OPTILAB

PHOTONIC EXPERT

WORLD FIRST

Visible Lightwave Link

The Optilab high speed visible wavelength lightwave transmit-receive system contains a 633 nm narrow band laser source, an Lithium Niobate (LN) optical intensity modulator up to 20 GHz and a receiver. It also built-in Automatic Bias Control (ABC) board which allows a stable operation over long operating periods of time and RF amplifer components to realize extremely stable communication of 630 nm optical signals.

TX

Operating Wavelength	630 nm
Impedance	50 Ω
Digital Bandwidth	50 Mb/s to 23 Gb/s
Optical Output Level	1 mW typ.
Modulator Bandwidth	20 GHz typ.
Modulator Bias Mode	4 Automatic Bias Control Modes
Extinction Ratio	15 dB typ.
Rise / Fall Time	< 40 ps

RX

Operating Wavelength	400 nm to 775 nm
Optical Input Level	< 5 mW
S21 3 dB Bandwidth	20 GHz typ.
S22 Characteristics	< -10 dB @ 20 GHz
Dark Current @ 25°C	10 nA typ.
Impedance	50 Ω
Coupling	DC Coupled

FEATURES

- 20 GHz Modulator
- Internal Modulator Driver
- Built-In Automatic Bias Control
- LCD Control Board
- Portable Design

USE IN

- Quantum Photonics
- Research and Development
- Optical Sensing
- Biological Science
- Seed Light Source
- Pulse Amplifier

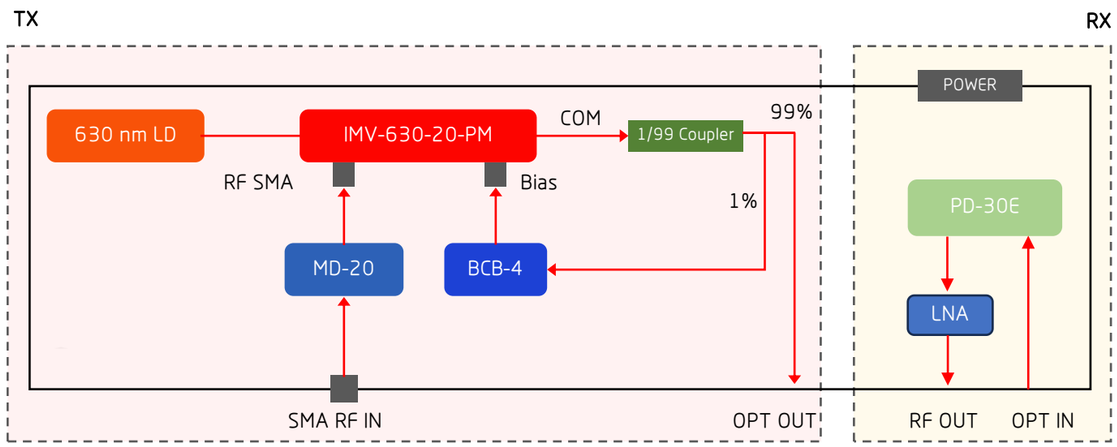
MECHANICAL

Operating Temperature	0℃ to +40℃
Storage Temperature	-10℃ to +70℃
Power Supply Requirements	12 V / 5 A
Optical Connector	FC/APC (Input / Output)
Fiber Type	PM630-HP
RF Input Connector	SMA
Dimensions	297 x 390 x 65 mm

BIAS CONTROL MODE

Mode	Operation Conditions	Modulation Format
Q+	Set to quadrature point of positive slope	Analog, NRZ
Q-	Set to quadrature point of negative slope	Analog, NRZ
Min.	Set to min. point of modulator curve	Pulse, RZ, BPSK
Max.	Set to max. point of modulator curve	Pulse, RZ

FUNCTIONAL DIAGRAM



Address: 600 East Camelback Road, Phoenix, AZ, 85012, USA +1 602-343-1496 www.optilab.com

