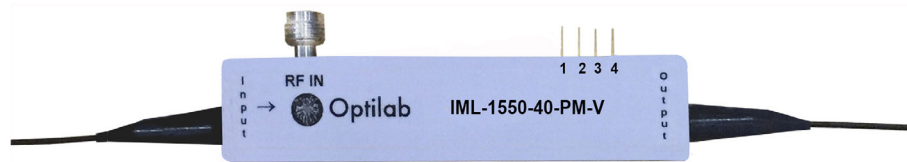


IML-1550-40-PM-V



1550 nm, 40 GHz Analog Modulator, PM Output, V Connectors

The Optilab IML-1550-40-PM-V Intensity Modulator is designed for analog modulation of up to 40 GHz for microwave links, antenna remoting, and RF over Fiber. It is a high linearity, low driving voltage lithium niobate mach zehnder interferometer (MZI) design. It is a bias-stabilized lithium modulator that proves to be extremely stable for long periods of time, and features excellent stability in a biased circuit, operating from 1525 nm to 1610 nm. It has an excellent operating temperature tolerance ranging from -30 °C to +60 °C, and its low insertion loss provides for its maximum transmission power. The IML-1550-40-PM-V uses a Polarization Maintaining (PM) input and output fiber, and features separate RF and bias ports. Contact Optilab for more information.

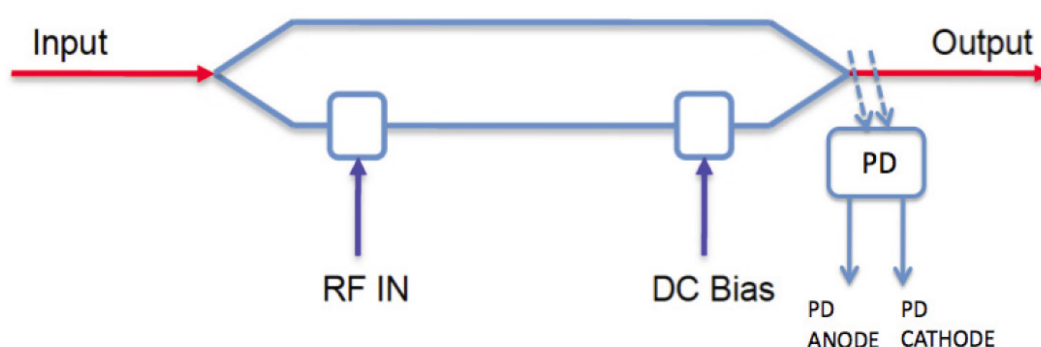
Features

- 3dB bandwidth of 30 GHz
- Excellent stability in a biased circuit
- Low Drive Voltage of 2.0 V
- 1525 nm to 1610 nm range wavelength
- Zero chirp design
- Built in photodiode
- Customizable options:
 - High Extinction Ratio (>30 dB)
 - Temperature Qualified (-55 °C to +75 °C)

Applications

- 40 GHz RF over Fiber (RFoF)
- Antenna remoting
- High frequency fiber optic links
- Delay Lines Telemetry Systems
- Instrumentation
- 43 Gb/s digital link
- Active mode-locked laser

Functional Diagram



1550 nm, 40 GHz Analog Modulator, PM Output, V Connectors

OPTIONS

IML-1550-40-PM-V-xx

xx **HE:** High Extinction Ratio
TQ: Temperature Qualified

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

WEB ORDER

To order, please click below:



