



RFLL-12-B



LTA-20



PR-12-B-M

DEVICE

12 GHz RF over Fiber Lightwave Link

OVERVIEW

The Optilab RFLL-12-B RF over Fiber Lightwave Link is composed of an LTA-20 lightwave transmitter and a PR-12-B-M unit to form a high-performance RFoF link greater than 12 GHz applications.

FEATURES

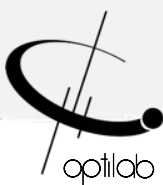
- RFoF Link up to 12 GHz Bandwidth
- High gain receiver with TIA post amplifier
- USB Monitor and Control Interface
- High Dynamic Range
- Low RIN DFB laser source

USE IN

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

LINK PERFORMANCE SUMMARY

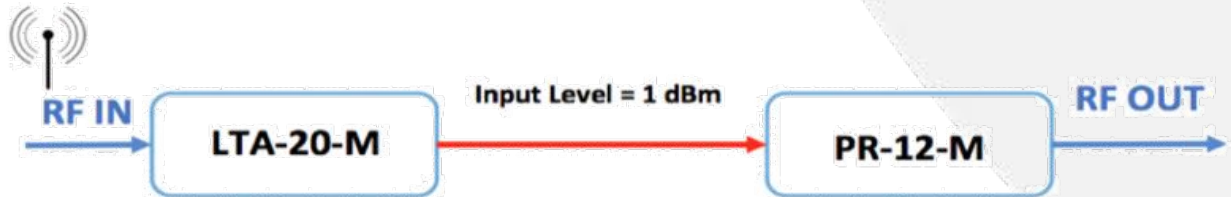
Analog Bandwidth	13 GHz typ.
Link Gain vs Bandwidth	-21 dB/13 GHz, -27 dB/14.5 GHz
Input 1 dB Comp.	15 dBm @ 1 GHz
Gain Flatness	± 0.7 dB
Noise Figure	42 dB @ 5 GHz, 51 dB @ 15 GHz
Group Delay	± 24.88 ps





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CONFIGURATION DIAGRAM



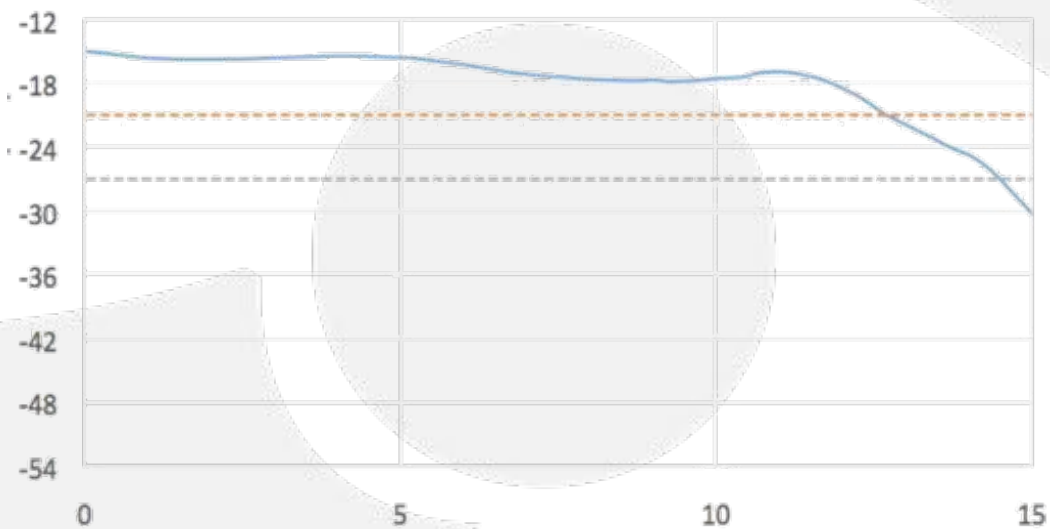
LTA-20, 20 GHZ LIGHTWAVE TRANSMITTER MODULE FOR RFOF

The Optilab LTA-20 is a high performance Lightwave Transmitter Module designed for analog photonics applications from DC to 20 GHz.

PR-12-M-B, 12 GHZ PHOTORECIVER, MODULE

The Optilab PR-12-B-M is a 12 GHz bandwidth amplified PIN photodiode receiver module, designed for RF over fiber, antenna remoting, and broadband RF signals transmission applications using single mode optical fiber.

