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Data Sheet

August 1, 2026

HP / AGILENT

HP/Agilent 83403A: Lightwave Source – 300 kHz to 3 GHz 1550 NM

HP / Agilent 83403A Lightwave Source, 300 kHz to 3 GHz, 1550 nm The HP / Agilent 83403A is a lightwave source module in the 83400-series family used with lightwave component analyzers such as the HP 8702. It provides a 1550 nm optical carrier that can be intensity-modulated by an external RF signal from 300 kHz to 3 GHz. Dealer and catalog listings specify the 83403A as a 1550 nm single-mode (9/125 μ m) source with 300 kHz to 3 GHz modulation bandwidth. The later 83403C extends modulation to 6 GHz with similar optical characteristics. The HP / Agilent 83403A is a lightwave source module in the 83400-series family used with lightwave component analyzers such as the HP 8702. It provides a 1550 nm optical carrier that can be intensity-modulated by an external RF signal from 300 kHz to 3 GHz. Dealer and catalog listings specify the 83403A as a 1550 nm single-mode (9/125 μ m) source with 300 kHz to 3 GHz modulation bandwidth. The later 83403C extends modulation to 6 GHz with similar optical characteristics. Electro-optic and lightwave component characterization, modulation response measurements, optical transmitter stimulus for O/E and E/O testing, and general 1550 nm modulated-source applications in fiber-optic R&D and production test.



MODEL

**HP / Agilent
83403A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

83403A

LISTING

<https://aumictechlabs.com/products/83403a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 83403A is a precision 1550 nm lightwave source engineered for optical signal generation across 300 kHz to 3 GHz. Operating at less than 3.0 mW output power, this Class I laser delivers stable, low-noise performance into single-mode fiber (9/125 μm core). External RF modulation capability enables amplitude modulation for dynamic optical testing. The instrument integrates readily into telecommunications test systems and optical component analyzers, supporting characterization of lasers, amplifiers, and fiber networks. Warm-up of 1 hour is recommended prior to critical measurements. Power operation requires 100/120 V or 220/240 V AC with appropriate fusing; a three-prong grounded AC cord is supplied. Standard fiber optic output connector accommodates 1550 nm SMF.

Technical Specifications
Wavelength: 1550 nm
Frequency Range: 300 kHz to 3 GHz
Optical Output Power: Less than 3.0 mW (nominal)
Laser Classification: FDA Class I / IEC Class 1
Fiber Type: Single-Mode Fiber (SMF), 9/125 μm core
Modulation: Amplitude modulation via external RF source
Power Supply: 100/120 V or 220/240 V AC, 50/60 Hz
Fusing (100/120 V): IEC 127 5 $\times$ 20 mm, 0.315 A, 250 V
Fusing (220/240 V): IEC 127 5 $\times$ 20 mm, 0.16 A, 250 V
Warm-up Time: 1 hour recommended before performance testing

Key Features
Stable optical signal with minimal noise across extended frequency range
Low output power (Class I safety compliance)
RF input for dynamic amplitude modulation
Single fiber output for SMF systems
AC-powered with dual voltage support

Typical Applications
Telecommunications optical component characterization
Fiber optic network testing
Laser and amplifier assessment
Research and development in optical communications

Compatibility & Integration
Standalone operation or test system integration
Compatible with Agilent 8702-series lightwave component analyzers
Standard fiber optic connector for 1550 nm SMF delivery
Calibration interval: 12 months

Features & description

From manufacturer datasheet

Features

- Wavelength: 1550 nm class (family 83403: 1550 +/-30 nm for C-series DFB documentation) • Modulation bandwidth: 300 kHz to 3 GHz (83403A) • Fiber: 9/125 um single-mode • External RF modulation input (SMA female) • Optical output with interchangeable connector adapters (FC/PC, ST, DIN, HMS-10, SC, and related options in the 83400 family) • Designed for use with HP 8702-series lightwave component analyzers • Factory magnitude/phase calibration data for corrected system response • Front-panel TEMP and DC POWER indicators; laser safety labeled per FDA/IEC classes for the 83400 source family

