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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 86144B Portable Standard Optical Spectrum Analyzer with Filter Mode

The Agilent 86144B is a portable 8614xB OSA with filter-mode single-mode monochromator output. OEM 8614xB specifications list 600 to 1700 nm, 9 μ m input, 10 dB max insertion loss in filter mode at 1550 nm, and adjacent-channel rejection tables for 50/100 GHz spacing. Drop single DWDM channel in filter mode; time-resolved chirp with Option TRC; portable WDM system and component characterization. Built-in WDM/amplifier/source applications. Optional wavelength calibrator for ± 10 pm class accuracy. Adjacent Channel Rejection 50 GHz 0.1 Nm: 50 dB characteristic at 1550 nm. Adjacent Channel Rejection 100 GHz 0.1 Nm: 50 dB characteristic at 1550 nm. Line Voltage: 90 Vac to 260 Vac, 44 to 444 Hz. Numeric rows from Agilent 8614xB Technical Specifications 5980-0177E. 86144B/86146B filter-mode tables are for the 50 μ m internal path except as noted; insertion-loss specs are at room temperature after enhanced auto-align.



MODEL

**Agilent / Keysight
86144B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

86144B

LISTING

<https://aumictechlabs.com/products/86144b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 86144B is a portable optical spectrum analyzer engineered for precision wavelength measurement and spectral filtering in the 1520–1600 nm band. This handheld instrument delivers high-resolution DWDM channel isolation down to 12.5 GHz spacing and

includes a unique filter mode for extracting individual channels from dense wavelength division multiplexed signals. The analyzer combines wavelength accuracy to ± 0.01 nm with tuning repeatability of ± 0.002 nm, making it suitable for fiber optic component characterization, manufacturing verification, and laboratory research.

Technical Specifications

Wavelength Range: 600 nm to 1700 nm; primary operational range 1520–1600 nm **Span Range:** 0.2 nm to full range; zero span capable **Wavelength Accuracy (after internal calibration):** ± 0.01 nm (1480–1570 nm); ± 0.025 nm (1570–1620 nm) **Wavelength Accuracy (external reference):** ± 0.01 nm typical within ± 10 nm of reference point **Wavelength Reproducibility:** ± 0.002 nm **Tuning Repeatability:** ± 0.002 nm **Amplitude Accuracy:** ± 0.35 dB at -20 dBm (1550 nm, 20–30 °C) **Scale Fidelity (≤ 0 dBm inputs):** ± 0.05 dB characteristic (fixed reference); ± 0.07 dB characteristic (multiple reference levels) **Maximum Safe Input Power:** +20 dBm **Power Requirements:** 90–260 Vac, 44–444 Hz

Key Features

Filter mode isolates single DWDM channels with spacing as tight as 12.5 GHz External 9 μ m single-mode fiber interface for filtered light output Marker-based filter tuning adjusts filtered output wavelength dynamically Sensitivity defined as signal value exceeding $6 \times$ RMS noise Span linearity specified for 1525–1570 nm range

Typical Applications

DWDM system verification and channel characterization Fiber optic component testing and qualification Manufacturing process control for wavelength-critical devices Laboratory spectral analysis and filter response measurement

Compatibility & Integration

Instrument operates with external single-mode fiber connections. Minimum span of >25 nm required for calibration procedures.

Features & description

From manufacturer datasheet

Built-in WDM/amplifier/source applications

Optional wavelength calibrator for ± 10 pm class accuracy Technical Specifications Model: 86144B
Instrument Type: Optical spectrum analyzer Series Family: Agilent 8614xB Form Factor: Portable
Weight: 14.5 kg Dimensions: 163 mmHx 325 mmWx 427 mmDWavelength Range: 600 nm to 1700 nm
Span Range: 0.2 nm to full range and zero span Wavelength Accuracy Enhanced Cal 1570 To 1620 Nm:
 ± 0.01 nm Wavelength Accuracy Enhanced Cal 1480 To 1570 Nm: ± 0.025 nm Tuning Repeatability:
 ± 0.002 nm Sensitivity 1250 To 1610 Nm: minus 90 dBm Filter Mode Insertion Loss 1550 Nm: 10 dB max,
0.1 nm filter bandwidth and greater Filter Mode Polarization Dependence: ± 0.2 dB at 1550 nm, 0.2 nm
filter bandwidth and greater Adjacent Channel Rejection 50 Ghz 0.1 Nm: 50 dB characteristic at 1550
nm Adjacent Channel Rejection 100 Ghz 0.1 Nm: 50 dB characteristic at 1550 nm Optical Input Fiber: 9
um Monochromator Output Fiber: 9 um Photodiode Input Fiber: 50 um White Light Source Fiber: 62.5
um Maximum Safe Power Total: +30 dBm Operating Temperature: 0 C to 55 C Line Voltage: 90 Vac to
260 Vac, 44 to 444 Hz Maximum Power Consumption: 230 W Remote Interface: GPIB IEEE-488.1/488.2
Notes Numeric rows from Agilent 8614xB Technical Specifications 5980-0177E. 86144B/86146B filter-
mode tables are for the 50 um internal path except as noted; insertion-loss specs are at room
temperature after enhanced auto-align.

