

RFLL-12-B



LTA-20



PR-12-B-M

12 GHz RF over Fiber Lightwave Link

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

Features

- RFoF Link up to 13 GHz Bandwidth
- High Dynamic Range
- Low RIN DFB laser source
- High gain receiver with TIA post amplifier
- USB Monitor and Control Interface

Applications

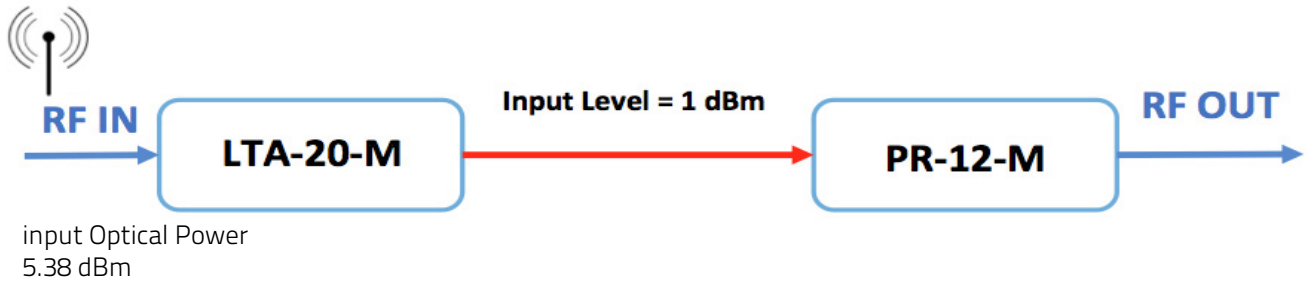
- Wideband RF Transmission over Fiber
- RF/IF Signal Distribution
- Satcom microwave antenna signal distribution
- Broadband delay-line and signal processing
- Phased and interferometric array antenna

Link Performance Summary

| | |
|------------------------|--------------------------------------|
| Analog Bandwidth | 13 GHz Typical |
| Link Gain Vs Bandwidth | -21 dB / 13 GHz -27 dB / 14.5 GHz |
| Input 1dB Comp | 15 dBm @ 1GHz |
| Gain Flatness | +/- 0.7 dB |
| Noise Figure | 30 dB @ 5 GHz 31 dB @ 15 GHz |
| Group Delay | +/- 24.88 ps |

