

**Polarization Extinction Ratio Meter**



The ERM-101 is a high performance polarization extinction ratio (PER) meter designed specifically for both production and laboratory environments. With a PER dynamic range greater than 50 dB, a wide wavelength range (1260-1650 nm), and an angular resolution of 0.06°, this instrument outperforms any competitors in its class. One attractive option is a separate measuring head that can be detached from the main instrument enclosure for user convenience in applications such as pigtailed of laser diodes. The instrument has 5 measurement speeds ranging from 0.1 to 10 seconds/cycle, with the high

speed for live alignment and the low speed for accuracy. The measurement data can also be stored and recalled at the touch of a button for comparison purposes. In automatic measurement mode, PER, axis angle, and optical power are automatically measured and displayed in the LCD window. In manual measurement mode, the user can manually rotate the internal polarizer using the arrow keys on the front panel to search for the maximum transmission. The instantaneous power and polarizer rotation angle are simultaneously displayed. The ERM-101 is ideal for PM fiber pigtailed of laser diodes, PM fiber patch cord manufacturing, PM fiber connectorization, PM fiber fusion splicing, PM fiber coil production and quality assurance for fiber gyros.

**Specifications:**

Wavelength Range <sup>1</sup>	1260 to 1650 nm
Calibrated Wavelengths <sup>2</sup>	1550 and 1310 nm
PER Dynamic Range	50 dB
PER Ranges <sup>3</sup> :	Integrated optical head 0 ~ 50 dB for input power - 5 to 10 dBm 0 ~ 30 dB for input power - 25 to - 5 dBm
	Remote optical head 0 ~ 45 dB for input power - 5 to 10 dBm 0 ~ 30 dB for input power - 25 to - 5 dBm
PER Resolution	0.1 dB
PER Accuracy <sup>3</sup> :	Integrated optical head 0.15 dB for ER <30 dB
	Remote optical head 0.35 dB for ER <25 dB
Angular Resolution	0.06°
Angular Accuracy	± 1°
Power measurement accuracy	± 0.5 dB
Optical power resolution	0.02 dBm (PER < 30) 0.2 dBm (PER > 30)
Input Optical Power Range	- 30 dBm to 10 dBm
Measurement Speeds	0.1, 0.2, 0.4, 1, 10 seconds/cycle
Connector Type	Free Space Adapter for FC connectors
Optical Power Damage Threshold	300 mW
Operating Temperature	0 ~ 40 °C
Storage Temperature	- 20 ~ 60 °C
Communication Interface	USB, RS-232, Ethernet, GPIB
Electrical Power Supply	100 - 120 VAC, 50 - 60 Hz or
	200 - 240 VAC, 50 - 60 Hz
Dimensions: Main body	2U 19" half rack width: 14" (L) x 8.5" (W) x 3.5" (H)
	Remote head

**Features:**

- High PER dynamic range
- Wide wavelength range
- High angular resolution
- Detachable optical head option
- Variable speed measurement
- Data storage and recall functions
- Manual Alignment function

**Applications:**

- PM fiber pigtailed of laser diodes
- PM fiber connectorization
- PM fiber patch cord production
- PM fiber fusion splicing QA
- PM fiber coil QA
- Fiber gyro QA

**Notes:**

1. Other wavelength ranges available by special request. Contact General Photonics for details
2. Other calibrated wavelengths available.
3. For measurements at or slower than 0.4 s/cycle.

**Ordering Information:**



Optical head option:  
I = integrated  
D = detachable

Note: Please specify power supply when ordering.

**Accessories:**

- Bare fiber adapter PEZ p. 89
- Temporary splicer LFS p. 90
- NoTai™ Isolator p. 79
- NoTai™ Polarizer p. 78

High ER polarizer (ER=35 to 50dB) with long PM pigtails available. Contact General Photonics for details.



Remote optical head for ERM-101-D

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