83403A Characteristics / Specifications

PARAMETER	VALUE
Model	83403A
Manufacturer	Hewlett-Packard / Agilent
Instrument Type	Lightwave source (modulated optical transmitter module)
Wavelength	1550 nm class (family 83403: 1550 +/-30 nm for C-series DFB documentation)
Modulation Frequency Range	300 kHz to 3 GHz
Optical Fiber	Single-mode 9/125 um
Laser Type	DFB class (83403 family documentation for C-series; A-series same wavelength band)
Optical Output Power	Family sources typically less than or equal to about 3 mW class output; observe laser safety labels on the unit
RF Input	SMA female; DC offset on modulation signal must not exceed 20 V DC (family guidance)
Connector Options (family)	011 HMS-10, 012 FC/PC, 013 DIN 47256, 014 ST, 015 Biconic, 017 SC Related Models 83403C: 1550 nm, 300 kHz to 6 GHz, SMF 9/125 um, DFB, optical power less than 3.0 mW (published C-series table) 83402C: 1300 nm counterpart with 300 kHz to 6 GHz modulation
Modulation bandwidth	300 kHz to 3 GHz (83403A)
Fiber	9/125 um single-mode
Bandwidth	300 kHz to 3 GHz (83403A) - Fiber: 9/125 um single-mode - External RF modulation input (SMA female) - Optical output with interchangeable connector adapters (FC/PC, ST, DIN, HMS-10, SC, and related options in the 83400 family) - Designed for use with

83403A Specifications

PARAMETER	VALUE
Key Features	- Wavelength: 1550 nm class (family 83403: 1550 +/-30 nm for C-series DFB documentation)
Technical Specifications	Model: 83403A
Related Models	83403C: 1550 nm, 300 kHz to 6 GHz, SMF 9/125 um, DFB, optical power less than 3.0 mW (published C-series table)

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.

characteristics.

Applications

Electro-optic and lightwave component characterization, modulation response measurements, optical transmitter stimulus for O/E and E/O testing, and general 1550 nm modulated-source applications in fiber-optic R&D and production test.

Key Features

- Wavelength: 1550 nm class (family 83403: 1550 +/-30 nm for C-series DFB documentation)
- Modulation bandwidth: 300 kHz to 3 GHz (83403A)
- Fiber: 9/125 um single-mode
- External RF modulation input (SMA female)
- Optical output with interchangeable connector adapters (FC/PC, ST, DIN, HMS-10, SC, and related options in the 83400 family)
- Designed for use with HP 8702-series lightwave component analyzers
- Factory magnitude/phase calibration data for corrected system response
- Front-panel TEMP and DC POWER indicators; laser safety labeled per FDA/IEC classes for the 83400 source family

Technical Specifications

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PARAMETER	VALUE
Model	83403A
Manufacturer	Hewlett-Packard / Agilent
Instrument Type	Lightwave source (modulated optical transmitter module)
Wavelength	1550 nm
Modulation Frequency Range	300 kHz to 3 GHz
Optical Fiber	Single-mode 9/125 um
Laser Type	DFB class (83403 family documentation for C-series; A-series same wavelength band)
Optical Output Power	Family sources typically less than or equal to about 3 mW class output; observe laser safety labels on the unit
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Related Models

83403C: 1550 nm, 300 kHz to 6 GHz, SMF 9/125 um, DFB, optical power less than 3.0 mW (published C-series table)

83402C: 1300 nm counterpart with 300 kHz to 6 GHz modulation

System Integration

Each source ships with unit-specific calibration coefficients/disk data describing magnitude and phase modulation response for loading into an HP 8702. Calibration data must not be interchanged between modules. Corrected response on the 8702 system uses this data to remove the source contribution from E/O measurements.

Operational Notes

Do not look into the optical output or attached fiber while the laser is on. Reduce optical power if OVER ILLUMINATION is indicated on associated receivers. Allow thermal shutdown recovery if the TEMP indicator lights. Match connector adapter type to the fiber plant in use.

Laser Safety

laser safety labeled per FDA/IEC classes for the 83400 source family Technical Specifications Model: 83403A Manufacturer: Hewlett-Packard / Agilent Instrument Type: Lightwave source (modulated optical transmitter module) Wavelength: 1550 nm Modulation Frequency Range: 300 kHz to 3 GHz Optical Fiber: Single-mode 9/125 um Laser Type: DFB class (83403 family documentation for C-series; A-series same wavelength

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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NIST-traceable calibration · SAM registered ·
30-day returns
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Generated August 1, 2026

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