RFLL-35-H-1


MD-50


LTA-40-LD-V


EDFA-16-C


PD-40-DC

DEVICE

35 GHz RF over Fiber Lightwave Link Modules, H-1

OVERVIEW

The Optilab RFLL-35-H-1 RF over Fiber Lightwave Link is composed of a MD-50 RF amplifier, 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 35 GHz applications.

FEATURES

- Amplified up to +9 dB link gain
- USB Monitor and Control Interface
- High Linearity Receiver
- Amplified up to +9 dB link gain
- Bandwidth up to 35 GHz

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	>35 GHz
Link Gain vs Bandwidth	+9 dB/ 20 GHz, +6 dB/29 GHz, 0 dB/32 GHz, -6 dB/37 GHz
Input 1 dB Comp.	-18.5 dBm typ.
Gain Flatness	± 0.5 dB over 1 GHz
Noise Figure	8 dB @ 10 GHz, 14.6 dB @ 30 GHz
SFDR	105.1 dBm x $Hz^{2/3}$
IIP3	-1.8 dBm
Group Delay	± 73 ps

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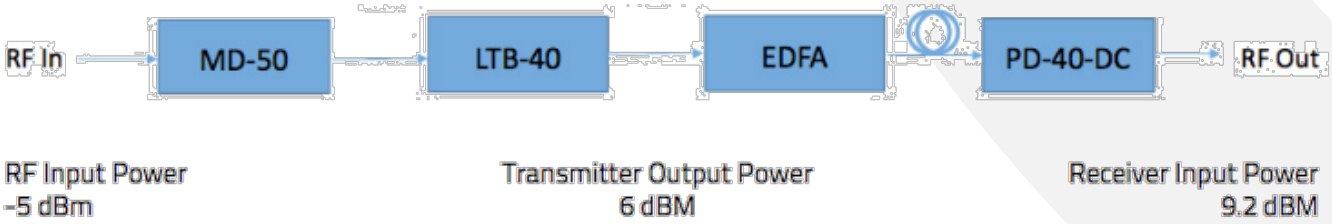
CONFIGURATION DIAGRAM



MD-50, 50 GHZ MODULATOR DRIVER/RF AMPLIFIER

The Modulator Driver (MD) is a 50 GHz Bandwidth RF Amplifier in a compact and user friendly module that provides a high-quality, single-ended voltage to drive an external LiNbO3 modulator.

LTA-40-LD-V, 40 GHZ LGITHWAVE TRANSMITTER MODULE FOR RFOF

The unit is a high performance Lightwave Transmitter Module designed for analog photonics applications from DC to 40 GHz.

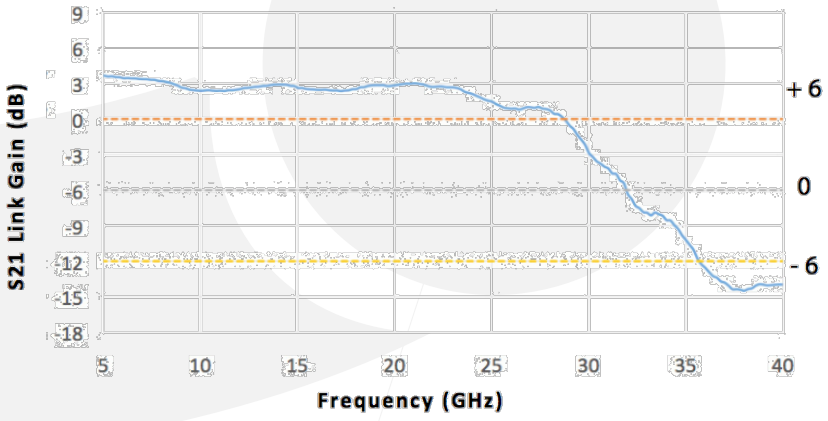
EDFA-16-C, EDFA MODULE WITH LOW CURRENT CONSUMPTION

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 INGAS 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.