MADE IN USA

WORLD FIRST

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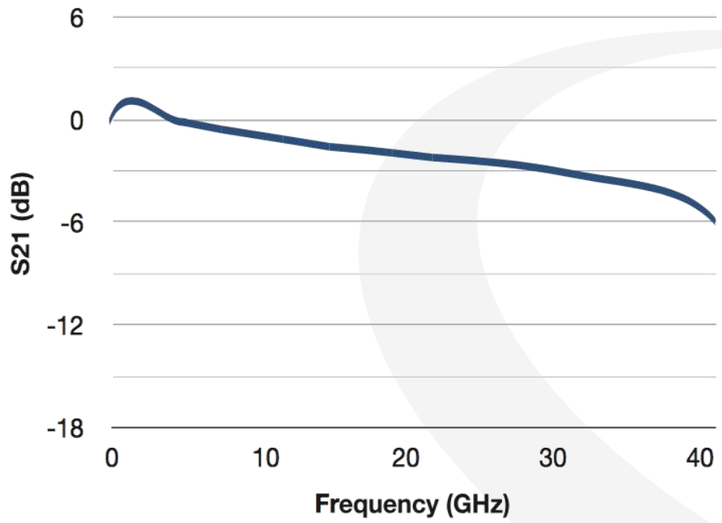
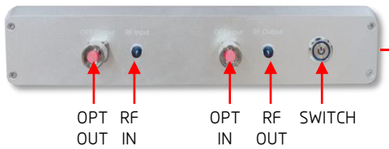
S21 TYPTICAL BANDWIDTH TEST DATA

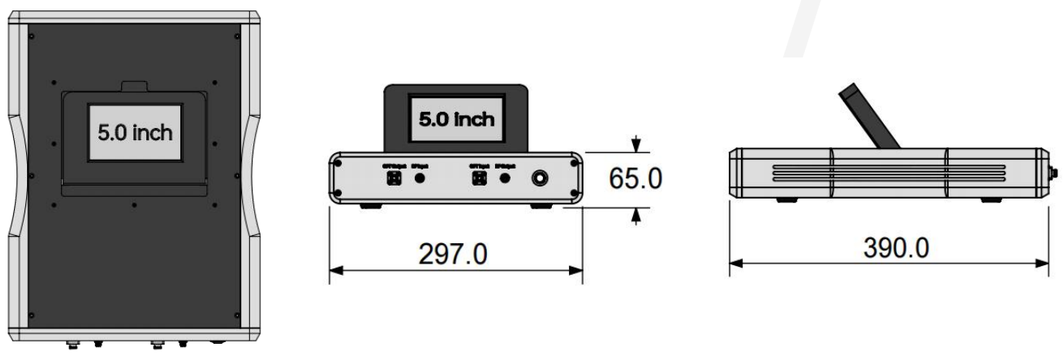


Package Introduction



MECHANICAL DRAWING

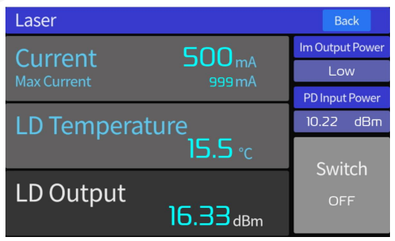
UNIT: mm



Screen Design

- Main Page

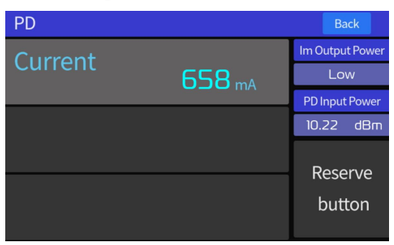
- LD Characteristic



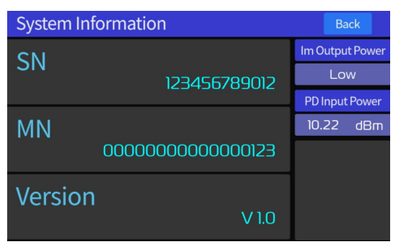
- MD-20 Page

- Driver Page

- PD Page



- System Information



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