



RFLL-40-M-1



LTB-40



PD-40-DC



EDFA-16-C

DEVICE

40 GHz RF over Fiber Lightwave Link, M-1

OVERVIEW

The Optilab RFLL-40-M-1 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

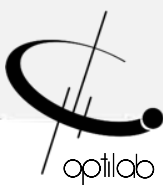
- RFoF Link with 40 GHz Bandwidth
- USB Monitor and Control Interface
- High Dynamic Range
- DFB low RIN Source Laser
- High Linearity Receiver

USE IN

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

LINK PERFORMANCE SUMMARY

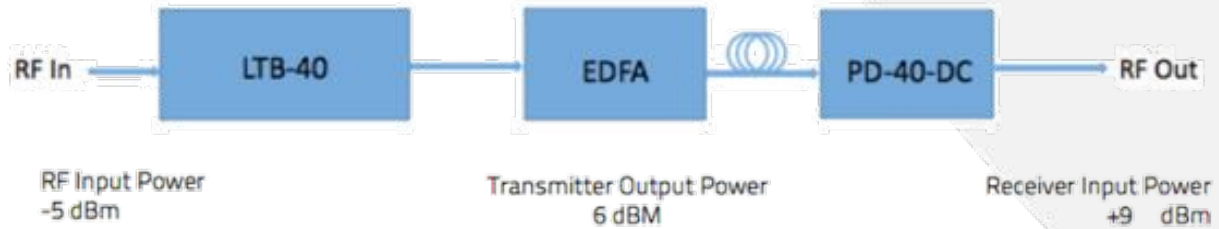
Analog Bandwidth	40 GHz
Link Gain vs Bandwidth	-21 dB/20 GHz typ., -28/32 GHz typ., -34 dB/40 GHz typ.
Input 1 dB Comp.	13.2 dBm typ.
Gain-Flatness	± 1.2 dB over 1 GHz
Noise Figure	32 dB @ 10 GHz, 29 dB @ 30 GHz
SFDR	116.7 dBm x Hz ^{2/3}
IIP3	32.3 dBm
Group Delay	± 37.8 ps





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CONFIGURATION DIAGRAM



LTB-40, 40 GHz LIGHTWAVE TRANSMITTER BOARD FOR OEM

The high performance Lightwave Transmitter Board designed for analog photonics applications from DC to 40 GHz

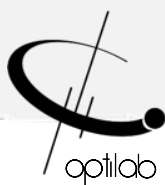
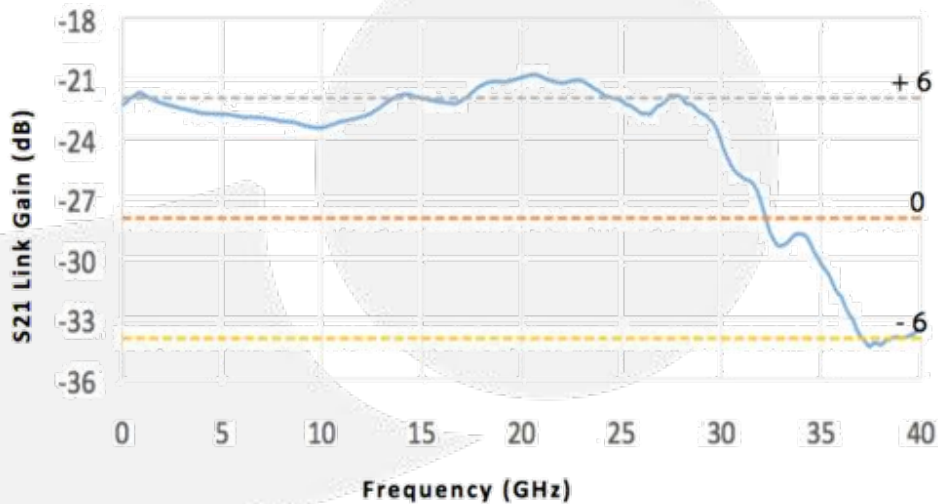
PD-40-DC, 40 GHz LINEAR INGaAs PIN PHOTODETECTOR, MODULE

The Optilab PD-40-M is a 40 GHz bandwidth PIN receiver module designed for RF over Fiber, antenna remoting, and broadband RF transmission applications.

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.

