

IMT-1550-60-PM



DEVICE

Thin-Film Intensity Modulator | 1550 nm | 60 GHz | PM Output

OVERVIEW

The Optilab IMT-1550-60-PM is a C-band Mach-Zehnder intensity modulator built on our **Enhanced Thin-Film Lithium Niobate (ETFLN™)** platform. It features a zero-chirp design and polarization-maintaining input/output via PM-fiber pigtailed. Typical applications include digital transmission up to 80 Gb/s, analog RF-over-Fiber links to 60 GHz, optical pulse generation, mode-locked fiber lasers, and microwave photonic links. Leveraging ETFLN™, the IMT-1550-60-PM delivers excellent bandwidth, high optical power handling, and low fiber-to-fiber insertion loss. Contact Optilab for more information.

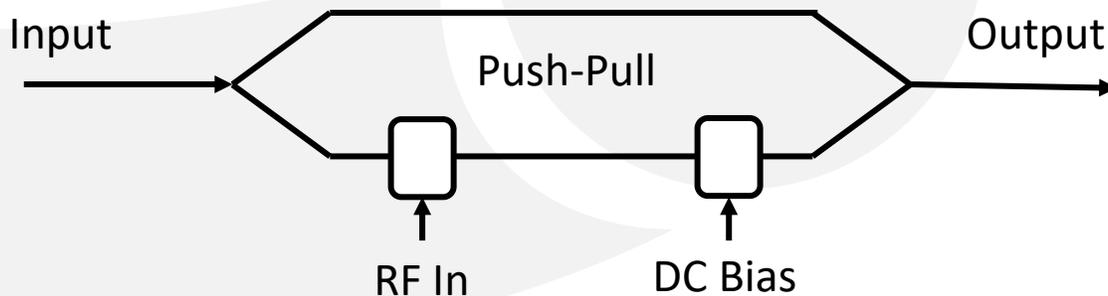
FEATURES

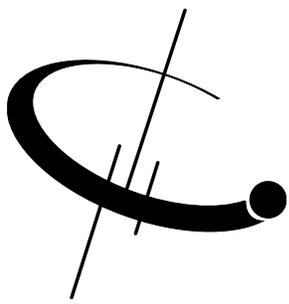
- PM fiber output
- High input power
- Zero chirp design
- C band operating wavelength
- High Extinction Ratio (HER) Available
- Temperature range of -5°C to 70°C

USE IN

- RF over fiber
- Pulse generation
- MOPA
- Analog modulation up to 60 GHz
- Active mode locked laser
- Satellite Link

FUNCTIONAL DIAGRAM





IMT-1550-60-PM

SPECIFICATIONS

GENERAL

Operating Wavelength	1520 nm to 1570 nm
Maximum Optical Input Power	100 mW
Insertion Loss	6 dB max., 5 dB typical
Static Extinction Ratio	≥ 20 dB, ≥ 30 dB for HER version
Chirp Value	± 0.1 max.
Optical Return Loss	≤ -40 dB, -50 dB typical
E to O S21 3dB Bandwidth (ref to 2GHz)	≥ 50 GHz, 55 GHz typ.
E to O S21 6dB Bandwidth (ref to 2GHz)	≥ 60 GHz
Electrical S11 Return Loss	≤ -7 dB up to 30 GHz
RF Port V_{π} @ 1GHz	≤ 7 V, 6.5 V typical
Bias Port V_{π} @ 1kHz	≤ 8.5 V, 7.8 V typical
RF Port Impedance	50 Ω
Bias Port Impedance	≥ 1 M Ω

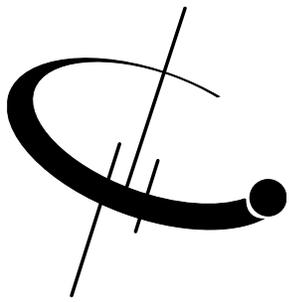
Mechanical

Input/Output Fiber Type	Corning PM15-U40D, Panda
Fiber Length	1 m typical, 0.8 m min.
Input Connector	PM FC/APC, slow axis aligned to narrow Key
Output Connector	PM FC/APC, slow axis aligned to narrow Key
RF Port Connectors	1.85 mm female
Cabling	900 μ m loose tubing
Dimensions	87 mm x 14.5 mm x 10 mm