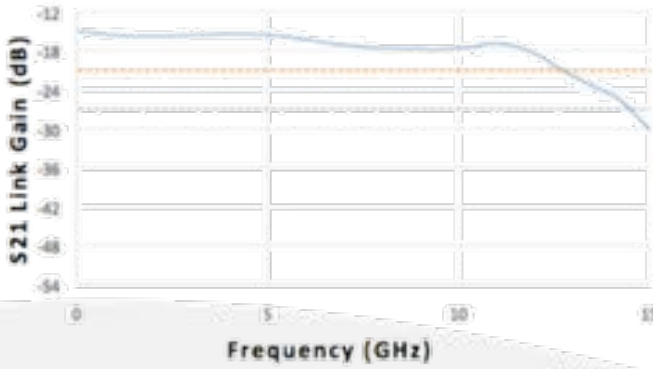
LINK GAIN



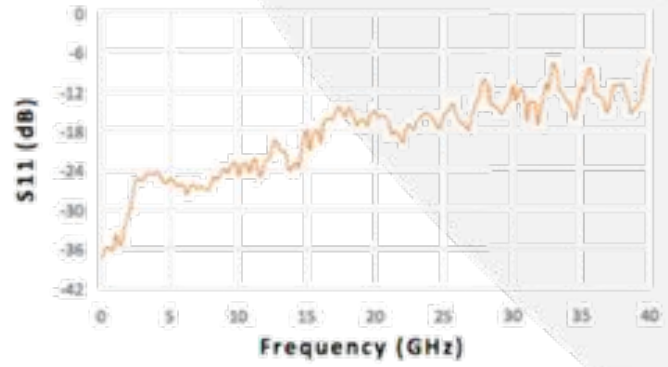


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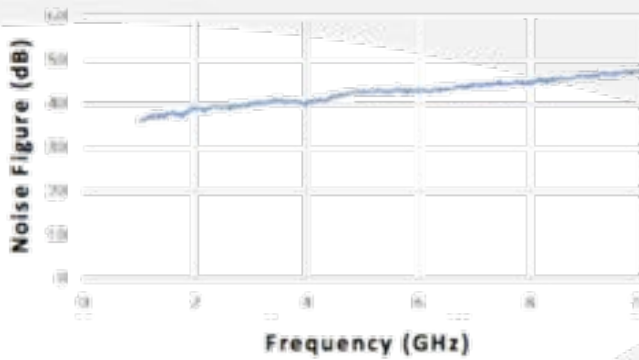
S21 BANDWIDTH



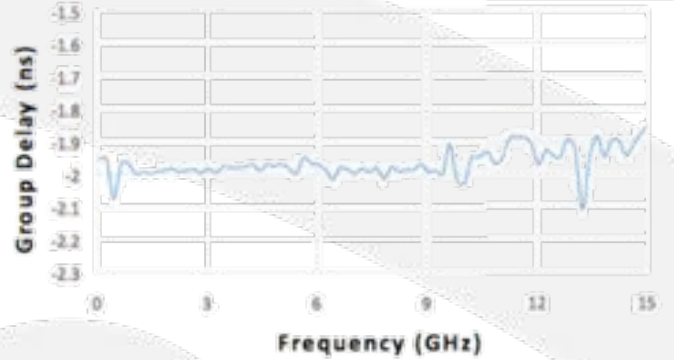
S11 RESPONSE



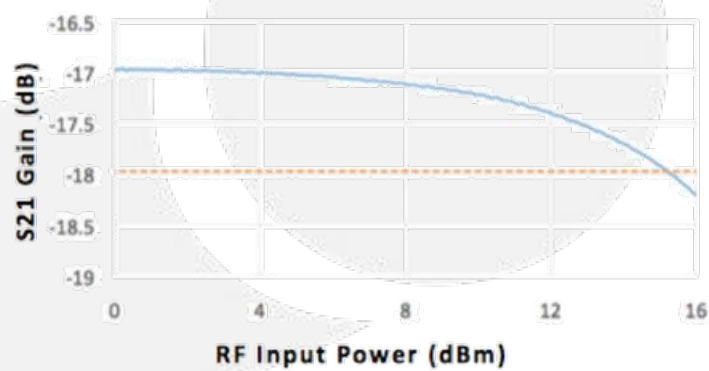
NOISE FIGURE



GROUP DELAY



1 DB COMPRESSION





RFLL-12-B

GENERAL SPECIFICATIONS

LTA-20	Power Supply Requirements	± 5 V, 1 A typ.
	Dimensions	206 mm x 102.4 mm x 31.5 mm
	Accessories Included	PS-5 USB Adaptor & Cable
PR-12-B-M	Power Supply Requirements	± 5 V, 1 A typ.
	Dimensions	90 mm x 80 mm x 22 mm
	Accessories Included	USB Adaptor & Cable
RF	S11 Reflection	< -10 dB within 10 GHz
	S22 Reflection	< -8 dB within 10 GHz

CONTROL SOFTWARE

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

