

RFLL-30-L-2



LTA-40-LD-V

PD-40-DC

DEVICE

30 GHz RF over Fiber Lightwave Link, L-2

OVERVIEW

The Optilab RFLL-30-L-2 RF over Fiber Lightwave Link is composed of a LTA-40-LD-V transmitter and a PD-40-DC receiver unit to form a high-performance RFoF link for up to 30 GHz applications.

FEATURES

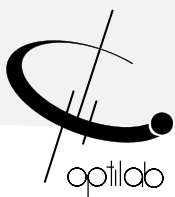
- High Dynamic Range
- DFB low RIN Source Laser
- High Linearity Receiver
- RFoF Link up to 30 GHz Bandwidth
- USB Monitor and Control Interface

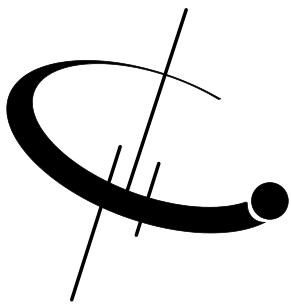
USE IN

- 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

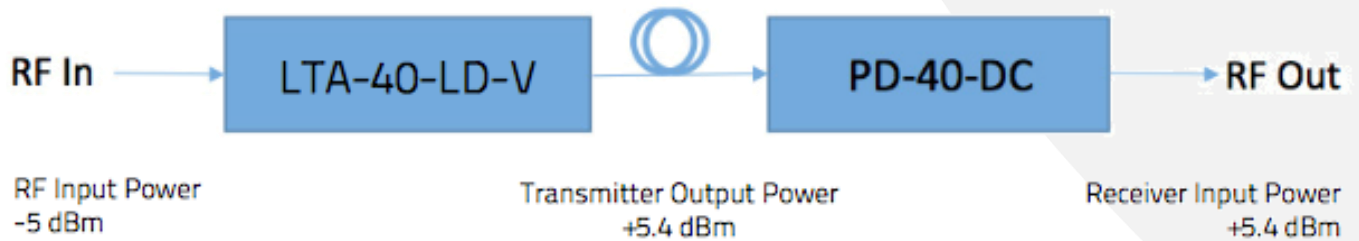
Analog Bandwidth	32 GHz
Link Gain Vs Bandwidth	-27 dB / 29 GHz Typical -33 dB / 33 GHz Typical -39 dB / 30 GHz Typical
Input 1dB Comp	13.1 dBm Typical
Gain Flatness	+/- 0.5 dB
Noise Figure	25.7 dB @10 GHz 24.4 dB @ 30 GHz
SFDR	119.1 dBm x Hz ^{2/3}
IIP3	30.3 dBm
Group Delay	+/- 30.3 ps



