

# SERIES 500

## Inline Optical Power Monitor

EigenLight's Series 500 (S500) is a low cost and compact instrument for measuring the power of a signal being transmitted through an optical fiber. Unlike conventional power meters, EigenLight's power monitor can be installed in live systems for real-time, continuous power measurement, without compromising system performance.



(Patchcords sold separately)

The Series 500 features a digital readout of the instantaneous power of a transmitted signal. The display can be toggled between wavelengths, as well as absolute and relative power readings. The device includes a USB port for interfacing with EigenLight's power monitoring software (sold separately). The Series 500 utilizes patented optical tap technology that maintains fiber continuity while measuring optical power. This allows for unrivalled performance among competing technology, including ultra-low insertion loss, low polarization dependent loss, and high directivity. The device can be used in highly sensitive systems, such as optical sensor, data centers, FTTH, metro and long haul optical networks without compromising the optical signal. A built-in stand, magnets for mounting on ferrous surfaces, and easy battery access make the device practical for use in field and lab applications. The Series 500 is available in singlemode, multimode, and PM fibers with specialty fiber available upon request.

### POWER MONITORING APPLICATION

- Transmitter/LASER output power monitoring
- Receiver input power monitoring
- Monitoring the input, output, pump and reflected power of an EDFA or Raman Amplifier
- Optical Network Performance Monitoring for Long Haul, Metro, FTTH or Data Centers
- Monitoring the power of optical systems used in manufacturing, research & development and field testing environments

### OPTICAL SYSTEMS

- Optical Sensor Systems
- Coherent and Non-Coherent Optical Networks
- Optical Test Instruments
- Optical Coherence Tomography
- Medical Sensors and Instruments
- Fiber LASERS

### STANDARD SPECIFICATIONS

	Model 51x Standard Monitor			Model 52x Low Loss, High Power PM	
Fiber Type	SMF	PM	MM	SMF	PM
Insertion Loss (dB) <sup>1</sup>	≤0.5	NA	≤1.5	≤0.2	-40 to +26
Power Range (dBm)	-50 to +16	-50 to +16	-50 to +16	-40 to +26	+/-0.2
Absolute Accuracy (dB) <sup>2</sup>	+/-0.2	+/-0.2	+/-0.3	+/-0.2	≥15 <sup>3</sup>
Directivity (dB) <sup>3</sup>	≥20	≥20	0	≥20	NA
Polarization Stability (dB)	≤0.2, ≤0.1 <sup>4</sup>	NA	NA	≤0.2, ≤0.1 <sup>4</sup>	NA
Modal Sensitivity (dB)	NA	NA	≤1	NA	≥18
Extinction Ratio (dB)	NA	≥18	NA	NA	
Power	1 Lithium Coin Cell (CR2477N), USB				
Battery Life	3 Years Typical (Slow Mode)				
Display Resolution	0.1 dB				
Display Refresh Rate	0.1 Sec/0.8 Sec (Fast/Slow Mode)				
Output Interface	Micro USB				
Operating Temperature	0°C to +40°C				
Storage Temperature	-10°C to +60°C				
Size (Housing Only)	94.5 x 56.5 x 27 mm				
Weight	100 grams				
Housing Material	Lexan Body, Santoprene Bumpers				

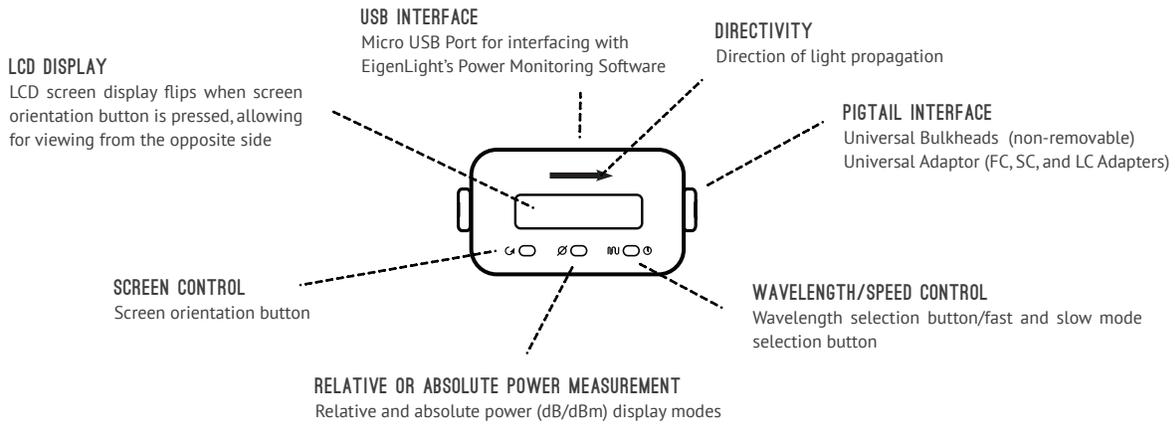
1. Excludes connector losses  
 2. Measured at the output and calibrated wavelengths  
 3. Measured at 1550 nm  
 4. Specify polarization stability spec of ≤0.2 or ≤0.1 when ordering

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### S500 Layout



### S500 Accessories *(Sold separately)*

- Extra Batteries
- Calibrated Spectral Curve
- Mirror Reflectors
- Additional Adapters
- Patchcords
- Variable Optical Attenuator
- Power Monitoring Software

### VARIABLE OPTICAL ATTENUATOR

EigenLight's variable optical attenuator (VOA) can be attached to the Series 500 input bulkhead adapter. The VOA allows fingertip control of the optical power within your system.

Specifications	
Attenuation Range	40 dB
Attenuation Resolution	0.1 dB
Return Loss	>40 dB

### POWER MONITORING SOFTWARE

EigenLight's power monitoring software interfaces with the S500 through a USB port. The software allows datalogging and remote control of up to 24 channels simultaneously.

Please contact [Sales@EigenLight.com](mailto:Sales@EigenLight.com) for ordering information.

	Power (dBm)	Serial Number	Wavelength (nm)		Power (dBm)	Serial Number	Wavelength (nm)
1	-19.25	125186760	830	23			
2	-14.72	111111111	1550	14			
3	-15.12	111111111	1550	15			
4	-15.35	111111111	1480	16			
5	-19.90	222222222	1550	17			
6	-20.40	12456789	1550	18			
7	-20.93	111111111	1480	19			
8	-27.87	987654321	1550	20			
9	-28.37	987654321	1550	21			
10	-28.93	987654321	1480	22			
11				23			
12				24			

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