

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

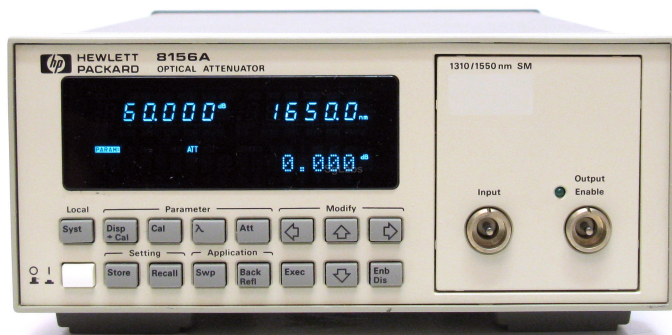
Data Sheet

August 2, 2026

HP / AGILENT

HP / Agilent 8156A Optical Attenuator 60dB attenuation with 0.001dB resolution 1200nm to 1650nm

HP / Agilent 8156A Optical Attenuator 60dB attenuation with 0.001dB resolution 1200nm to 1650nm The 8156A provides a high-precision programmable optical attenuator designed for single-mode fiber applications with a 60 dB attenuation range (excluding insertion loss), 0.001 dB resolution, and wavelength coverage from 1200 nm to 1650 nm with GPIB remote control. Optical power leveling and BER test path attenuation; automated attenuation sweeps under GPIB; single-mode fiber component and transceiver characterization from 1200 to 1650 nm; return-loss-sensitive high-performance options (101/201 class) and monitor-output variants (121/221 class). The 8156A provides a high-precision programmable optical attenuator designed for single-mode fiber applications with a 60 dB attenuation range (excluding insertion loss), 0.001 dB resolution, and wavelength coverage from 1200 nm to 1650 nm with GPIB remote control. Optical power leveling and BER test path attenuation; automated attenuation sweeps under GPIB; single-mode fiber component and transceiver characterization from 1200 to 1650 nm; return-loss-sensitive high-performance options (101/201 class) and monitor-output variants (121/221 class).



MODEL

HP / Agilent 8156A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8156A

LISTING

<https://aumictechlabs.com/products/8156a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 8156A is a precision optical attenuator engineered for telecommunications testing and R&D applications requiring exact control of optical power levels across extended wavelength ranges. It delivers 60 dB attenuation with 0.001 dB resolution, exceptional repeatability of ± 0.005 dB, and attenuation accuracy down to ± 0.05 dB typical. The instrument employs a novel single-filter design that eliminates dark spots and attenuation overshoots or undershoots inherent in ranging-based architectures.

Technical Specifications

- Wavelength Range: 1200 nm to 1650 nm
- Attenuation Range: 60 dB (excluding insertion loss)
- Attenuation Resolution: 0.001 dB
- Attenuation Accuracy (Typical): ± 0.05 dB; linearity $< \pm 0.1$ dB
- Repeatability (Typical): ± 0.005 dB
- Polarization Sensitivity (Typical): 35 dB (Option 100) to > 60 dB (Options 201, 221)
- Insertion loss ranges 2.5 dB to 4.5 dB depending on configuration
- Single-mode fiber optimized; multimode support available via Option 350 (50/125 μm)
- HP-IB (GPIB) interface with IEEE 488.1/488.2 compliance and SCPI command compatibility
- Configurable with straight (PC) or angled (APC) optical connectors
- Optional monitor output for real-time power measurement (Options 121, 221)

Typical Applications

Optical power control in telecommunications test labs, fiber-optic component characterization, automated attenuation measurement in production environments, and integrated system architectures requiring programmable optical signal conditioning.

Compatibility & Integration

Primarily supports 9/125 μm single-mode fiber with Option 350 extending support to 50/125 μm multimode applications. GPIB control enables seamless integration into automated measurement systems. Optical connectors sold separately.

Features & description

From manufacturer datasheet

Features

- Standalone high-precision optical attenuator (non-modular mainframe)
- Wavelength range 1200 to 1650 nm
- Attenuation range 60 dB (excluding insertion loss)
- Resolution 0.001 dB
- Wavelength-corrected attenuation when wavelength is entered
- Programmable up/down attenuation sweeps via GPIB (HPIB)
- Fiber type 9/125 μm single-mode
- Option families: 100 standard; 101 high performance; 201 high RL; 121/221 with monitor output

8156A Characteristics / Specifications

PARAMETER	VALUE
Model	8156A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Programmable Optical Attenuator
Wavelength Range	1200 to 1650 nm
Attenuation Range	60 dB (excluding insertion loss)
Resolution	0.001 dB
Fiber Type	9/125 μ m single-mode
Typical Insertion Loss (Opt 101 class)	approximately 2.5 dB
Return Loss (Opt 101 class)	>45 dB
Attenuation Accuracy / Linearity (Opt 101 typical)	$<\pm 0.2$ dB class
Maximum Input Level	23 dBm class
Remote Interface	GPIB (HPIB)
Connector Interfaces	Two optical connector interfaces required (sold separately)
Alias	8156A Standard Operating Conditions Install matching connector interfaces on both ports. Enter operating wavelength so attenuation correction applies. Observe maximum input power limits for the installed option. Allow warm-up before precision linearity measurements.
Confirm option code (100/101/121/201/221) on the faceplate	return loss, monitor output, and performance class differ by option. Catalog base listing 8156A covers the 60 dB / 0.001 dB / 1200–1650 nm attenuator family. Alias 8156A.
Option families	100 standard; 101 high performance; 201 high RL; 121/221 with monitor output
Attenuation	with 0.001dB resolution 1200nm to 1650nm
Return loss	(Opt 101 class): >45 dB

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.

performance options (101/201 class) and monitor-output variants (121/221 class).

Key Features

- Standalone high-precision optical attenuator (non-modular mainframe)
- Wavelength range 1200 to 1650 nm
- Attenuation range 60 dB (excluding insertion loss)
- Resolution 0.001 dB
- Wavelength-corrected attenuation when wavelength is entered
- Programmable up/down attenuation sweeps via GPIB (HPIB)
- Fiber type 9/125 μm single-mode
- Option families: 100 standard; 101 high performance; 201 high RL; 121/221 with monitor output

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	8156A
Manufacturer	Hewlett-Packard / Agilent / Keysight
Instrument Type	Programmable Optical Attenuator
Wavelength Range	1200 to 1650 nm
Attenuation Range	60 dB (excluding insertion loss)
Resolution	0.001 dB
Fiber Type	9/125 μm single-mode
Typical Insertion Loss (Opt 101 class)	approximately 2.5 dB
Return Loss (Opt 101 class)	>45 dB
Attenuation Accuracy / Linearity (Opt 101 typical)	± 0.2 dB class
Maximum Input Level	23 dBm class
Remote Interface	GPIB (HPIB)
Connector Interfaces	Two optical connector interfaces required (sold separately)
Alias	8156A

Standard Operating Conditions

Install matching connector interfaces on both ports. Enter operating wavelength so attenuation correction applies. Observe maximum input power limits for the installed option. Allow warm-up before precision linearity measurements.

Operational Notes

Confirm option code (100/101/121/201/221) on the faceplate—return loss, monitor output, and performance class differ by option. Catalog base listing 8156A covers the 60 dB / 0.001 dB / 1200–1650 nm attenuator family. Alias 8156A.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 2, 2026

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