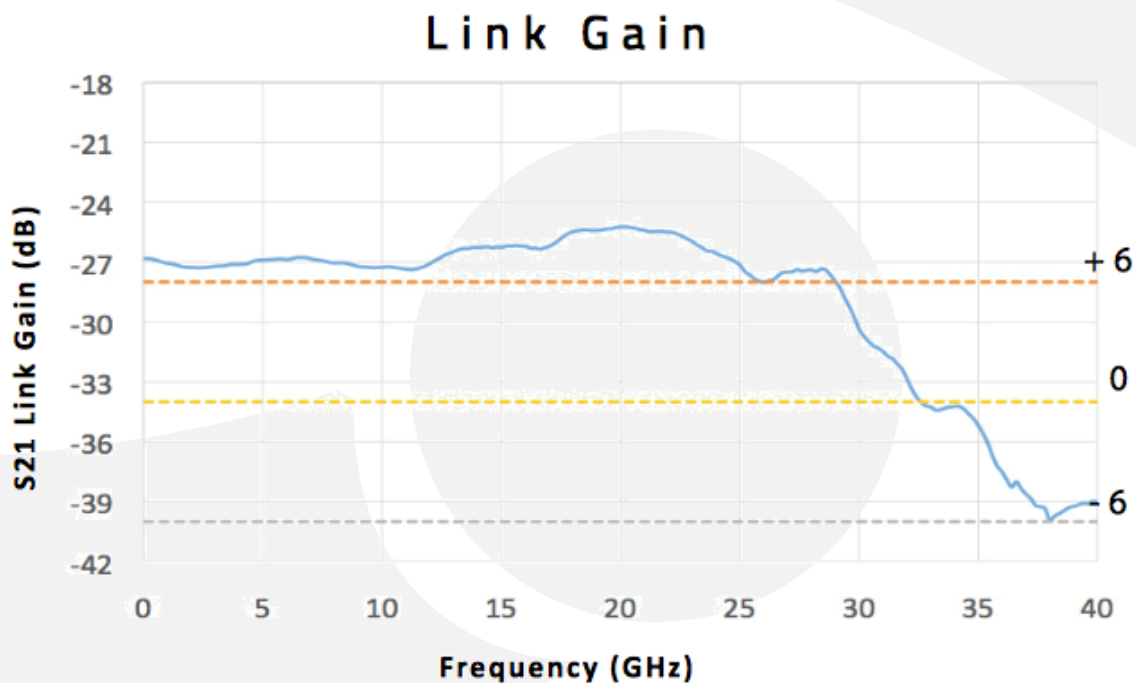


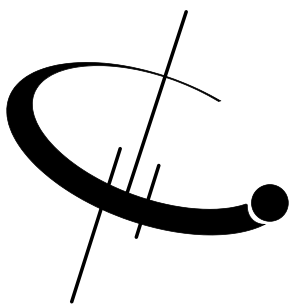
RFL-30-L-2

CONFIGURATION DRAWING



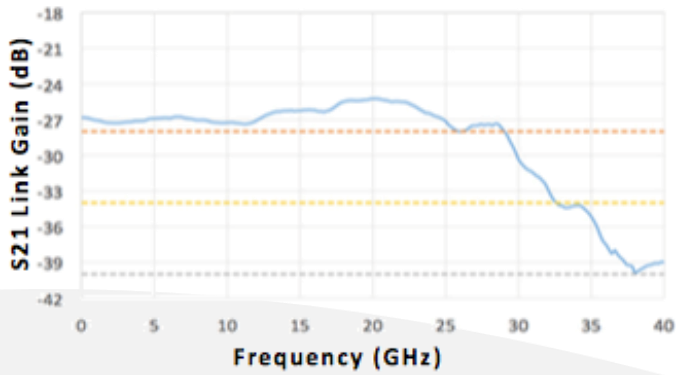
- **LTA-40-LD-V**, 40 GHz Lightwave Transmitter Module for OEM
The unit is a high performance Lightwave Low Drive Transmitter Board designed for analog photonics applications from DC to 40 GHz.
- **PD-40-DC**, 40 GHz Linear InGaAs PIN Photodetector, Module
The Optilab PD-40-M is a 40 GHz bandwidth PIN receiver module designed for RF over Fiber, antenna remoting, and broadband analog photonics link.



