

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent Keysight 8158A Optical Attenuator

The HP/Agilent 8158A is a programmable optical attenuator for setting optical power levels in fiber test systems. Optical receiver sensitivity testing and leveled optical stimulus paths.

Application Class: optical transceiver and component test Wavelength: telecom wavelength operation class Max Input: limited by optics damage level Family Peers: 8156A 8157x modular attenuators Configuration Note: expand full attenuation range/accuracy vs wavelength from OEM datasheet before denser upload Identity rows from HP/Agilent 8158A product literature. Expand full attenuation accuracy tables from the OEM datasheet before upload.



MODEL

**Agilent / Keysight
8158A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

8158A

LISTING

<https://aumictechlabs.com/products/8158a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent Keysight 8158A is a programmable optical attenuator delivering precise control of optical power across single-mode and multimode fiber systems. It has 60 dB of attenuation range with 0.01 dB resolution and ± 0.04 dB repeatability, enabling accurate characterization of optical components, amplifiers, and high-speed transmission systems. The instrument supports wavelength-corrected attenuation through user-selectable options, ensuring measurement accuracy across infrared and visible wavelengths. Its high return loss and polarization-insensitive design make it ideal for demanding applications including bit error rate testing on fast optical systems. Technical Specifications Attenuation Range: 60 dB Resolution: 0.01 dB Repeatability: Typically ± 0.04 dB Fiber Compatibility: Single-mode and multimode optical fibers (NA up to 0.3

for multimode) Wavelength Correction Options: Option 001: 600 nm to 1200 nm Option 002: 1200 nm to 1650 nm Return Loss: Very high (specified for bit error rate test applications) Polarization Sensitivity: Insensitive to polarization state Control Interface: HP-IB/GPIB for remote automation; manual control available Key Features High accuracy and linearity across the full attenuation range Integrated shutter option for power meter zeroing and channel drop simulation Built-in calibration capabilities with reference power setting and relative measurement display Wavelength correction memory for matching attenuator response to source wavelength Typical Applications Optical amplifier testing (EDFA, Raman amplifier characterization) DWDM transmission system testing and multi-wavelength applications Bit error rate (BER) testing on high-speed optical systems Optical component and system characterization Optical power level control in telecommunication and data communication test setups Compatibility & Integration Programs via HP-IB (GPIB) interface for system integration and automated test sequences. Compatible with standard optical fiber connectors appropriate to deployment configuration.

8158A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Optical attenuator
Series Family	HP Agilent 8158A
Function	variable optical attenuation
Application Class	optical transceiver and component test
Control	local and GPIB class
Fiber	single-mode class typical
Display	attenuation setting
Form Factor	benchtop optical instrument
Use Stage	R&D manufacturing
Wavelength	telecom wavelength operation class
Resolution	fine attenuation setting class
Repeatability	high repeatability attenuator class
Shutter	path block feature class on related models
Calibration	wavelength dependent calibration class
Connectors	interchangeable optical interfaces class
Max Input	limited by optics damage level
Accessories	connector adapters
Documentation	8158A manual
Family Peers	8156A 8157x modular attenuators
Remote	automated attenuation sweeps
Units	dB attenuation
Environment	lab optical test
Warm Up	allow thermal stability
Maintenance	connector cleaning critical
Configuration Note	expand full attenuation range/accuracy vs wavelength from OEM datasheet before denser upload

PARAMETER	VALUE
Attenuation	Application Class: optical transceiver and component test

8158A Specifications

PARAMETER	VALUE
Agilent HP 8158A Optical Attenuator	Overview
Technical Specifications	Instrument Type: Optical attenuator
Notes	Identity rows from HP/Agilent 8158A product literature. Expand full attenuation accuracy tables from the OEM datasheet before upload.

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	
Specifications	
PARAMETER	VALUE
Instrument Type	Optical attenuator
Series Family	HP Agilent 8158A
Function	variable optical attenuation
Application Class	optical transceiver and component test
Control	local and GPIB class
Fiber	single-mode class typical
Display	attenuation setting
Form Factor	benchtop optical instrument
Use Stage	R&D manufacturing
Wavelength	telecom wavelength operation class
Resolution	fine attenuation setting class
Repeatability	high repeatability attenuator class
Shutter	path block feature class on related models
Calibration	wavelength dependent calibration class
Connectors	interchangeable optical interfaces class
Max Input	limited by optics damage level
Accessories	connector adapters
Documentation	8158A manual
Family Peers	8156A 8157x modular attenuators
Remote	automated attenuation sweeps
Units	dB attenuation
Environment	lab optical test
Warm Up	allow thermal stability
Maintenance	connector cleaning critical
Configuration Note	expand full attenuation range/accuracy vs wavelength from OEM datasheet before denser upload

Notes

Identity rows from HP/Agilent 8158A product literature. Expand full attenuation accuracy tables from the OEM datasheet before upload.

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 14, 2026

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