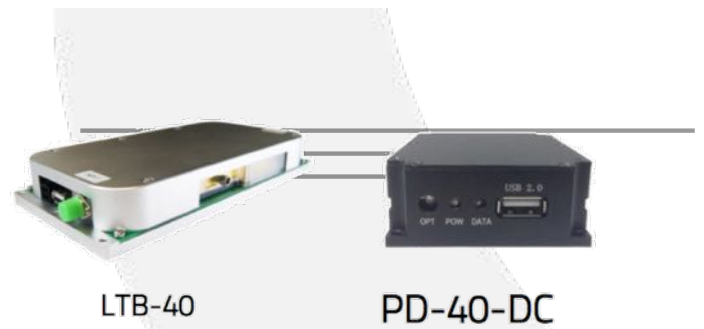




RFLL-30-L-1



LTB-40

PD-40-DC

DEVICE

30 GHz RF over Fiber Lightwave Link, L-1

OVERVIEW

The Optilab RFLL-30-L-1 RF over Fiber Lightwave Link is composed of a LTB-40 transmitter and a PD-40 receiver unit to form a high-performance RFoF link up to 30 GHz applications.

FEATURES

- RFoF Link up to 30-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

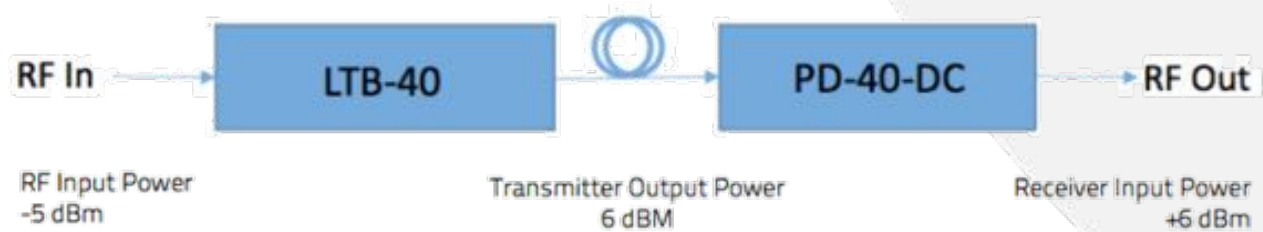
Analog Bandwidth	32 GHz
Link Gain vs Bandwidth	-30 dB/26 GHz typ., -36 dB/32 GHz typ., -42 dB/40 GHz typ.
Input 1 dB Comp.	15.9 dBm @ 1 GHz
Gain Flatness	± 1 dB
Noise Figure	29.5 dB @ 10 GHz, 27 dB @ 30 GHz
SFDR	117.9 dBm x Hz ^{2/3}
IIP3	32.3 dBm
Group Delay	± 39.7 ps





RFL-30-L-1

CONFIGURATION DIAGRAM



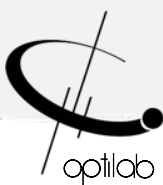
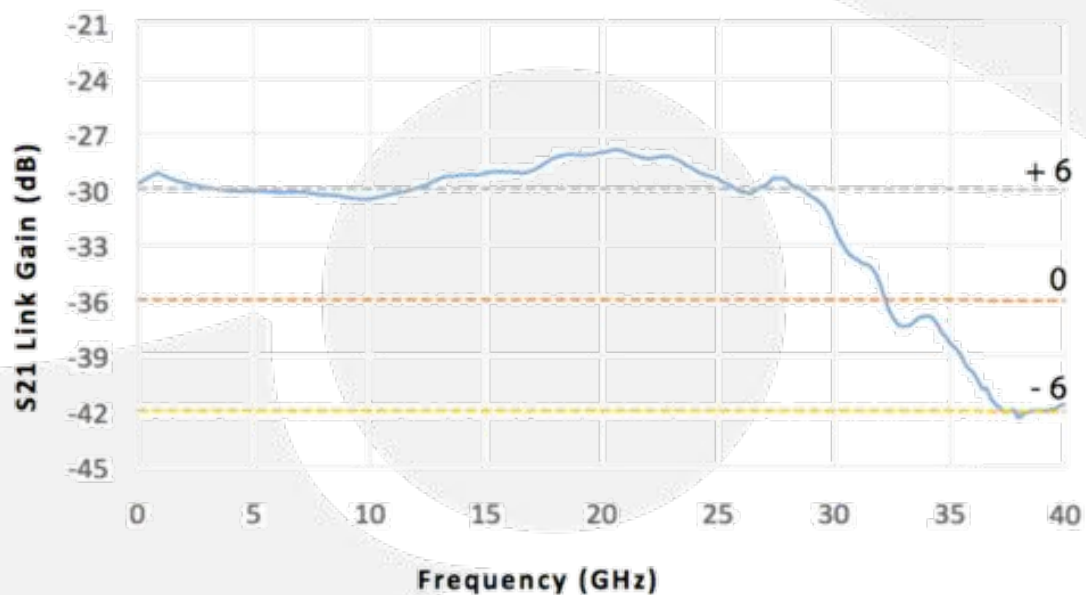
LTB-40, 40 GHZ LIGHTWAVE TRANSMITTER BOARD FOR OEM

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

PD-40-DC, 40 GHZ LINEAR 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 RF transmission applications.