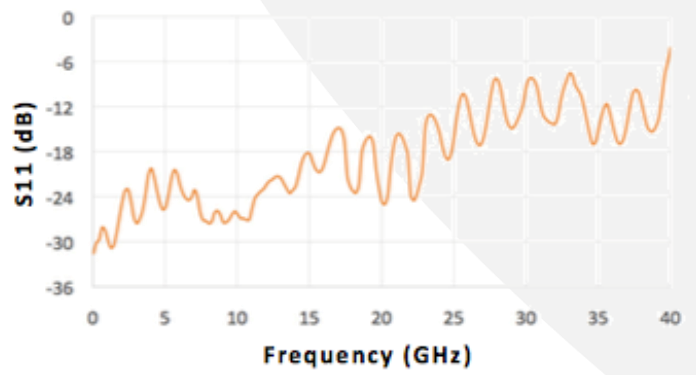


RFL-30-L-2

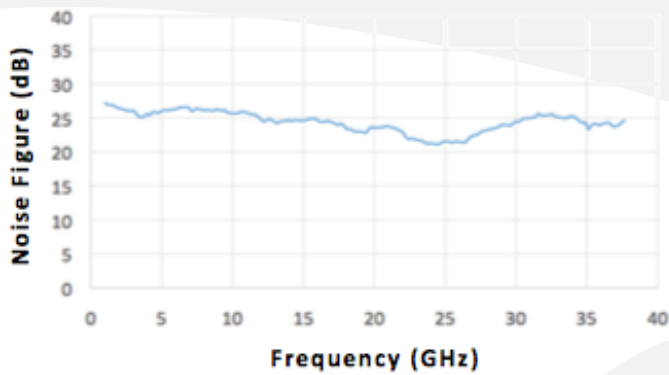
S21 Bandwidth



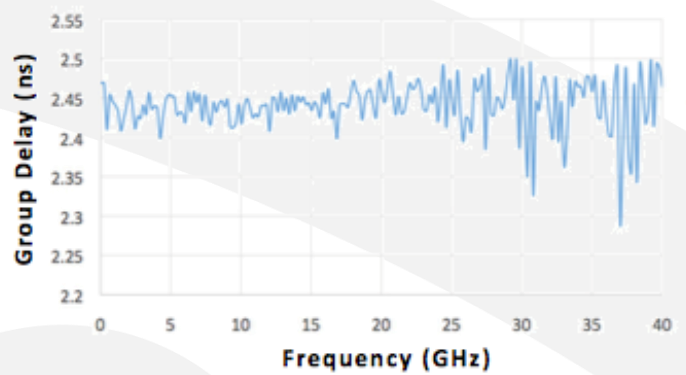
S11 Response



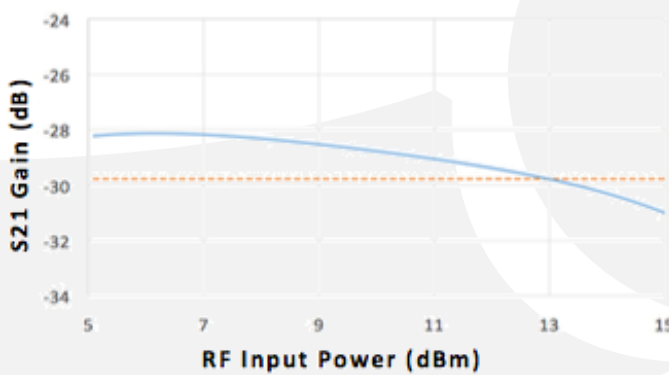
Noise Figure



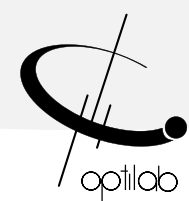
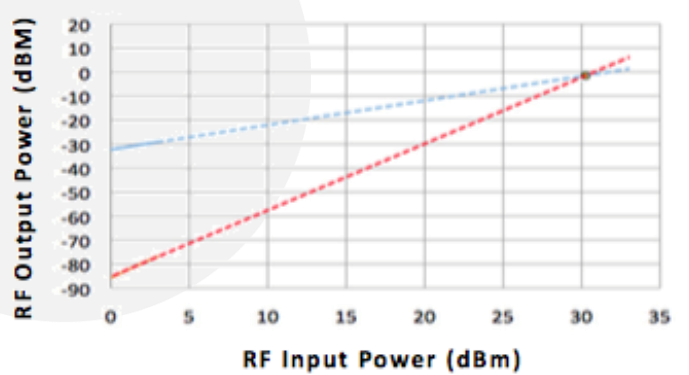
Group Delay

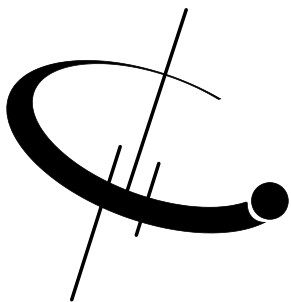


1 dB Compression



IIP3 Plot





RFL-30-L-2

GENERAL SPECIFICATIONS

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

RF SPECIFICATIONS

	From DC to 15 GHz < -18 dB		From DC to 23 GHz < -10 dB
S11 Reflection	From 15 GHz to 25 GHz < -12 dB	S22 Reflection	From 23 GHz to 40 GHz < -5 dB
	From 25 GHz to 40 GHz < -4 dB		

CONTROL SOFTWARE

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

Configuration | LTA-40-LD-V | MD-50

Com Port #
COM23

Stop

Optilab

RFL-H-40-A Remote Control System Software
Version: 0.1

Module	485 ID	S/N
LTA-40-LD-V #1	0	OE1603L101
LTA-40-LD-V #2	1	OE1603L102
LTA-40-LD-V #3	2	OE1603L103
LTA-40-LD-V #4	3	OE1603L104

Module	485 ID	S/N
MD-50 #1	4	OE1603M101
MD-50 #2	5	OE1603M102
MD-50 #3	6	OE1603M103
MD-50 #4	7	OE1603M104

Temperature 1 (°C)
0

Temperature 2 (°C)
0

