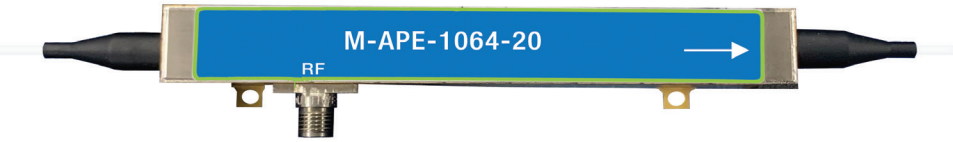
M-APE-I-1064-20

1064 nm, 20 GHz Intensity Modulator, PM Output

The Newport IMP-1064-20-PM Intensity Modulator is designed for external modulation of 1064 nm laser up to 17 GHz or 20.5 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-1064-20-PM uses a Polarization Maintaining (PM) input and output fiber, featuring separate RF and bias ports. Contact MKS for more information.



Features & Uses

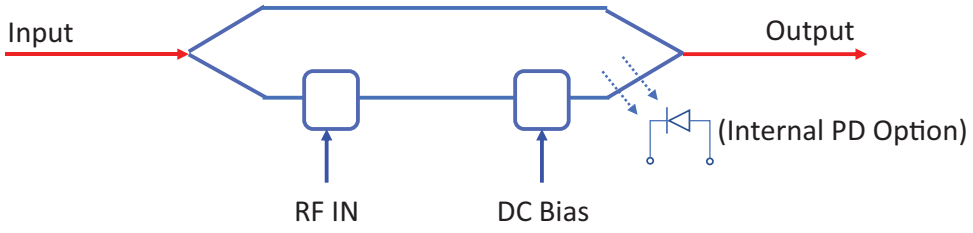
Features

- 1030-1090 nm wavelength
- Low Drive Voltage
- 3 dB bandwidth up to 17 GHz
- PM input and output
- High extinction ratio
- Internal PD option

Benefits of Use

- Pulse generation for YDFA
- Up to 20.5 Gb/s Data Rate
- Satellite Link
- Active mode locked laser
- Research and development

Functional Diagram



Specifications

GENERAL

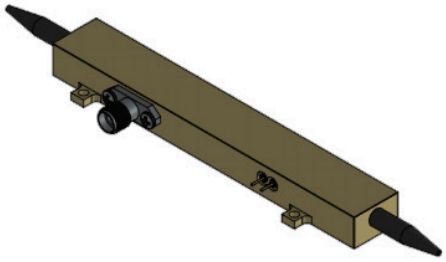
Input Optical Power	100 mW
Operating Wavelength	1030 to 1090 nm
Chirp Value	< ± 0.2
Insertion Loss	5.0 dB max., 4.5 dB typ.
Extinction Ratio	20 dB min.
Optical Return Loss	45 dB min
S21 Bandwidth (RF Port)	17 GHz typ
S11 Return Loss (RF Port)	≤ -10 dB @ 20 GHz
Vπ (RF Port)	4.3 V typ., 5.2 V max
RF Input Power	26 dBm Maximum
Impedance (RF Port)	50 ± 5Ω
Vπ (Bias Port)	4 V typ., 5 V max.
Impedance (Bias Port)	> 1 MΩ

MECHANICAL

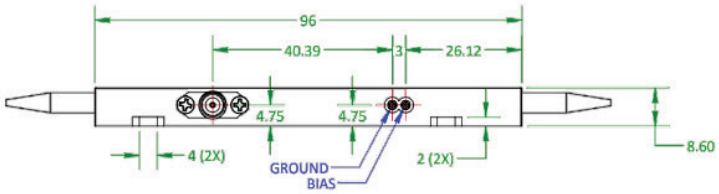
Operating Temperature (Standard)	-30°C to +75 °C
Storage Temperature	-60 °C to +85 °C
Operating Humidity	0% to 90% Relative Humidity
Input/Output Fiber Type	PM 980 - 400
Input/Output Connector	FC/APC, key aligned to slow axis
Material	LiNb03
Crystal Orientation	X-cut, Y-propagating
RF Port Connectors	K type female
Bias Port Connector	2 Pins/4Pins Optional
RF Port Connectors	Anritsu K female
Cabling	900 µm tubing
Dimensions	3.783” x 0.981” x 0.640”

Mechanical Drawing

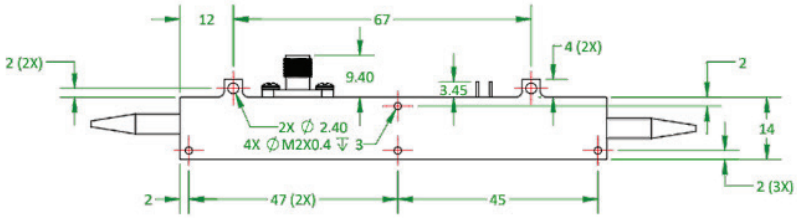
M-APE-I-1064-20



M-APE-I-1064-20 Housing



FRONT VIEW

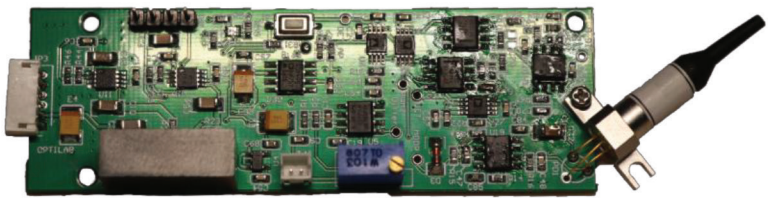


BOTTOM VIEW

PIN #	Symbol
G	GND
B	DC BIAS

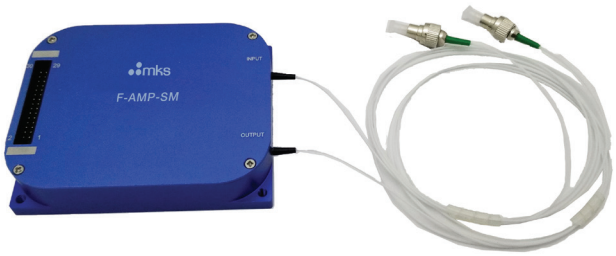
Available Accessories

M-CB



The Optilab M-CB is a compact bias control boarddesigned for M-APE-I-1064 modulator

F-AMP-SM



The Optilab F-AMP-SM is a high-gain Dual Stage Preamplifiermodule in a multiple source agreement footprint housing.

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