LINK GAIN



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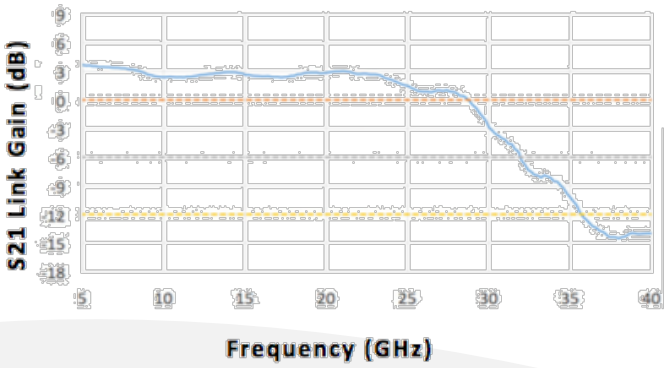
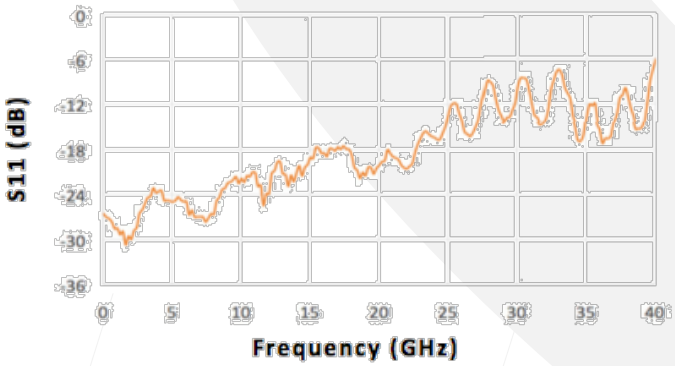
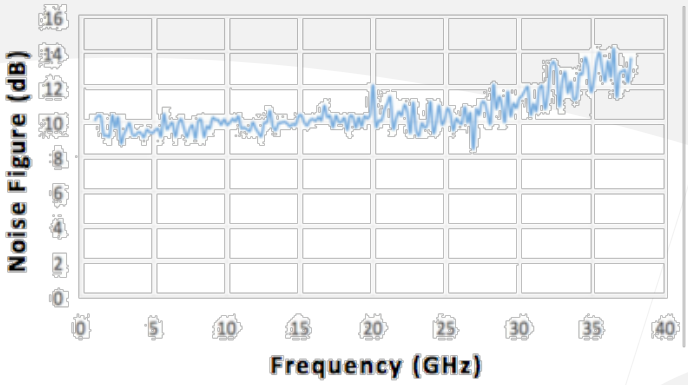
LINK GAIN



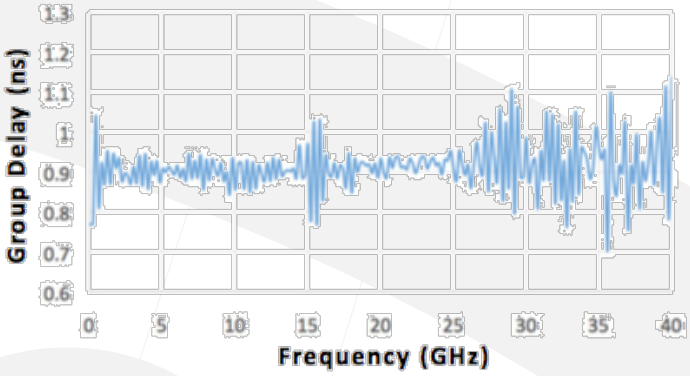
S11 RESPONSE



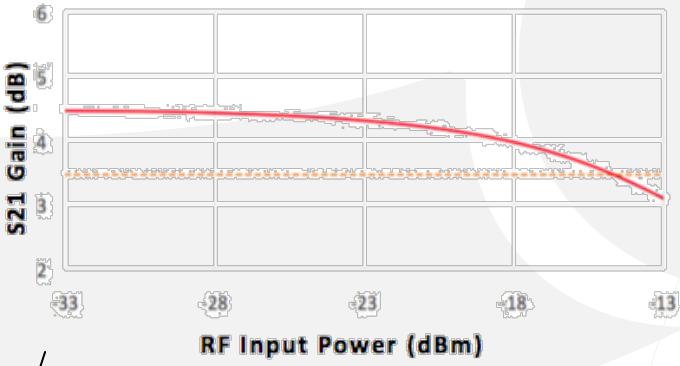
NOISE FIGURE



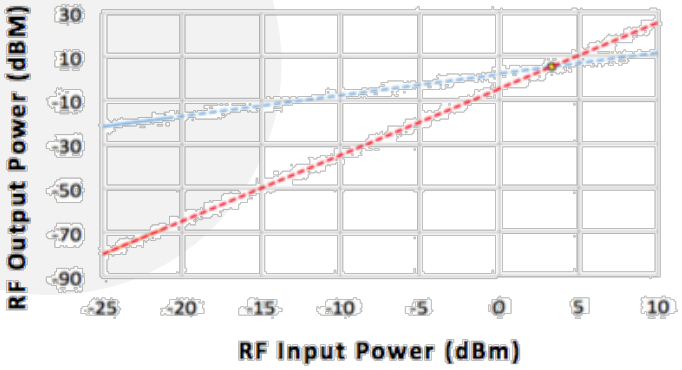
GROUP DELAY



1 DB COMPRESSION



IIP3 PLOT



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GENERAL SPECIFICATIONS

MD-50	Power Supply Requirements	+ 12VDC, 500mA max.
	Dimensions	82 mm x 60 mm x 26.5 mm
	Accessories	PS-5 & Cables
LTA-40-LD-V	Power Supply Requirements	± 5 V, 1 A typ.
	Dimensions	206 mm x 102.4 mm x 31.5 mm
	Accessories	PS-5 & Cables
EDFA-16-C	Power Supply Requirements	± 5 V, 1 A typ.
	Dimensions	90 mm x 70 mm x 18 mm
	Accessories	PS-5 & Cables
PD-40-DC	Power Supply Requirements	+ 5 V DC, 500mA max.
	Dimensions	82 mm x 60 mm x 26.5 mm
	Accessories	PS-5 & Cables
RF	S11 Reflection	< -18 dB from DC to 22 GHz, < -6 dB from 22 GHz to 40 GHz
	S22 Reflection	< -6 dB from DC to 25 GHz, < -5 dB from 25 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.