

0701 Electro-Optic Modulator

IM-1550-20-A



1550 nm, 20 GHz Intensity Modulator

The IM-1550-20-A intensity modulator is designed for TDM and WDM 20 Gb/s transmission and can also be incorporated for analog modulation of up to 20 GHz for satellite links, antennae remoting, and RF over fiber. It is a hands-on 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 1530 nm to 1610 nm. It has an excellent operating temperature tolerance ranging from -30 °C to +75 °C, and its low insertion loss provides for its maximum transmission power. The IM-1550-20-A uses a Polarization Maintaining (PM) input fiber and a Single Mode (SM) output fiber. It features separate RF and bias ports.

FEATURES

- 1530 nm to 1610 nm Operating Wavelength
- Wide Operating Temp. Range (-30 °C to +60 °C)
- Low Insertion Loss
- Useful Bandwidth Up to 20 GHz
- Excellent Stability in Biased Circuit

USE IN

- TDM and WDM Up to 25 Gb/s
- Analog Transmission Up to 20 GHz
- Satellite Link
- Antenna Remote
- RF over Fiber

ORDERING OPTIONS

IM-1550-20-A-XX

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Input Optical Power	100 mW max.
Operating Wavelength	1530 nm to 1610 nm
Chirp Value	±0.2 max. (Zero Chirp Design)
Insertion Loss	5.0 dB max.
Extinction Ratio	25 dB min.
Optical Return Loss	-45 dB max.
PRBS Electrical Drive Voltage	6.0 Vpp typ.
S21 Bandwidth	Up to 20 GHz
S11 Return Loss	10 dB max. @ 10 GHz
V_{π} (RF Port)	5.7 V typ. @ 10 GHz
RF Input Power	27 dBm max.
Impedance (RF Port)	50 Ω typ.
S21 Bandwidth (Bias Port)	500 MHz min.
V_{π} (Bias Port)	10 V @ DC max.
Impedance (Bias Port)	1 M Ω min.
IIP3@7 GHz	32 dBm typ.
1 dB Compression Point @10 GHz	16 dBm typ.
Operating Temperature (Standard)	-30°C to +75°C
Storage Temperature	-60°C to +85°C
Operating Humidity	0% to 90% Relative Humidity
Input Fiber Type	PANDA-PM
Output Fiber Type	SMF-28
Input Connector	PM FC/APC, PM FC/UPC
Output Connector	FC/APC, FC/UPC
Material	LiNbO3
Crystal Orientation	X-cut, Y-propagating
Waveguide Process	Ti-indiffused
Bias Port Connector	Pin
RF Port Connectors	K Type (Compatible w/ SMA)
Cabling	900 μ m Tubing
Dimensions	3.783"x0.981"x0.640"