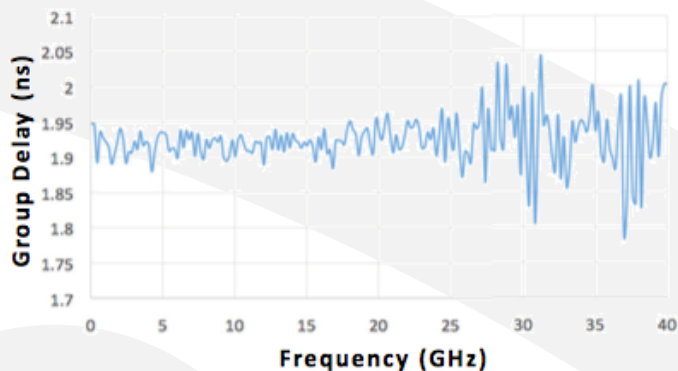
S11 Response



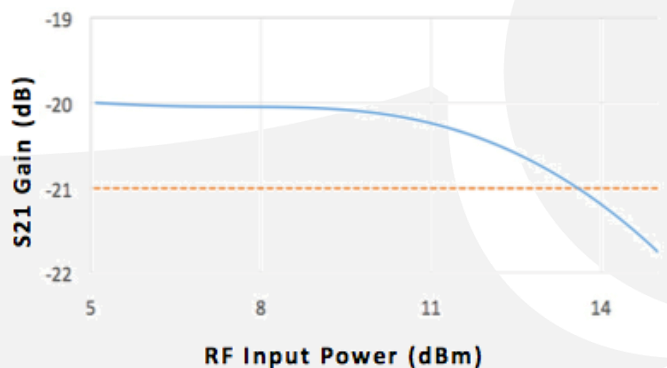
Noise Figure



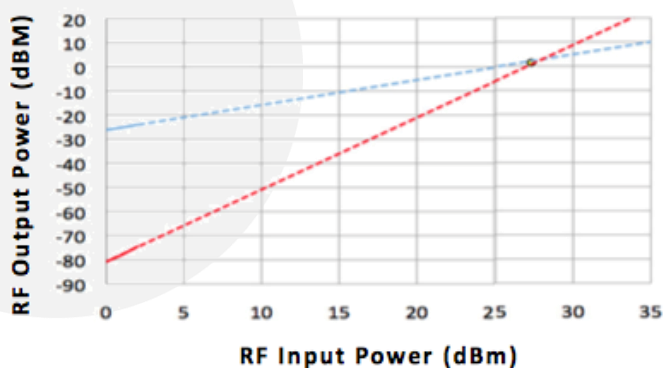
Group Delay

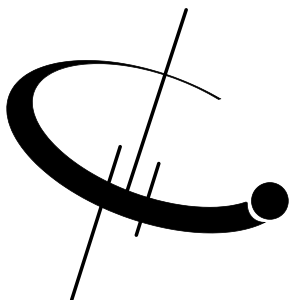


1 dB Compression



IIP3 Plot





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GENERAL SPECIFICATIONS

	LTA-40-LD-V	EDFA-16-C	PD-40-DC
Power Supply	±5 V, 1A typ.	±5 V, 1A typ.	+5 V DC, 500 mA max.
Dimensions	206 x 102.4 x 31.5 (mm)	90 x 70 x 18 (mm)	82 x 60 x 26.5 (mm)
Accessories	PS-5 & Cables	PS-5 & Cables	USB adaptor & Cables

RF SPECIFICATIONS

S11 Reflection	< -15 dB from DC to 23 GHz	S22 Reflection	< -9 dB from DC to 24 GHz
	< -6 dB from 23 GHz to 39 GHz		< -5 dB from 24 GHz to 40 GHz

CONTROL SOFTWARE

A LabView TM based control software is used to set the RF over Fiber system parameters and monitors system performance.

