

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

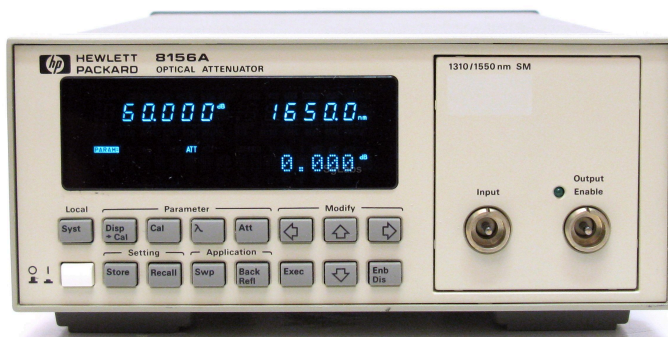
August 15, 2026

AGILENT / KEYSIGHT

Agilent Keysight 8156A-100 High Power Optical Attenuator

The Agilent/Keysight 8156A-100 is a optical attenuator for precise control of optical power in telecommunications testing and measurement. Operating across 1200 nm to 1650 nm, it delivers 60 dB attenuation range with 0.001 dB resolution and ± 0.1 dB accuracy. The instrument accommodates single-mode and 50 μ m multimode fiber via external connector interfaces, supporting both R&D and production environments. A novel single filter design eliminates dark spots and attenuation overshoots or undershoots, ensuring stable performance without ranging artifacts. Repeatability reaches ± 0.005 dB typical, while polarization sensitivity remains below 0.075 dBp-p. Insertion loss measures 4.5 dB typical with return loss exceeding 35 dB. Maximum input power is +23 dBm, with switching time ranging from 20 ms to 400 ms.

Compatibility & Integration The 8156A operates as a mainframe and requires external o

**MODEL****Agilent / Keysight
8156A-100****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****8156A-100****LISTING**<https://aumictechlabs.com/products/8156a-100-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 8156A-100 is a optical attenuator for precise control of optical power in telecommunications testing and measurement. Operating across 1200 nm to 1650 nm, it delivers 60 dB attenuation range with 0.001 dB resolution and ± 0.1 dB accuracy. The instrument

accommodates single-mode and 50 μm multimode fiber via external connector interfaces, supporting both R&D and production environments. A novel single filter design eliminates dark spots and attenuation overshoots or undershoots, ensuring stable performance without ranging artifacts. Repeatability reaches ± 0.005 dB typical, while polarization sensitivity remains below 0.075 dBp-p. Insertion loss measures 4.5 dB typical with return loss exceeding 35 dB. Maximum input power is +23 dBm, with switching time ranging from 20 ms to 400 ms.

Technical Specifications

Wavelength Range:	1200 nm to 1650 nm
Attenuation Range:	60 dB
Resolution:	0.001 dB
Attenuation Accuracy (Option 100):	± 0.1 dB typical
Attenuation Accuracy (Options 101/201):	± 0.05 dB typical
Polarization Sensitivity (Option 100):	<0.075 dBp-p typical
Polarization Sensitivity (Options 101/201):	<0.02 dBp-p typical
Repeatability:	35 dB (Option 100), >45 dB (Options 101/121), >60 dB (Options 201/221), >22 dB (Option 350)
Maximum Input Power:	+23 dBm
Switching Time:	20 ms to 400 ms
Operating Temperature:	0°C to 55°C
Storage Temperature:	-40°C to 80°C
Humidity:	<95% RH (0°C to 40°C)
Power Requirements:	100/120/220/240 Vrms ($\pm 10\%$), 45–400 Hz, 90 VA max
Dimensions:	9 mm H $\times$ 212.3 mm W $\times$ 345 mm D
Weight:	5.3 kg (net)

Key Features

- Single filter design - no dark spots, overshoots, or undershoots
- Fiber support for single-mode and 50 μm multimode (Option 350)
- HP-IB/GPIB remote control interface
- Programmable back reflector mode with external reference reflector (HP 81000BR) compatibility
- Optional 13 dB monitor tap output on select options (121, 221)
- Multiple configuration options tailoring return loss and insertion loss performance

Typical Applications

- Fiber-optic component characterization and testing
- Telecommunications system validation and debug
- Optical power level regulation in test benches
- Reflection sensitivity measurement and analysis
- Production and manufacturing test environments

Compatibility & Integration

The 8156A operates as a mainframe and requires external optical connector interfaces from the Agilent 81000FI series (FC/PC, SC/APC, ST, and other types available). Integration with HP 81000BR reflectors enables back reflector measurements. Multiple performance options - 100, 101, 121, 201, 221, and 350 - allow customization of return loss, insertion loss, monitoring capability, and fiber type support.