Optilab Advantage

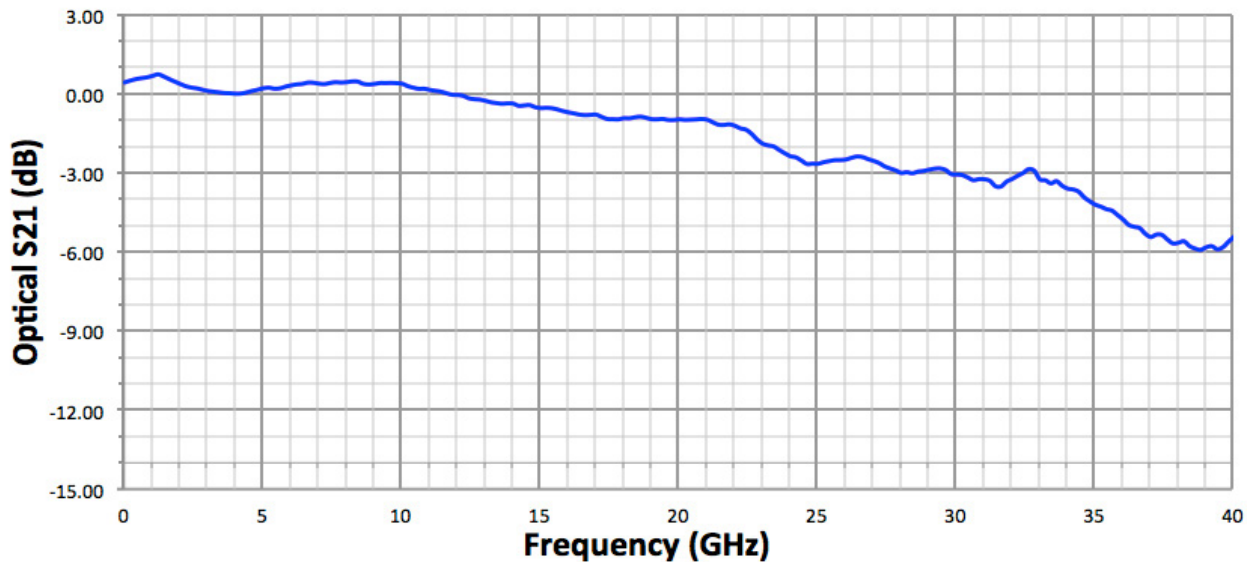
- Innovation
- Performance
- Quality
- Customization
- Warranty

| General Specifications | |
|---------------------------------------|--|
| Input optical power | 100 mW max. |
| Operating wavelength | 1525 to 1610 nm |
| Chirp Value | <± 0.2 (zero chirp design) |
| Insertion Loss | 4dB typ., 4.5dB max. |
| Extinction Ratio | ≥ 25 dB ≥ 30 dB (HE Version) |
| Optical return loss | ≤ -45 dB |
| S ₂₁ Bandwidth (RF Port) | 30 GHz typ. @ -3 dB |
| S ₁₁ Return Loss (RF Port) | ≤ -8 dB @ 30 GHz |
| V _π (RF Port) | 2.0 V typ. @ low frequency 3.0 V typ. @ 10 GHz; 4.5 V typ. @ 30 GHz; |
| RF Input power | 27 dBm max. |
| Impedance (RF Port) | 50 Ω typ. |
| S ₂₁ Bandwidth (Bias Port) | 500 MHz typ. |
| V _π (Bias Port) | ≤ 2 V @ 1 KHz |
| Impedance (Bias Port) | >1 MΩ |
| PD Responsivity | 40 ~100 mA/W typ. |
| Analog Link Performance | |
| IIP3 @7 GHz | 23 dBm typ. |
| 1 dB Compression Point @10 GHz | 9 dBm typ. |

| Mechanical Specifications | |
|---|------------------------------------|
| Operating Temperature (standard) | -30 °C to +60 °C |
| Operating Temperature (TQ version) | -55 °C to +75 °C |
| Storage Temperature | -60 °C to +90 °C |
| Operating Humidity | 0% to 90% Relative Humidity |
| Input Fiber Type | PANDA - PM 1550 |
| Output Fiber Type | PANDA - PM 1550 |
| Input Connector | PM FC/APC; Customized is available |
| Output Connector | PM FC/APC; Customized is available |
| Bias Port Connector | 2 PINS (Pin 1, 2) |
| TAP PD Connector | 2 PINS (Pin, 3, 4) |
| RF Port connectors | V Connector |
| Cabling | 900 μm tubing |
| Dimension | 72 x 16 x 7 mm |

1550 nm, 40 GHz Analog Modulator, PM Output, V Connectors

Typical S21 Bandwidth



Typical S11 Bandwidth

