



# RFLL-20-L



LTA-20-M



PD-30-M

DEVICE

## 20 GHz RF over Fiber Lightwave Link

OVERVIEW

The Optilab RFLL-20-L RF over Fiber Lightwave Link is composed of a LTA-20-M lightwave transmitter module and a PD-30-M receiver to form a high-performance RFoF link for up to 20 GHz applications.

FEATURES

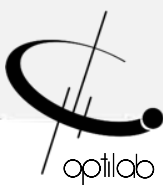
- RFoF Link up to 20 GHz Bandwidth
- High Linearity Receiver
- USB Monitor and Control Interface
- High Dynamic Range
- Low RIN DFB laser source

USE IN

- Satcom microwave antenna signal distribution
- Broadband delay-line and signal processing
- Phased and interferometric array antenna
- RF/IF Signal Distribution
- RF to 20 GHz Transmission over Fiber

### LINK PERFORMANCE SUMMARY

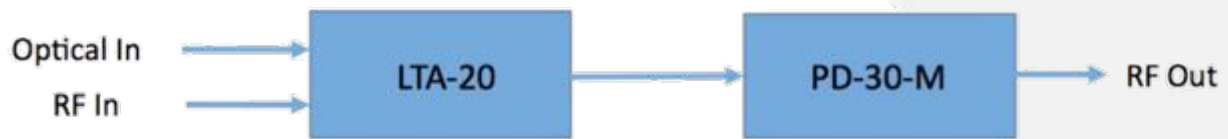
Analog Bandwidth	25 GHz
Link Gain vs Bandwidth	-34 dB @ 17 GHz typ., -37 dB @ 22 GHz typ.
Input 1 dB Comp.	12.4 dBm @ 1 GHz
Gain Flatness	± 1.5 dB
Noise Figure	36 dB @ 10 GHz, 37 dB @ 20 GHz
Group Delay	± 26 ps





# RFL-20-L

## CONFIGURATION DIAGRAM



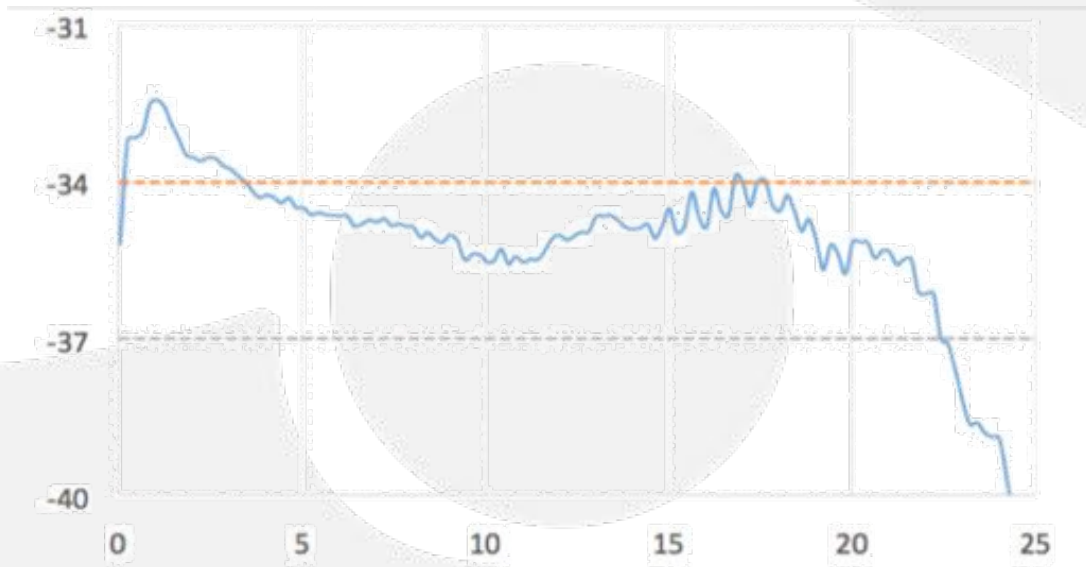
### LTA-20-M, 20 GHz LIGHTWAVE TRANSMITTER MODULE FOR RFOF

The high performance Lightwave Transmitter Module designed for analog photonics applications from DC to 20 GHz.

### PD-30-M, 30 GHz LINEAR INGAS PHOTODETECTOR, MODULE

The bandwidth PIN receiver module designed for RF over Fiber, antenna remoting, and broadband RF transmission applications.