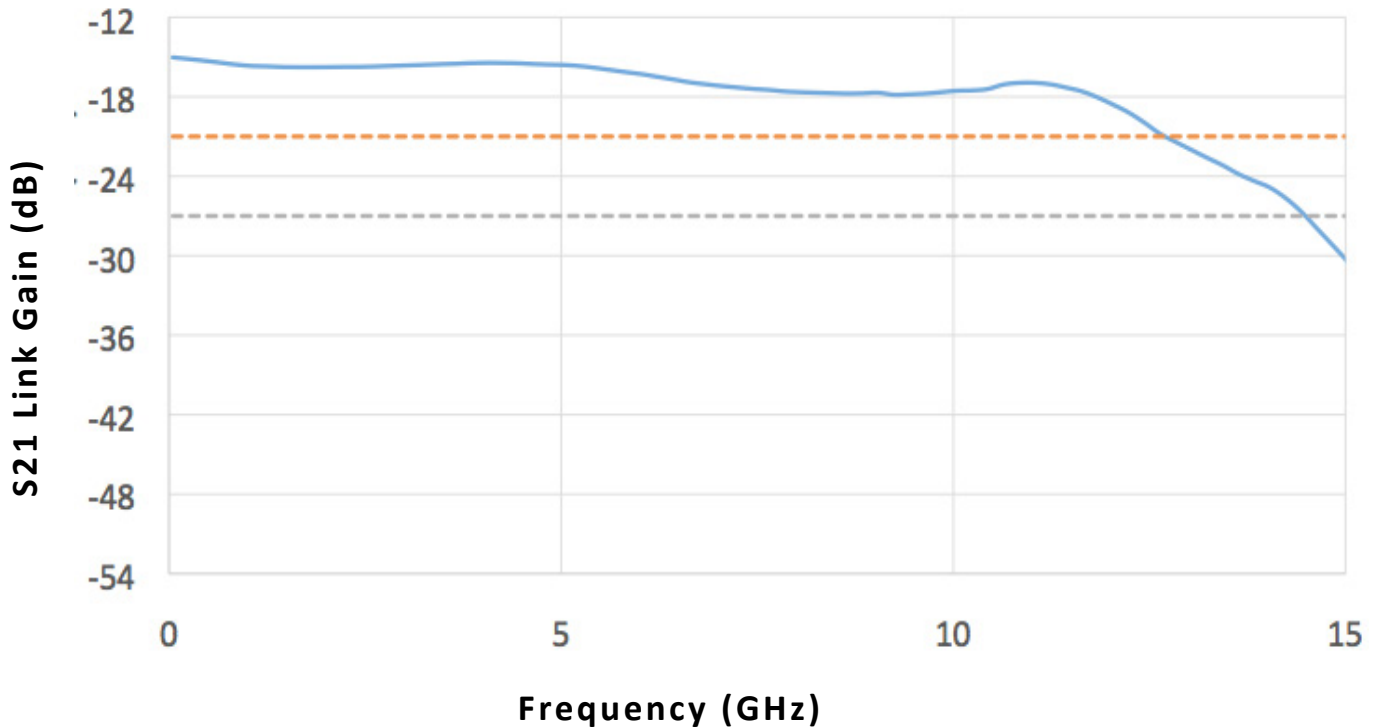
12 GHz RF over Fiber Lightwave Link

Configuration Diagram



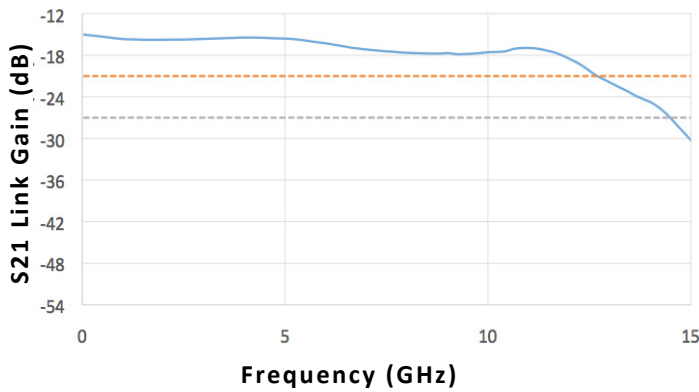
- **LTA-20, 20 GHz Lightwave Transmitter Module for RFoF** ([Datasheet](#))
The Optilab LTA-20 is a high performance Lightwave Transmitter Module designed for analog photonics applications from DC to 20 GHz.
- **PR-12-M-B, 12 GHz PhotoReceiver, Module** ([Datasheet](#))
The Optilab PR-12-B-M is a 12 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

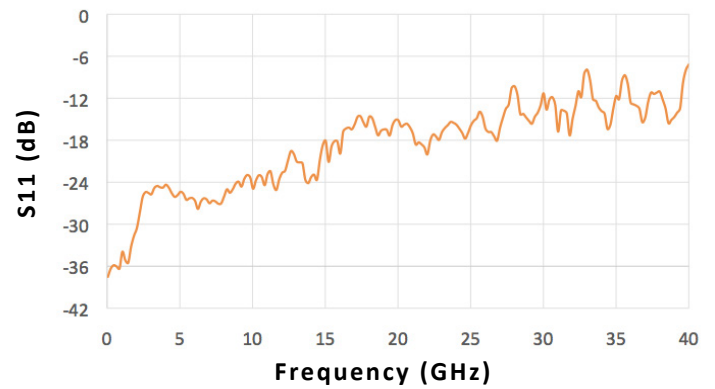


12 GHz RF over Fiber Lightwave Link

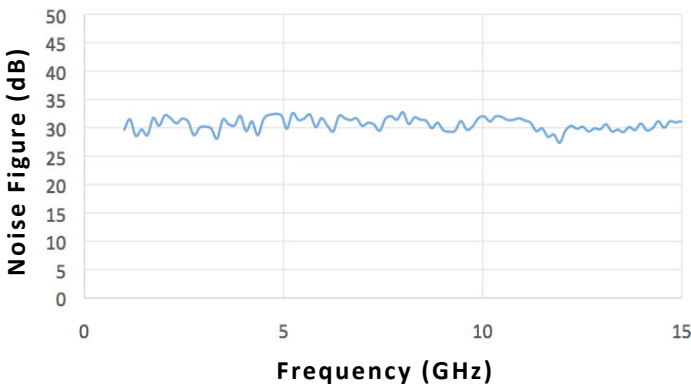
S21 Bandwidth



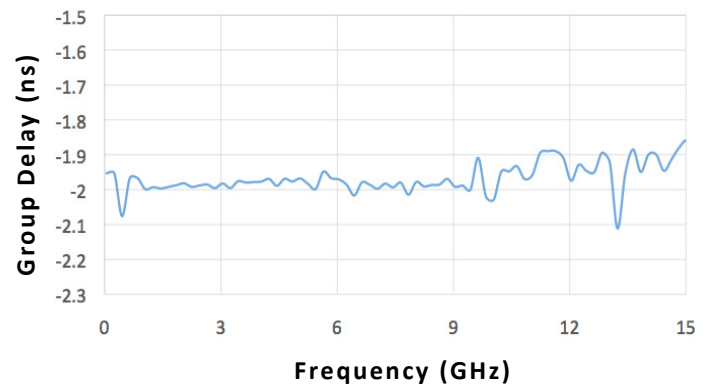
S11 Response



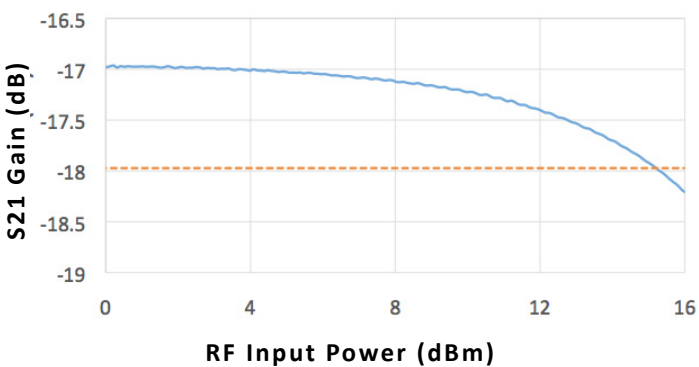
Noise Figure



Group Delay



1 dB Compression



12 GHz RF over Fiber Lightwave Link

General Specifications

| LTA-20 | |
|---------------------------|--|
| Power Supply Requirements | ±5V, 1A 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 DC, 1 mA max. |
| Dimensions | 90 mm x 80 mm x 22 mm |
| Accessories Included | USB Adaptor & Cable |

RF Specifications

| | | | |
|-----------------------|-----------------------|-----------------------|----------------------|
| S11 Reflection | <-10 dB within 10 GHz | S22 Reflection | <-8 dB within 10 GHz |
|-----------------------|-----------------------|-----------------------|----------------------|

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-12-B 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

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To order, please click below.



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sales@optilab.com