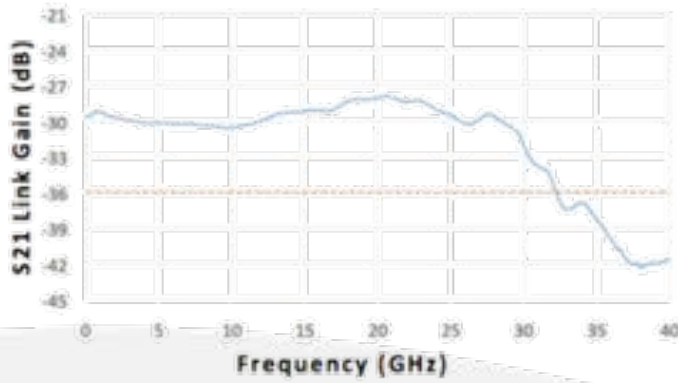
LINK GAIN



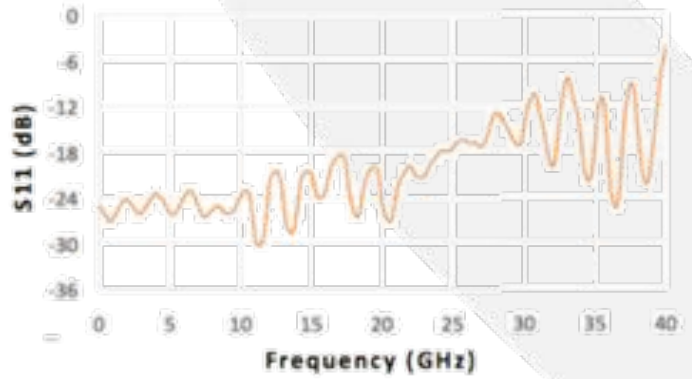


RFL-30-L-1

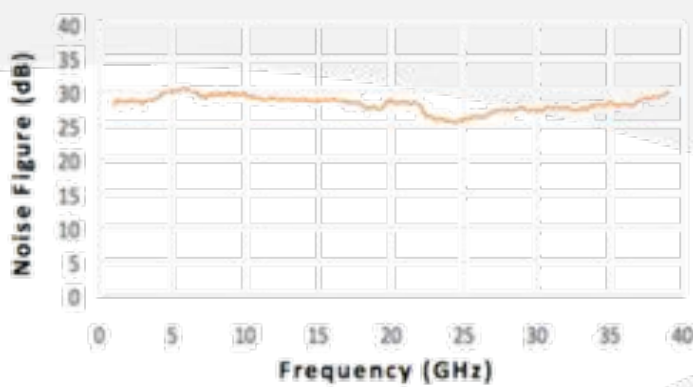
LINK GAIN



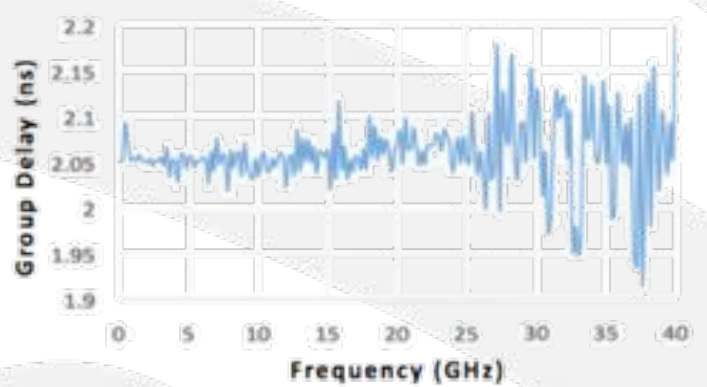
S11 RESPONSE



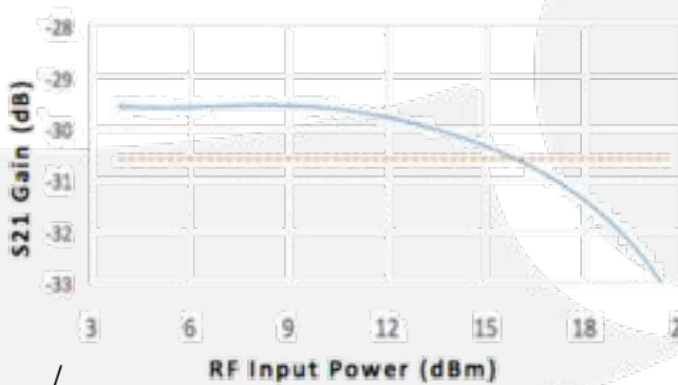
NOISE FIGURE



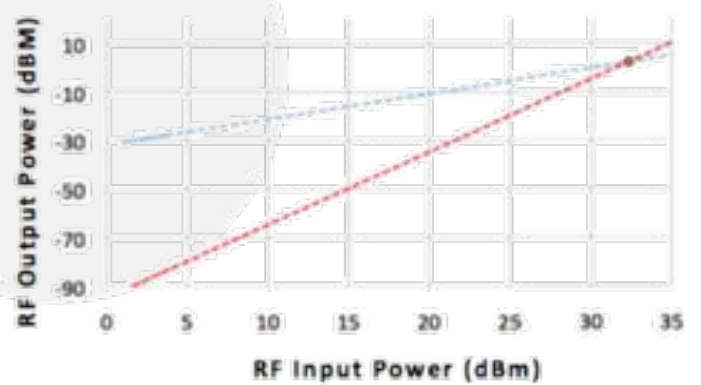
GROUP DELAY



1 DB COMPRESSION



IIP3 PLOT





RFL-30-L-1

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

RF

S11 Reflection	From DC to 25 GHz < -17.5 dB, From 25 GHz to 40 GHz < -4 dB
S22 Reflection	From DC to 8 GHz < -12 dB, From 8 GHz to 25 GHz < -6 dB, From 25 GHz to 40 GHz < -4.5 dB

CONTROL SOFTWARE

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