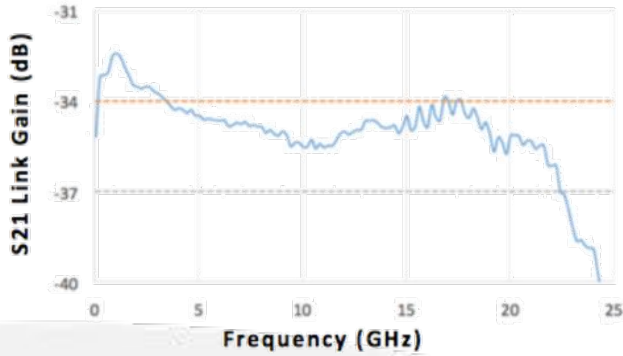
### LINK GAIN



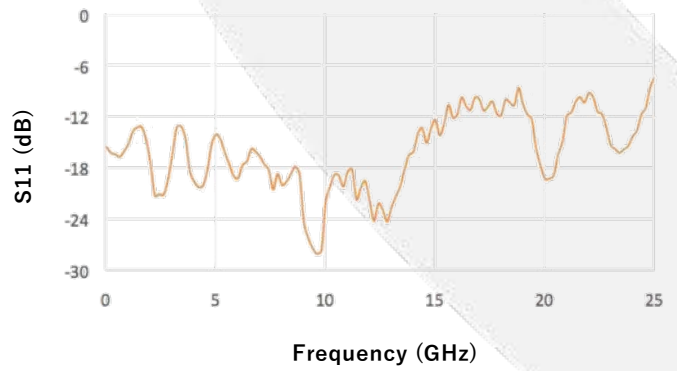


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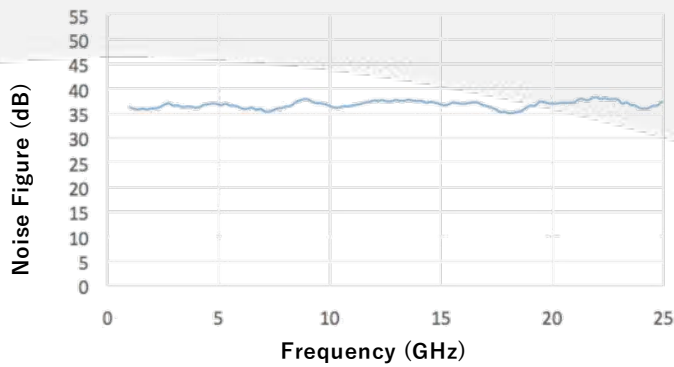
S21 BANDWIDTH



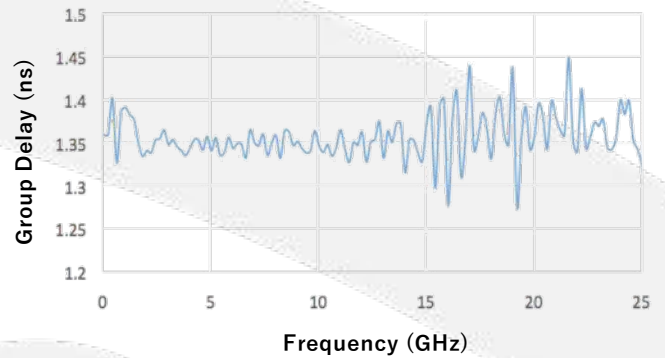
S11 RESPONSE



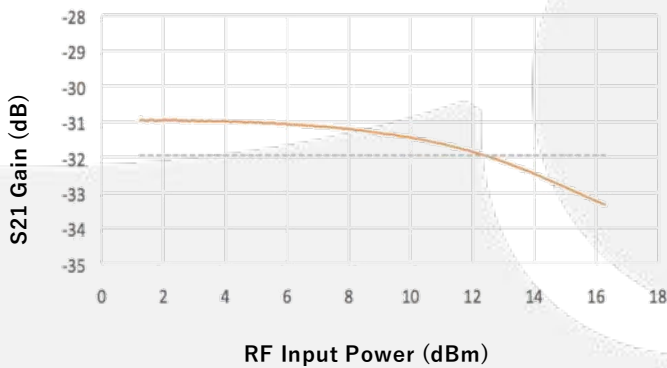
NOISE FIGURE



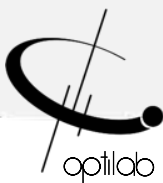
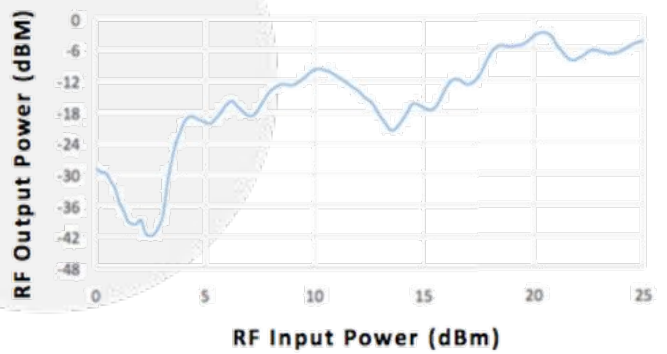
GROUP DELAY



1 DB COMPRESSION



S22 ELECTRICAL





# RFL-20-L

## GENERAL SPECIFICATIONS

LTA-20-M	<a href="#">Power Supply Requirements</a>	± 5 V, 1 A typ.
	<a href="#">Dimensions</a>	206 mm x 102.4 mm x 31.5 mm
	<a href="#">Accessories Included</a>	PS-5 USB Adaptor & Cable
PD-30-M	<a href="#">Power Supply Requirements</a>	± 5 V DC, 500 mA max.
	<a href="#">Dimensions</a>	82 mm x 60 mm x 26.5 mm
	<a href="#">Accessories Included</a>	USB Adaptor & Cable
RF	<a href="#">S11 Reflection</a>	From DC to 15 GHz < -12 dB, From 15 GHz to 25 GHz < -7 dB
	<a href="#">S22 Reflection</a>	From DC to 17 GHz < -10 dB, From 17 GHz to 25 GHz < -3 dB

## CONTROL SOFTWARE

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