Absolute Maximum Ratings

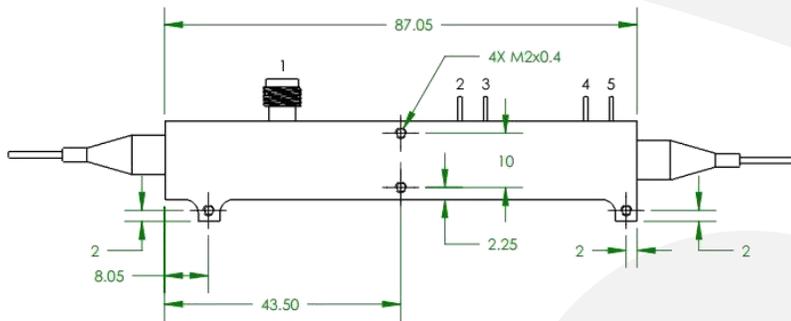
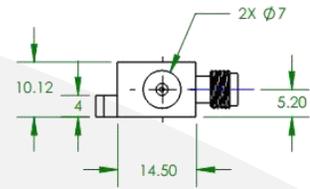
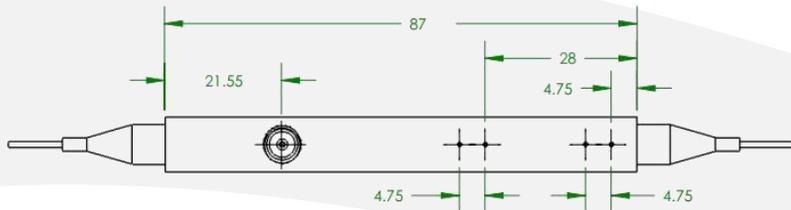
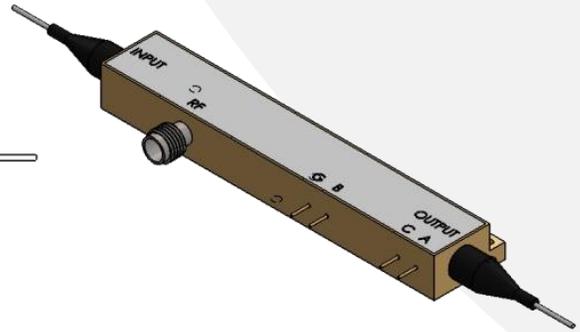
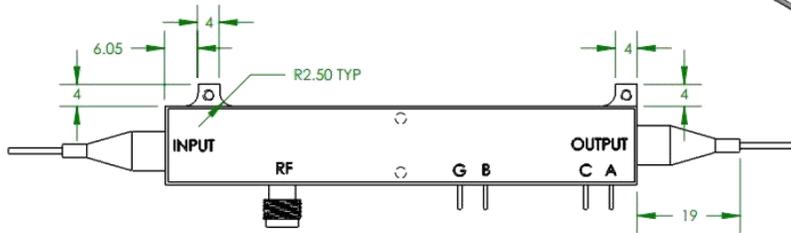
Operating Temperature	-10 °C to +70 °C
Storage Temperature	-40 °C to +85 °C
Operating Humidity	0% to 85% Relative Humidity, Non-Condensing
Maximum RF Input Power	+25 dBm
Maximum DC Bias Voltage	+/- 25 V





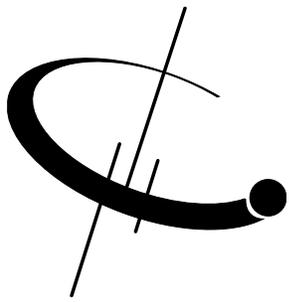
IMT-1550-60-PM

MECHANICAL DRAWING



PIN #	Description
1	RF Input
2	Case Ground
3	DC Bias
4	NC
5	NC





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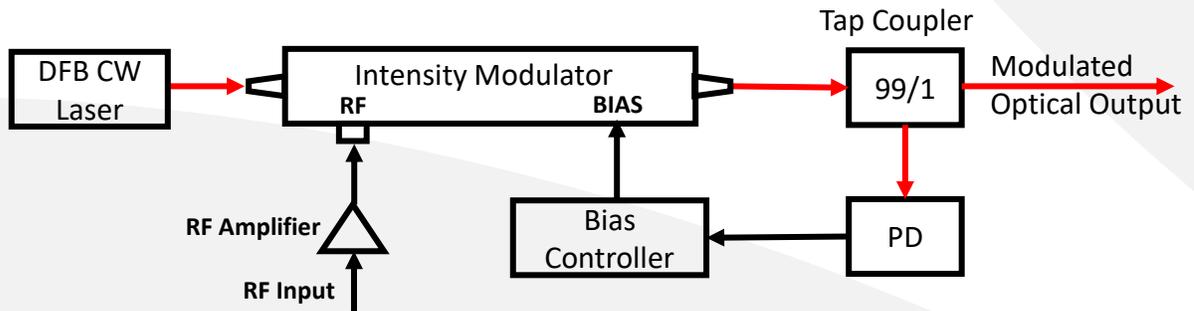
ORDERING OPTIONS

IMT-1550-60-PM-XX

XXX HER: High Extinction Ratio, ≥ 30 dB

LIL: Low Insertion Loss, ≤ 4 dB

Application Diagram



Related Product

- **BCB-4**



The Optilab BCB-4 is a compact automatic bias control board fully compatible with IMP-1310-40-PM modulator.

- **DFB Laser Source**



The Optilab DFB-1310A-PM laser is a 1310 nm CW DFB laser diode with polarization maintaining output up to 200 mW. It is often used as the seed laser for IMP-1310-20-PM modulator input. This laser is also available in other CWDM wavelength 1270 nm, 1290 nm and 1330 nm.