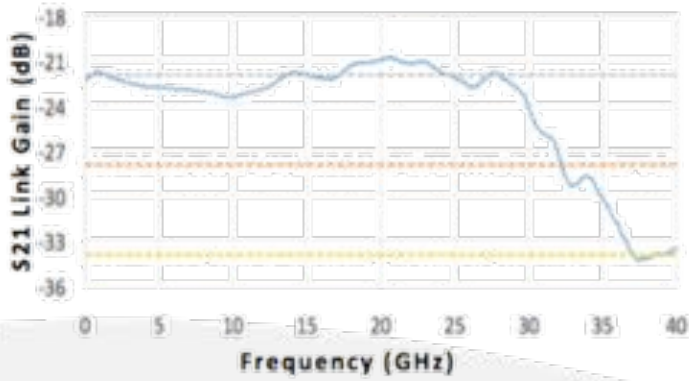
LINK GAIN



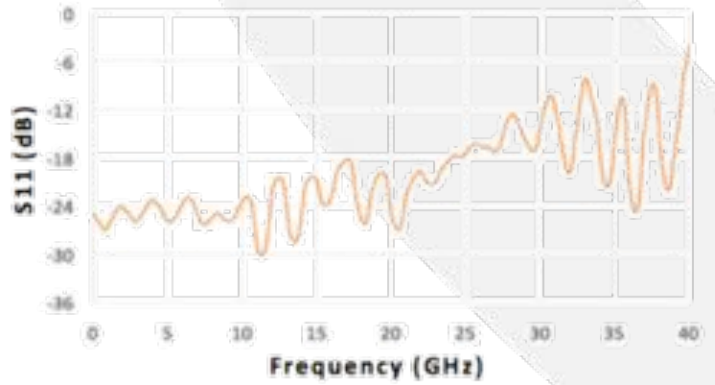


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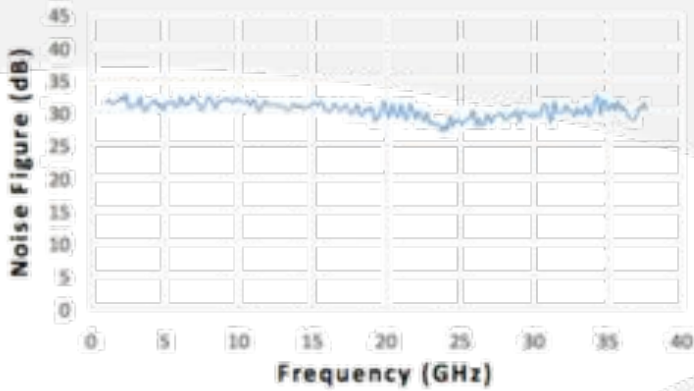
LINK GAIN



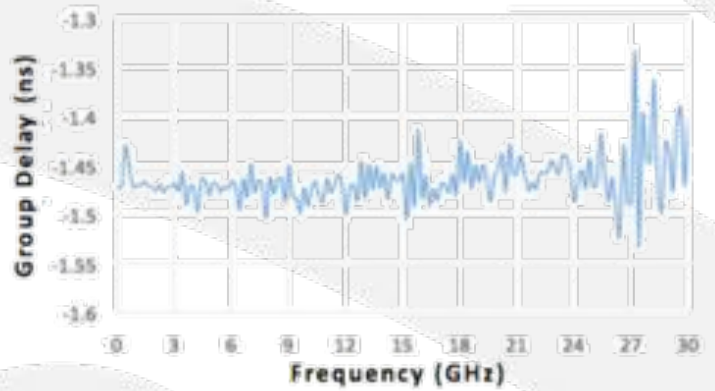
S11 RESPONSE



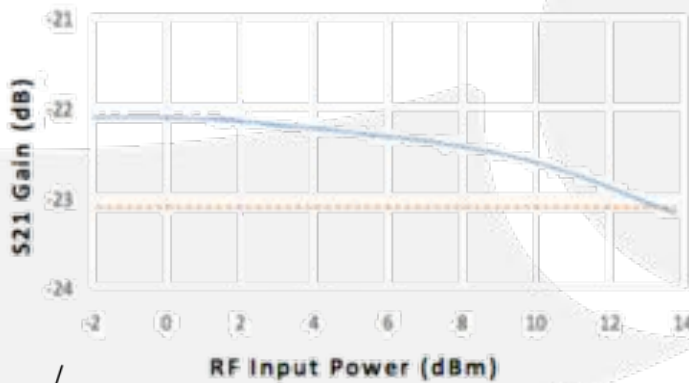
NOISE FIGURE



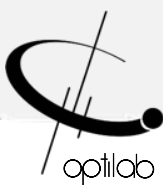
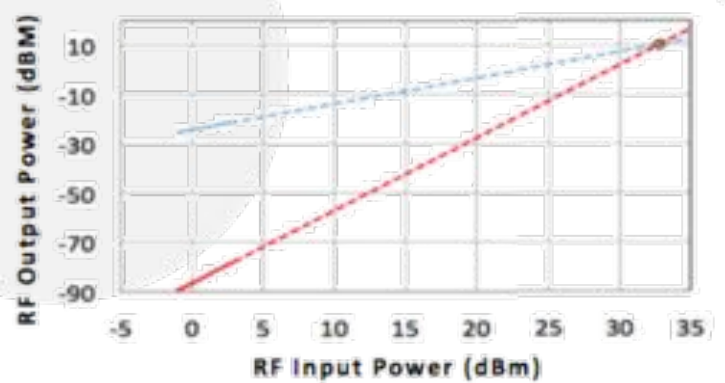
GROUP DELAY



1 DB COMPRESSION



IIP3 PLOT





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GENERAL SPECIFICATIONS

LTB-40	Power Supply Requirements	± 5 V, 1 A typ.
	Dimensions	102.4 mm x 200 mm x 31.5 mm
	Accessories	PS-5 USB Adaptor & Cable
PD-40-DC	Power Supply Requirements	± 5 V DC, 500 mA max.
	Dimensions	82 mm x 60 mm x 26.5 mm
	Accessories	USB Adaptor & Cable
EDFA-16-C	Power Supply Requirements	± 5 V, 1 A typ.
	Dimensions	90 mm x 70 mm x 18 mm
	Accessories	PS-5 & Cables
RF	S11 Reflection	From DC to 25 GHz < -17.5 dB, From 25 GHz to 40 GHz < -4 dB
	S22 Reflection	From DC to 7 GHz < -18 dB, From 7 GHz to 25 GHz < -6 dB, From 25 GHz to 40 GHz < -4.5 dB

CONTROL SOFTWARE

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

