RFLL-40+-H-3


MD-50


LTA-40-LD-V


EDFA-16-C


PD-40-DC

DEVICE

40 GHz + RF over Fiber Lightwave Link, H-3

OVERVIEW

The Optilab RFLL-40+-H-3 RF over Fiber Lightwave Link is composed of a MD-50 RF amplifier, LTA-40-LD-X lightwave transmitter module, EDFA-16-C low drive consumption and a PD-50-M receiver to form a high-performance RFoF link for grater than 40 GHz applications.

FEATURES

- Bandwidth greater than 40 GHz
- Low Noise Figure
- High Linearity Receiver
- USB Monitor and Control Interface

USE IN

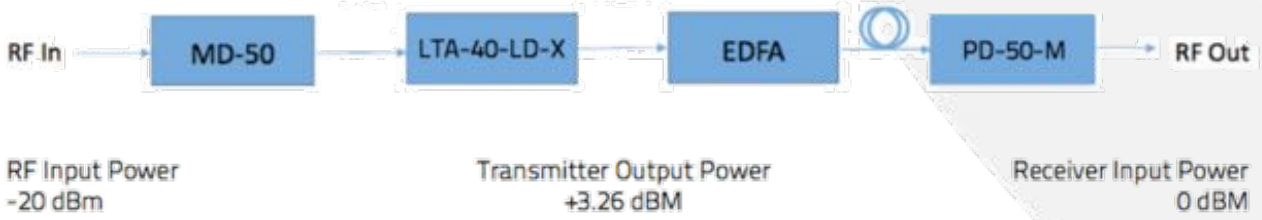
- Satcom microwave antenna signal distribution
- Broadband delay-line and signal processing
- Phased and interferometric array antenna
- Wideband RF Transmission over Fiber
- RF/IF Signal Distribution

LINK PERFORMANCE SUMMARY

Analog Bandwidth	40+ GHz
Link Gain vs Bandwidth	-12 dB/28 GHz, -15 dB/33 GHz
Input 1 dB Comp.	-20.6 dBm @ 1 GHz
Gain Flatness	± 1 dB
Noise Figure	15.4 dB @ 10 GHz, 18.6 dB @ 30 GHz
SFDR	102.2 dBm x $Hz^{2/3}$
IIP3	-2.1 dBm
Group Delay	± 146 ps

RFLL-40+-H-3

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-X, 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.

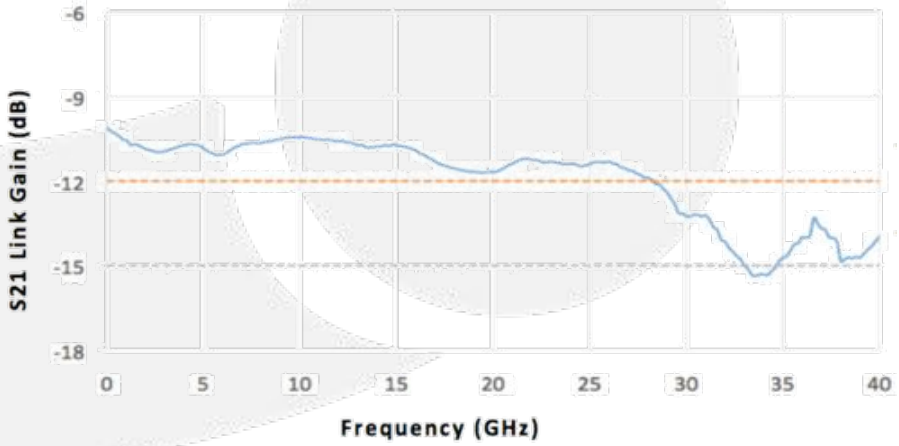
EDFA-16-C, EDFA MODULE WITH LOW CURRENT CONSUMPTION

The EDFA-16-C with a Low Drive Consumption (LD) is an ideal building block for photonic subsystems and OEM system integration.

PD-50-M, 50 GHZ LINEAR INGAS PIN PHOTODETECTOR, MODULE

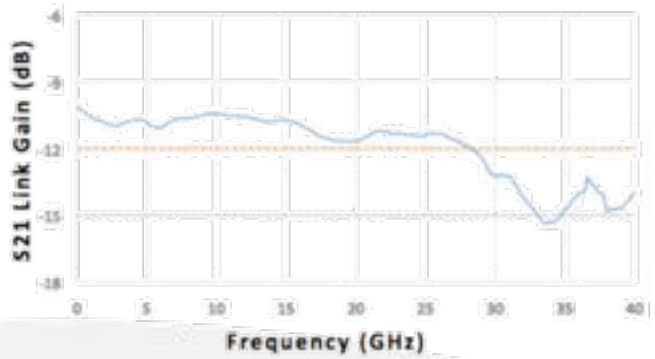
The Optilab PD-50-M is a 50 GHz bandwidth PIN receiver module designed for RF over Fiber, antenna remoting, and broadband analog photonics link.

