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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 86143B portable optical spectrum analyzer for 50 GHz applications.

HP Agilent 86143B Optical Spectrum Analyzer The Agilent 86143B is an optical spectrum analyzer in the 8614x series configured for portable-class and system optical spectral measurements. OEM family specifications cover telecom wavelength coverage, automated markers, and GPIB control shared across the 86140/86142/86143 platform. Field and bench DWDM spectral checks, laser line measurements, and automated optical spectral acquisition.

Instrument Type: Optical spectrum analyzer The Agilent 86143B is an optical spectrum analyzer in the 8614x series configured for portable-class and system optical spectral measurements. OEM family specifications cover telecom wavelength coverage, automated markers, and GPIB control shared across the 86140/86142/86143 platform. Field and bench DWDM spectral checks, laser line measurements, and automated optical spectral acquisition.

Instrument Type: Optical spectrum analyzer Wavelength Range Class: 600 nm to 1700 nm option dependent



MODEL

**Agilent / Keysight
86143B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86143B

LISTING

<https://aumictechlabs.com/products/86143b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 86143B is a portable optical spectrum analyzer engineered for high-resolution characterization of optical signals in 50 GHz channel spacing applications. Designed

for both laboratory and field deployment, this compact instrument delivers accurate WDM system analysis, optical source testing, and passive component characterization across the 600 nm to 1700 nm wavelength range.

Technical Specifications

Wavelength Range: 600 nm to 1700 nm

Wavelength Accuracy: ± 0.01 nm (1480–1570 nm); ± 10 pm with Option 006; ± 0.01 nm (1480–1570 nm) and ± 0.025 nm (1570–1620 nm) after calibration

Wavelength Linearity: ± 0.01 nm (1525–1700 nm)

Wavelength Repeatability: ± 0.002 nm

Dynamic Range: -70 dB overall; -40 dB at ± 0.2 nm (± 25 GHz at 1550 nm); -52 dB at ± 0.4 nm (± 50 GHz at 1550 nm)

Resolution Bandwidth: 0.07, 0.1, 0.2, 0.5, 1, 2, 5, 10 nm (selectable)

Sweep Speed: Maximum 40 nm/50 ms; cycle time <180 ms (50 nm span, auto zero off)

Power Consumption: 230 W maximum

Operating Temperature: 0°C to 55°C

Storage Temperature: -40°C to 70°C

Dimensions: 163 mm H $\times$ 325 mm W $\times$ 427 mm D; 14.5 kg

Key Features

- Single DWDM channel drop measurement and time-resolved chirp (TRC) analysis
- Integrated power measurement and dispersion penalty calculation (DPC)
- Built-in applications for WDM, amplifier, source, and passive component testing
- Fast sweep capability for high-throughput characterization

Typical Applications

- DWDM system validation and channel analysis
- Optical amplifier characterization
- Broadband and narrowband optical source testing
- WDM component performance verification

Compatibility & Integration

Remote Control: IEEE-488.1, IEEE-488.2 (100%)

Data Formats: CSV ASCII for spreadsheet/word processor compatibility; CGM graphics export

Instrument Drivers: Universal PNP drivers compatible with VEE, LabVIEW, Visual Basic, and C++

Physical Interfaces: LAN, GPIB, parallel printer, external VGA, PS/2 keyboard and mouse

Optical Connectors: FC/PC standard; HMS-10 (Opt. 011), DIN (Opt. 013), ST (Opt. 014), SC (Opt. 017) available

Fiber Inputs: Single-mode standard; multi-mode 50 μm (Opt. 025) available

Built-in Sources: 1310 & 1550 nm EELED (Opt. 004) or 1550 nm EELED (Opt. 005)

Power Supply: 90–260 Vac, 44–444 Hz

Features & description

From manufacturer datasheet

Polarization Dependence Class: low PDL class

Connector Interface Class: FC PC APC options Minimum Displayable Power Class: -80 dBm class
Maximum Safe Input Class: plus 10 dBm class damage limit WDM Analysis: Supported class
Wavelength Repeatability Class: picometer to 0.01 nm class Notes From Agilent 86143B optical
spectrum analyzer family literature. Model-specific accuracy and RBW rows are on the OEM
comparison table and calibration certificate.

86143B Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Optical spectrum analyzer
Wavelength Range Class	600 nm to 1700 nm option dependent
Wavelength Accuracy Class	plus or minus 0.02 nm class family sheet
Wavelength Resolution Bandwidth Class	0.07 nm and wider class
Dynamic Range Class	greater than 60 dB class
Amplitude Accuracy Class	plus or minus 0.5 dB class
Sensitivity Class	-80 dBm to -90 dBm class
Input Fiber	Single-mode
Sweep Modes	Continuous single repeat
Marker Functions	Supported
Remote Interface	GPIB
Display	Graphical color display
Form Factor	Benchtop OSA
Operating Temperature Class	0 C to 55 C
Power Line	100 to 240 V class
Series Family	Agilent 8614x OSA
Polarization Dependence Class	low PDL class
Connector Interface Class	FC PC APC options
Minimum Displayable Power Class	-80 dBm class
Maximum Safe Input Class	plus 10 dBm class damage limit
WDM Analysis	Supported class
Wavelength Repeatability Class	picometer to 0.01 nm class
Wavelength range	Class: 600 nm to 1700 nm option dependent
Wavelength resolution	Bandwidth Class: 0.07 nm and wider class
Bandwidth	Class: 0.07 nm and wider class

PARAMETER	VALUE
Wavelength repeatability	Class: picometer to 0.01 nm class
Operating temperature	Class: 0 C to 55 C

86143B Specifications

PARAMETER	VALUE
HP Agilent 86143B Optical Spectrum Analyzer	Overview
Key Features	8614x family OSA architecture
Technical Specifications	Instrument Type: Optical spectrum analyzer

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: 0 C to 55 C
Operating Temperature	Class: 0 C to 55 C
Operating Temperature Class	0 C to 55 C
Power Line	100 to 240 V class
Series Family	Agilent 8614x OSA
Polarization Dependence Class	low PDL class
Connector Interface Class	FC PC APC options
Minimum Displayable Power Class	-80 dBm class
Maximum Safe Input Class	plus 10 dBm class damage limit
WDM Analysis	Supported class
Wavelength Repeatability Class	picometer to 0.01 nm class Notes From Agilent 86143B optical spectrum analyzer family literature. Model-specific accuracy and RBW rows are on the OEM comparison table and calibration certificate.

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 cover telecom wavelength coverage, automated markers, and GPIB control shared across the 86140/86142/86143 platform.

Applications

Field and bench DWDM spectral checks, laser line measurements, and automated optical spectral acquisition.

Key Features

8614x family OSA architecture

Telecom wavelength coverage

Automated markers and spectral analysis

GPIB remote control

Benchtop form factor

Technical Specifications

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PARAMETER	VALUE
Instrument Type	Optical spectrum analyzer
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PARAMETER	VALUE
WDM Analysis	Supported class
Wavelength Repeatability Class	picometer to 0.01 nm class

Notes

From Agilent 86143B optical spectrum analyzer family literature. Model-specific accuracy and RBW rows are on the OEM comparison table and calibration certificate.

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 ·
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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.