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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 8157A OPTICAL ATTENUATOR

The HP/Agilent 8157A is a high-performance standalone single-mode variable optical attenuator for the 1200 to 1650 nm window. OEM and authorized distributor specification summaries cite 60 dB attenuation range, 0.01 dB display resolution, high return loss, and suitability for high-rate BER measurements requiring polarization-insensitive attenuation. Used for bit-error-rate testing of optical systems, loss simulation in fiber links, transceiver and line-card characterization, and power-meter linearity checks needing stable single-mode attenuation. Polarization sensitivity: polarization insensitive design Intended BER use: high data rate optical systems Wavelength window width: 450 nm (1200 to 1650) Numeric values are from Agilent/HP 8157A published specification summaries used by authorized optical equipment sources. Option codes (for example Opt 012) select connector interfaces; confirm the installed option on the unit.



MODEL

HP / Agilent 8157A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

8157A

LISTING

<https://aumictechlabs.com/products/8157a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 8157A is a programmable single-mode optical attenuator engineered for precise control of optical power levels across telecommunications and research applications. Operating from 1200 nm to 1650 nm, this instrument delivers 60 dB of attenuation with exceptional repeatability and stability. The attenuator's low insertion loss, high return loss, and minimal polarization sensitivity make it ideal for demanding fiber optic system testing where accurate

optical power management is critical. Technical Specifications Wavelength Range: 1200 nm to 1650 nm Attenuation Range: 60 dB Display Resolution: 0.01 dB Attenuation Accuracy: Typically better than ± 0.02 dB Linearity (typical): ± 0.05 dB Polarization Sensitivity: Less than 0.02 dB p-p Insertion Loss (typical): 1 dB or 2 dB Return Loss: 45 dB Control Interface: HP-IB (GPIB) Dimensions: 89 mm H $\times$ 212 mm W $\times$ 345 mm D Net Weight: 5.3 kg Key Features Programmable attenuation control via GPIB interface Single-mode fiber compatibility Superior accuracy and linearity for repeatable measurements Low polarization sensitivity ensures stable performance across signal states High return loss minimizes reflections in optical paths Typical Applications Telecommunications system characterization and testing Optical signal conditioning in research environments Fiber optic subsystem development and validation Power level calibration and verification in lightwave systems Compatibility & Integration Integrates with Agilent's Lightwave Solution Platform modules including the 8163A/B, 8164A/B, and 8166A/B. Requires Agilent optical interface connectors (81000xl Series), available separately.

Features & description

From manufacturer datasheet

Polarization behavior: polarization-insensitive design

Form factor: standalone attenuator Attenuation range including path: 60 dB class Optical connector options: orderable interface options such as Opt 012 Instrument form: benchtop standalone

Polarization sensitivity: polarization insensitive design

Typical linearity: ± 0.05 dB Intended BER use: high data rate optical systems Wavelength window width: 450 nm (1200 to 1650) Notes Numeric values are from Agilent/HP 8157A published specification summaries used by authorized optical equipment sources. Option codes (for example Opt 012) select connector interfaces; confirm the installed option on the unit.

8157A Characteristics / Specifications

PARAMETER	VALUE
Wavelength range	1200 to 1650 nm
Fiber type	single-mode 9/125 μm
Attenuation range excluding insertion loss	60 dB
Display resolution	0.01 dB
Linearity	±0.2 dB
Linearity typical	±0.05 dB
Insertion loss	2 dB
Return loss	45 dB
Instrument type	benchtop variable optical attenuator
Optical path	single-mode
Primary window	1200–1650 nm
Maximum attenuation setting class	60 dB
Resolution class	0.01 dB
Application focus	high data-rate BER measurements
Polarization behavior	polarization-insensitive design
Form factor	standalone attenuator
Attenuation range including path	60 dB class
Optical connector options	orderable interface options such as Opt 012
Instrument form	benchtop standalone
Polarization sensitivity	polarization insensitive design
Typical linearity	±0.05 dB
Intended BER use	high data rate optical systems
Wavelength window width	450 nm (1200 to 1650)
Data Rate	optical systems

PARAMETER	VALUE
Attenuation	range excluding insertion loss: 60 dB

8157A Specifications

PARAMETER	VALUE
HP Agilent 8157A Optical Attenuator	Overview
Key Features	Wide single-mode wavelength window 1200–1650 nm
Technical Specifications	Wavelength range: 1200 to 1650 nm

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 standalone single-mode variable optical attenuator for the 1200 to 1650 nm window. OEM and authorized distributor specification summaries cite 60 dB attenuation range, 0.01 dB display resolution, high return loss, and suitability for high-rate BER measurements requiring polarization-insensitive attenuation.

Applications

Used for bit-error-rate testing of optical systems, loss simulation in fiber links, transceiver and line-card characterization, and power-meter linearity checks needing stable single-mode attenuation.

Key Features

Wide single-mode wavelength window 1200–1650 nm
High attenuation range for deep fade simulation
Fine display resolution for precise level setting
High return loss and polarization-insensitive design for BER work
Benchtop instrument form (not a plug-in module)
Excellent linearity for accurate optical path leveling

Technical Specifications

Technical Specifications

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Wavelength range	1200 to 1650 nm
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PARAMETER	VALUE
Instrument form	benchtop standalone
Polarization sensitivity	polarization insensitive design
Typical linearity	±0.05 dB
Intended BER use	high data rate optical systems
Wavelength window width	450 nm (1200 to 1650)

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.