LINK GAIN

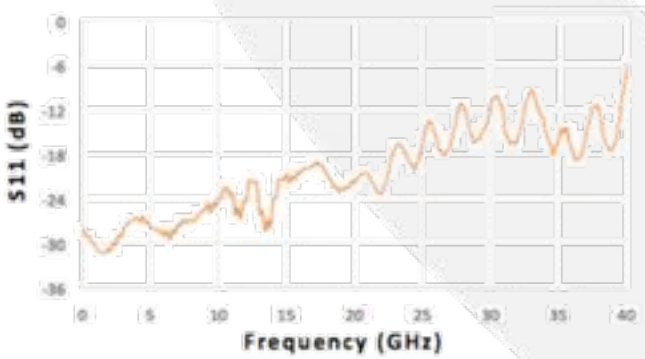


RFLL-40+-H-3

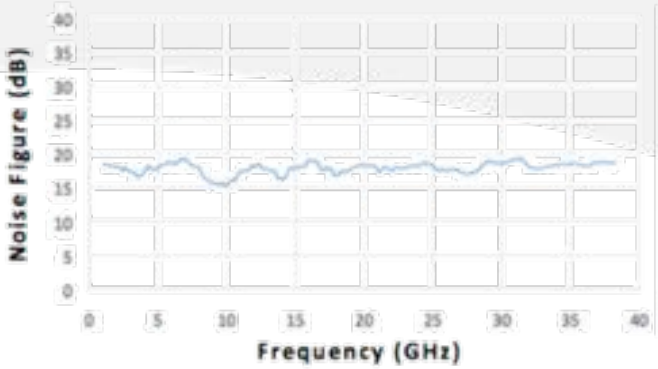
LINK GAIN



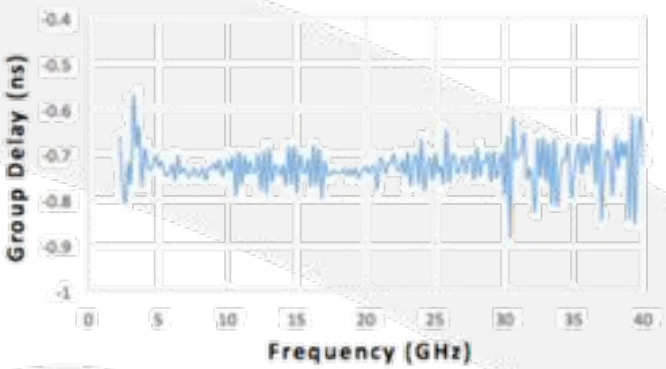
S11 RESPONSE



NOISE FIGURE

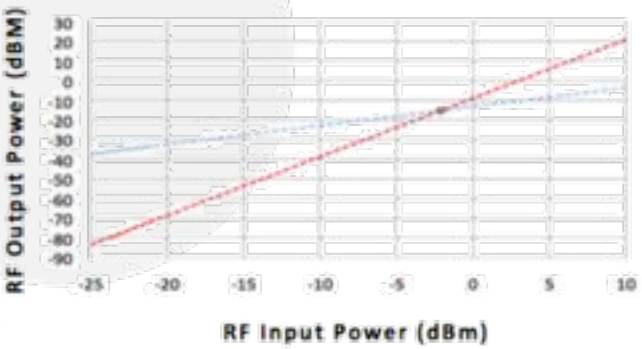


GROUP DELAY



1 DB COMPRESSION

IIP3 PLOT



RFLL-40+-H-3

GENERAL SPECIFICATIONS

MD-50	Power Supply Requirements	+ 5 V DC, 500mA max.
	Dimensions	82 mm x 60 mm x 26.5 mm
	Accessories	PS-5 & Cables
LTA-40-LD-X	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-50-M	Power Supply Requirements	+ 5 V DC, 500mA max.
	Dimensions	82 mm x 60 mm x 26.5 mm
	Accessories	USB adaptor and cables
RF	S11 Reflection	< -16 dB from DC to 25 GHz, < -9 dB from DC to 39 GHz
	S22 Reflection	< -12 dB from DC to 24 GHz, < -3 dB from 24 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.