86144B Characteristics / Specifications

PARAMETER	VALUE
Model	86144B
Instrument Type	Optical spectrum analyzer
Series Family	Agilent 8614xB
Form Factor	Portable
Weight	14.5 kg
Dimensions	163 mmHx 325 mmWx 427 mmDWavelength Range: 600 nm to 1700 nm
Span Range	0.2 nm to full range and zero span
Wavelength Accuracy Enhanced Cal 1570 To 1620 Nm	±0.01 nm
Wavelength Accuracy Enhanced Cal 1480 To 1570 Nm	±0.025 nm
Tuning Repeatability	±0.002 nm
Sensitivity 1250 To 1610 Nm	minus 90 dBm
Filter Mode Insertion Loss 1550 Nm	10 dB max, 0.1 nm filter bandwidth and greater
Filter Mode Polarization Dependence	±0.2 dB at 1550 nm, 0.2 nm filter bandwidth and greater
Adjacent Channel Rejection 50 Ghz 0.1 Nm	50 dB characteristic at 1550 nm
Adjacent Channel Rejection 100 Ghz 0.1 Nm	50 dB characteristic at 1550 nm
Optical Input Fiber	9 um
Monochromator Output Fiber	9 um
Photodiode Input Fiber	50 um
White Light Source Fiber	62.5 um
Maximum Safe Power Total	+30 dBm
Operating Temperature	0 C to 55 C
Line Voltage	90 Vac to 260 Vac, 44 to 444 Hz

PARAMETER	VALUE
Maximum Power Consumption	230 W
Remote Interface	GPIB IEEE-488.1/488.2
Wavelength range	600 nm to 1700 nm
Bandwidth	and greater

86144B Specifications

PARAMETER	VALUE
Agilent 86144B Optical Spectrum Analyzer	Overview
Filter mode to drop one DWDM channel	Portable 14.5 kg package
Technical Specifications	Model: 86144B

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 55 C
Operating Temperature	0 C to 55 C
Line Voltage	90 Vac to 260 Vac, 44 to 444 Hz
Maximum Power Consumption	230 W
Remote Interface	GPIB IEEE-488.1/488.2 Notes Numeric rows from Agilent 8614xB Technical Specifications 5980-0177E. 86144B/86146B filter-mode tables are for the 50 um internal path except as noted; insertion-loss specs are at room temperature after enhanced auto-align.

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 list 600 to 1700 nm, 9 um input, 10 dB max insertion loss in filter mode at 1550 nm, and adjacent-channel rejection tables for 50/100 GHz spacing.

Applications

Dropasingle DWDM channel in filter mode; time-resolved chirp with Option TRC; portable WDM system and component characterization.

Key Features

Filter mode to drop one DWDM channel

Portable 14.5 kg package

Single-mode monochromator output

Built-in WDM/amplifier/source applications

Optional wavelength calibrator for ±10 pm class accuracy

Technical Specifications

Technical Specifications

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Model	86144B
Instrument Type	Optical spectrum analyzer
Series Family	Agilent 8614xB
Form Factor	Portable
Weight	14.5 kg
Dimensions	163 mm H x 325 mm W x 427 mm D
Wavelength Range	600 nm to 1700 nm
Span Range	0.2 nm to full range and zero span

Technical Specifications

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Instrument Type	Optical spectrum analyzer
Series Family	Agilent 8614xB
Form Factor	Portable
Weight	14.5 kg
Dimensions	163 mmHx 325 mmWx 427 mmDWavelength Range: 600 nm to 1700 nm
Span Range	0.2 nm to full range and zero span

Wavelength Accuracy Enhanced Cal 1570 To 1620 Nm: ±0.01 nm

Wavelength Accuracy Enhanced Cal 1480 To 1570 Nm: ±0.025 nm

Specifications

PARAMETER	VALUE
Tuning Repeatability	±0.002 nm
Sensitivity 1250 To 1610 Nm	minus 90 dBm
Filter Mode Insertion Loss 1550 Nm	10 dB max, 0.1 nm filter bandwidth and greater
Filter Mode Polarization Dependence	±0.2 dB at 1550 nm, 0.2 nm filter bandwidth and greater
Adjacent Channel Rejection 50 Ghz 0.1 Nm	50 dB characteristic at 1550 nm
Adjacent Channel Rejection 100 Ghz 0.1 Nm	50 dB characteristic at 1550 nm
Optical Input Fiber	9 um
Monochromator Output Fiber	9 um
Photodiode Input Fiber	50 um
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Notes

Numeric rows from Agilent 8614xB Technical Specifications 5980-0177E. 86144B/86146B filter-mode tables are for the 50 um internal path except as noted; insertion-loss specs are at room temperature after enhanced auto-align.

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

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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.