



# IMP-1064-10-PM



## DEVICE

## 1064 nm, 10 GHz Intensity Modulator, PM Output

## OVERVIEW

The Optilab IMP-1064-10-PM Intensity Modulator is designed for external modulation of 1064 nm laser up to 10 GHz or 12.5 Gb/s. It is also applicable for pulse generation for Ytterbium-Doped Fiber Amplifier amplification (YDFA) in satellite links and active mode locked laser applications. 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 1030 nm to 1090 nm. It has an excellent operating temperature tolerance ranging from -30° C to +75° C. The IMP-1064-10-PM uses a Polarization Maintaining (PM) input and output fiber, featuring separate RF and bias ports. Contact Optilab for more information.

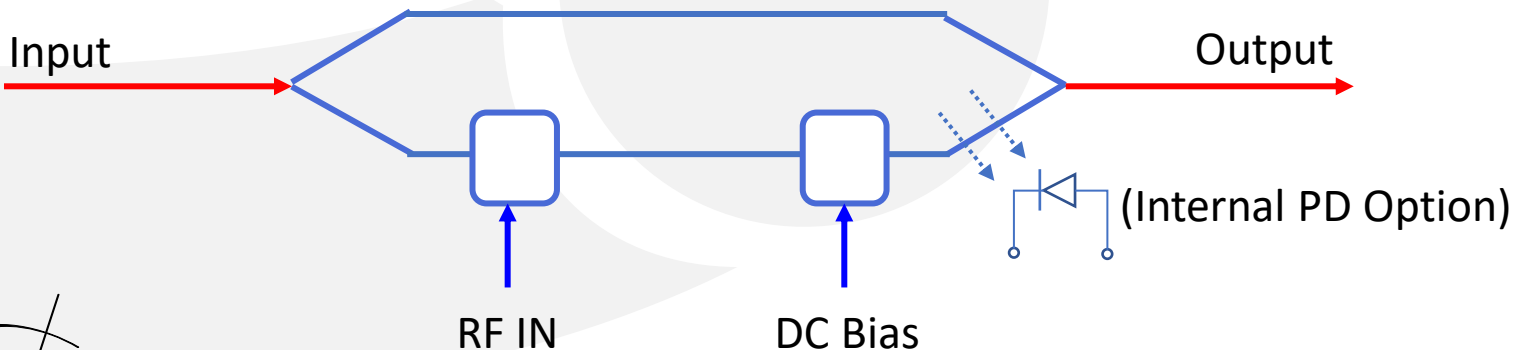
## FEATURES

- 1030-1090 nm wavelength
- Low Drive Voltage
- 3 dB bandwidth up to 10 GHz
- PM input and output
- High extinction ratio
- Internal PD option

## USE IN

- Pulse generation for YDFA
- Up to 12.5 Gb/s Data Rate
- Satellite Link
- Active mode locked laser
- Research and development

## FUNCTIONAL DIAGRAM





# IMP-1064-10-PM

## SPECIFICATIONS

Input Optical Power	100 mW max.
Operating Wavelength	1030 to 1090 nm
Chirp Value	$< \pm 0.2$
Insertion Loss	5.0 dB max., 4.5 dB typ.
Extinction Ratio	20 dB min.
Optical Return Loss	45 dB min.
S21 Bandwidth (RF Port)	7 GHz min., 10 GHz typ.
S11 Return Loss (RF Port)	$\leq -10$ dB @ 10 GHz
V $\pi$ (RF Port)	4.3 V typ., 5.2 V max.
RF Input Power	26 dBm Maximum
Impedance (RF Port)	50 $\pm$ 5 $\Omega$
V $\pi$ (Bias Port)	4 V typ., 5 V max.
Impedance (Bias Port)	$> 1$ M $\Omega$

## GENERAL

Operating Temperature (Standard)	-30°C to +75 °C
Storage Temperature	-60 °C to +85 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	PM 980 - 400
Input/Output Connector	FC/APC, key aligned to slow axis
Material	LiNbO <sub>3</sub>
Crystal Orientation	X-cut, Y-propagating
RF Port Connectors	K type female
Cabling	900 $\mu$ m tubing
Dimensions	3.783" x 0.981" x 0.640"

