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Data Sheet

August 15, 2026

EIGENLIGHT

EigenLight 420 WDM Optical Power Monitor

EigenLight 420 WDM Optical Power Monitor Attenuator The EigenLight Series 400 Model 420 combines a 40 dB variable optical attenuator with an inline optical power monitor for single-mode fiber. OEM Series 400 datasheet rates Model 420 power range minus 40 dBm to plus 20 dBm, insertion loss less than 1.0 dB, return loss greater than 40 dB, and absolute accuracy plus or minus 0.2 dB at calibrated wavelengths. In-line WDM power leveling and monitoring in laboratory factory and field fiber systems without breaking the fiber path for a separate power meter. The EigenLight Series 400 Model 420 combines a 40 dB variable optical attenuator with an inline optical power monitor for single-mode fiber. OEM Series 400 datasheet rates Model 420 power range minus 40 dBm to plus 20 dBm, insertion loss less than 1.0 dB, return loss greater than 40 dB, and absolute accuracy plus or minus 0.2 dB at calibrated wavelengths. In-line WDM power leveling and monitoring in laboratory factory and field fiber systems without breaking the fiber path for a separate power meter.



MODEL

EigenLight 420

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

420

LISTING

<https://aumictechlabs.com/products/420-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The EigenLight 420 WDM Power Monitor-Attenuator is an optically passive device designed for precise control and monitoring of optical power within WDM systems. It integrates the functionality of a variable attenuator with an in-line power monitor, allowing for simultaneous adjustment of power levels and real-time display of absolute optical power. This device is

engineered for applications in the field, factory, or laboratory, serving as a replacement for conventional attenuators. It features low insertion loss, low polarization-dependent loss, and high return loss, ensuring minimal impact on the optical signal.

Technical Specifications

- Product Name:** EigenLight 420 WDM Power Monitor-Attenuator
- Device Type:** WDM Power Monitor-Attenuator
- Attenuation Range:** 40 dB variable attenuation
- Attenuation Resolution:** 0.1 dB
- Power Measurement Range:** * -40 dBm to +20 dBm * Note: Model 410 has a power range of -50 dBm to +16 dBm
- Minimum Insertion Loss:** * <1.0 dB (for Model 420) * <1.5 dB (for Model 410) * 0.6 dB to 1.4 dB * As low as 0.05 dB * Down to 0.2 dB
- Return Loss:** >40 dB
- Polarization Dependent Loss (PDL):** Low
- Directivity:** High
- Optical Interface:** SC/APC and SC/PC connectors are specified. All industry-standard fiber optic connectors are available.
- Fiber Type:** Single-Mode
- Wavelengths:** 1.3 μ m / 1.55 μ m
- Battery Life:** Typical 3 years

Features

- Combined Functionality:** Integrates a variable attenuator with an optical power monitor in a single unit.
- Dual LCD Displays:** Enables easy viewing of readings from any configuration, eliminating the need to reposition the device.
- Power Measurement Modes:** Supports both absolute and relative power readings.
- Auto Power On/Off:** Light-activated power management for extended battery life.
- Durable Construction:** Features internal steel-tube construction for robustness in field, factory, or laboratory environments.
- Optional Analog Output:** Available via a microphone jack for data logging purposes.
- Pigtail Interface:** Standard 1.5-meter pigtails on input and output.
- Wavelength and Speed Control:** Allows selection of operating wavelength and switching between fast and slow response modes.
- Micro USB Interface:** For optional remote readout via API and device power.

Applications

- In-line control and monitoring** in the field, factory, or laboratory.
- Monitoring optical power in WDM systems, optical amplifiers, and lightwave systems.
- Replacing conventional attenuators in optical networks.
- Use in sensitive optical systems such as fiber lasers, optical sensor systems, and medical laser systems.
- Ideal for FTTX, Data Centers, Metro, and Long Haul optical networks.

Compatibility

- * Compatible with standard single-mode fiber (G.652.D)
- Supports all industry-standard fiber optic connectors.

Why Choose Aumictech for EigenLight 420 WDM Power Monitor-Attenuator? At Aumictech, we specialize in sourcing and supplying optical test and measurement equipment. Whether you need precise optical power monitoring, reliable attenuation control, or seamless integration into your WDM systems, our team ensures the EigenLight 420 WDM Power Monitor-Attenuator delivers maximum performance and accuracy for your specific application.

420 Characteristics / Specifications

PARAMETER	VALUE
Model	420
Also Known As	420-00
Instrument Type	WDM power monitor attenuator
Fiber Type	single mode
Attenuator Range	40 dB
Attenuator Resolution	0.1 dB
Power Range	minus 40 dBm to plus 20 dBm
Minimum Insertion Loss	less than 1.0 dB
Absolute Accuracy	plus or minus 0.2 dB
Return Loss	greater than 40 dB
Display Resolution	0.1 dB
Display Refresh Fast	0.1 s
Display Refresh Slow	0.8 s
Analog Output Scale	1 mV per dBm
Analog Output Impedance	40 kOhm
Power Source	4 CR2032 lithium coin cells
Battery Life Typical	3 years slow mode
Operating Temperature	0 C to plus 40 C
Storage Temperature	minus 10 C to plus 60 C
Relative Humidity	less than 95 percent non-condensing
Housing Size	9.5 × 3.7 × 3.6 cm
Mass With Batteries	140 g
Housing Material	flame retardant ABS
Wavelength Range Class	1280 nm to 1580 nm
Calibration Wavelengths	1310 nm and 1550 nm

PARAMETER	VALUE
PdI Class	less than 0.2 dB
Directivity Class	greater than 20 dB
Wavelength range	Class: 1280 nm to 1580 nm
Humidity	less than 95 percent non-condensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 10 C to plus 60 C
Operating temperature	0 C to plus 40 C
Operating Temperature	0 C to plus 40 C
Humidity	less than 95 percent non-condensing
Relative Humidity	less than 95 percent non-condensing
Housing Size	9.5 × 3.7 × 3.6 cm
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Housing Material	flame retardant ABS
Wavelength Range Class	1280 nm to 1580 nm
Calibration Wavelengths	1310 nm and 1550 nm
PdI Class	less than 0.2 dB
Directivity Class	greater than 20 dB Notes From EigenLight Series 400 Fiber Optic Power Monitor Attenuators datasheet Model 420 column and Artisan 420-00 configuration notes.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
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Notes
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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.