Features & description

From manufacturer datasheet

High Power Handling Class: high power

Low Power Handling Class: low power Module Build Class: attenuator module build Operating Temperature Class: 0 C to 40 C Storage Temperature Class: minus 40 C to 70 C Line Power: 100/120/220/240 V Humidity Class: non condensing Display: attenuation setpoint display Calibration: wavelength calibrated attenuation Duty: continuous optical test Grounding: chassis ground Cooling: convection Mass Class: benchtop instrument Notes Files map 8156A-100 8156A-101 and 8156A-121 inventory options to the 8156A optical attenuator family. Confirm option-specific power rating on the unit label. Family identity from Agilent/HP 8156A optical attenuator literature. Option suffixes 100 101 121 select power and packaging; confirm exact attenuation range and max input power on the option datasheet matching the unit.

8156A100 Characteristics / Specifications

PARAMETER	VALUE
Model	8156A with option suffix
Base Model	8156A
Instrument Type	optical attenuator
Fiber Type	single mode
Remote Interface	GPIB
Form Factor	benchtop
Manufacturer	HP Agilent Keysight
Wavelength Class	telecom 1200 to 1650 nm class
Attenuation Range Class	0 to 60 dB class
Resolution Class	0.001 dB class
Insertion Loss Class	low insertion loss attenuator
Return Loss Class	high return loss
Connector Options	FC SC diamond class adapters
High Power Handling Class	high power
Low Power Handling Class	low power
Module Build Class	attenuator module build
Operating Temperature Class	0 C to 40 C
Storage Temperature Class	minus 40 C to 70 C
Line Power	100/120/220/240 V
Humidity Class	non condensing
Display	attenuation setpoint display
Calibration	wavelength calibrated attenuation
Duty	continuous optical test
Grounding	chassis ground
Cooling	convection

PARAMETER	VALUE
Mass Class	benchtop instrument
Attenuation	Range Class: 0 to 60 dB class
Storage temperature	Class: minus 40 C to 70 C
Operating temperature	Class: 0 C to 40 C
Humidity	Class: non condensing
Return loss	Class: high return loss

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: minus 40 C to 70 C
Operating temperature	Class: 0 C to 40 C
Operating Temperature	Class: 0 C to 40 C
Humidity	Class: non condensing
Operating Temperature Class	0 C to 40 C
Storage Temperature Class	minus 40 C to 70 C
Line Power	100/120/220/240 V
Humidity Class	non condensing
Display	attenuation setpoint display
Calibration	wavelength calibrated attenuation
Duty	continuous optical test
Grounding	chassis ground
Cooling	convection
Mass Class	benchtop instrument Notes Files map 8156A-100 8156A-101 and 8156A-121 inventory options to the 8156A optical attenuator family. Confirm option-specific power rating on the unit label. Family identity from Agilent/HP 8156A optical attenuator literature. Option suffixes 100 101 121 select power and packaging; confirm exact attenuation range and max input power on the option datasheet matching the unit.

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 optical attenuator for single-mode fiber systems. OEM 8156A family literature rates calibrated attenuation across telecom wavelengths with low insertion loss and GPIB control; option codes such as 100/101/121 select power handling and connector configurations.

Applications
Optical power leveling in DWDM component test, receiver sensitivity testing, and automated optical attenuation in fiber optic manufacturing.

Key Features
Programmable optical attenuation GPIB remote control Single mode fiber path Option coded power and connector variants Benchtop optical instrument packaging

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	8156A with option suffix
Base Model	8156A
Instrument Type	optical attenuator
Fiber Type	single mode
Remote Interface	GPIB
Form Factor	benchtop
Manufacturer	HP Agilent Keysight
Wavelength Class	telecom 1200 to 1650 nm class
Attenuation Range Class	0 to 60 dB class
Resolution Class	0.001 dB class
Insertion Loss Class	low insertion loss attenuator
Return Loss Class	high return loss
Connector Options	FC SC diamond class adapters
High Power Handling Class	high power
Low Power Handling Class	low power
Module Build Class	attenuator module build
Operating Temperature Class	0 C to 40 C
Storage Temperature Class	minus 40 C to 70 C
Line Power	100/120/220/240 V
Humidity Class	non condensing
Display	attenuation setpoint display

PARAMETER	VALUE
Calibration	wavelength calibrated attenuation
Duty	continuous optical test
Grounding	chassis ground
Cooling	convection
Mass Class	benchtop instrument

Notes

Files map 8156A-100 8156A-101 and 8156A-121 inventory options to the 8156A optical attenuator family. Confirm option-specific power rating on the unit label.

Family identity from Agilent/HP 8156A optical attenuator literature. Option suffixes 100 101 121 select power and packaging; confirm exact attenuation range and max input power on the option datasheet matching the unit.

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 15, 2026

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