## MECHANICAL

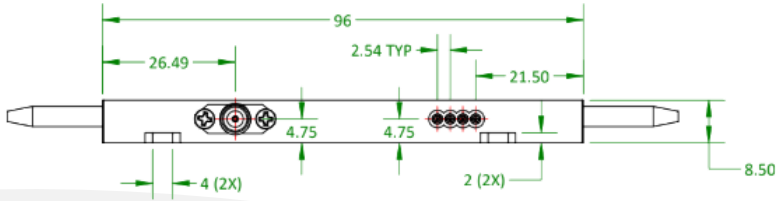
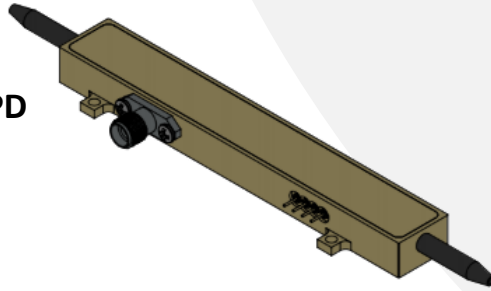




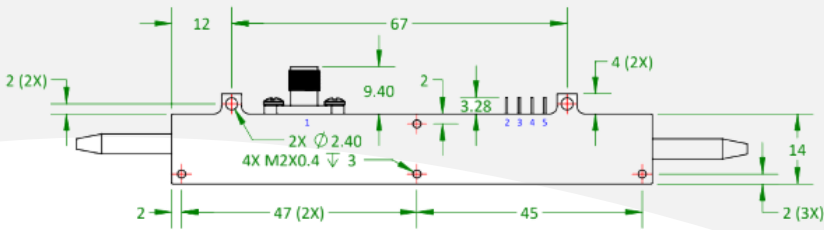
# IMP-1064-10-PM

## MECHANICAL DRAWING

### 1. IMP-1064-10-PM-PD Housing, W/Internal PD



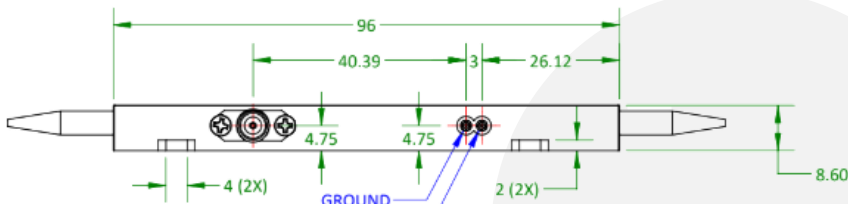
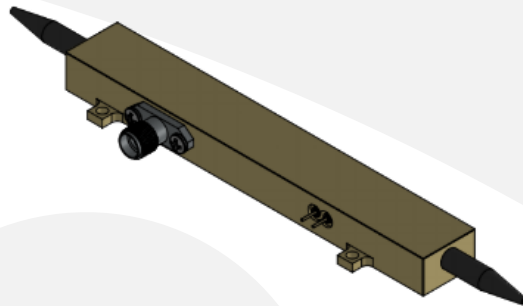
FRONT VIEW



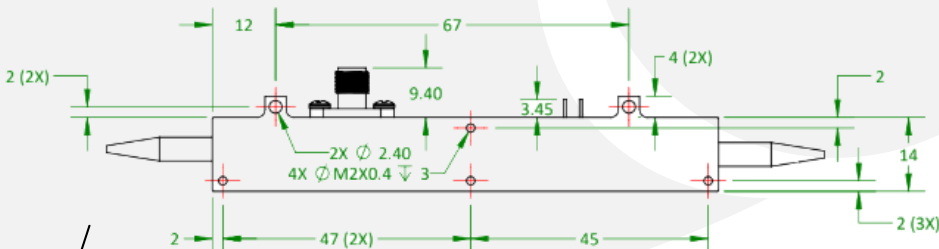
BOTTOM VIEW

PIN #	Symbol
1	RF
2	GND
3	B
4	PD-A
5	PD-C

### 2. IMP-1064-10-PM Housing, No Internal PD



FRONT VIEW



BOTTOM VIEW

PIN #	Symbol
G	GND
B	DC BIAS





# IMP-1064-10-PM

ORDERING  
OPTIONS

**IMP-1064-10-PM-XX**  
**XX** PD: Internal PD

Available  
Accessories

- **BCB-4**



The Optilab BCB-4 is a compact bias control board designed for IMP-1064-10-PM modulator

- **YDFA-PA-MSA**



The Optilab YDFA-PA-MSA is a high-gain Dual Stage Pre-amplifier module in a multiple source agreement footprint housing.

