

# LM-00K-R



## DEVICE

## Lightwave Modulator for ON OFF Key, up to 50 Gb/s

## OVERVIEW

The Optilab LM-00K-R is a high performance ON OFF Key (OOK) lightwave modulator designed for Optical Communication up to 50 Gb/s or beyond. The LM-00K-R incorporates an external laser source (DFB, tunable laser) which couples into a high speed MZI modulator for OOK modulation, with a broadband modulator driver. The LM-00K-R has a built-in Automatic Bias Control board which allows for stable long-term operation, with up to 4 bias operating modes. Adjustable RF gain through the front panel interface and LabVIEW software can be performed. Contact Optilab for more information.

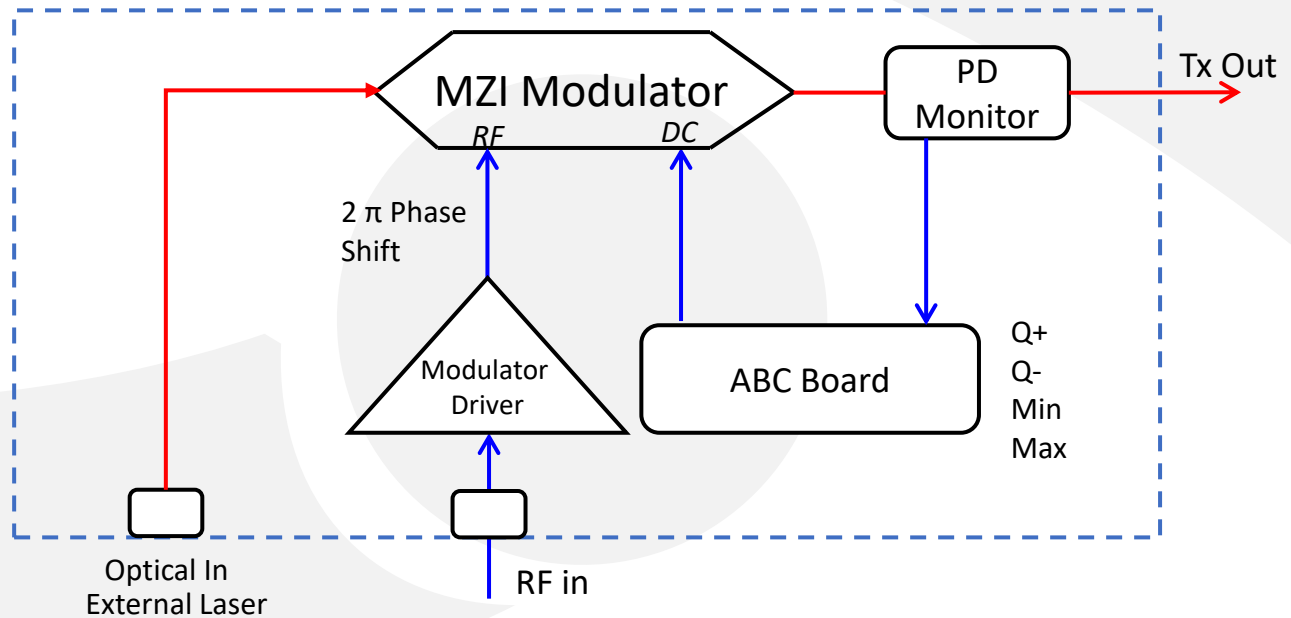
## FEATURES

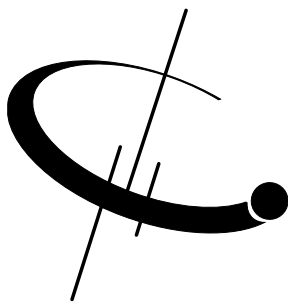
- Up to 50 Gb/s bit rate
- Integrated modulator driver
- Four auto bias modes
- Accepts external laser via PM input
- RS-232 Communication

## USE IN

- Optical communications
- Analog transmission
- Picosecond pulse generation
- Research and development
- Test and measurement

## FUNCTIONAL DIAGRAM





# LM-00K-R

## SPECIFICATIONS

### GENERAL

Bit Rate/Bandwidth	See Table 1.0
External Optical Input Level	+ 20 dBm max.
Impedance	50 $\Omega$ typ.
Optical Output Power	6 dBm typ.
Modulator Bias Mode	Automatic bias control modes
Input RF Voltage Range	250 mW to 750 mW typ.
Eye Crossing Adjustment	Available

### MECHANICAL

Operating Temperature	-10 °C to +60 °C
Storage Temperature	-50 °C to +90 °C
Power Supply Requirements	110/220 VAC, 50-60 Hz
Optical Connectors	FC/APC, others optional
Input Fiber Type	PANDA PM
Output Fiber Type	SMF-28 standard; PANDA PM optional
RF Input Connector	See Table 1.0
Remote Control	USB 2.0 and LabVIEW software included
Alarm	Bias mode status, over temperature
Dimensions	1RU 482.6 (L) mm x 470.57 (W) mm x 44 (H) mm

TABLE 1.0  
BANDWIDTH OPTIONS

Model #	Bit Rate	Analog Bandwidth	RF Connector
LM-00K-10-R	12 Gb/s min.	10 GHz typ.	SMA type
LM-00K-20-R	20 Gb/s min.	17 GHz typ.	K type
LM-00K-30-R	32 Gb/s min.	25 GHz typ.	K type
LM-00K-40-R	40 Gb/s min.	32 GHz typ.	K type
LM-00K-50-R	50 Gb/s min.	40 GHz typ.	V type

### ORDERING OPTIONS

#### LM-00K-XX-R-YY

**XX** Bandwidth: See Table 1.0

**YY** PM: Polarization Maintaining Output Fiber

