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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8167B, Lightwave Test System

Keysight 8167B Tunable Laser Source 1255 nm to 1365 nm The Agilent/HP 8167B isaFabry-Perot InGaAsP tunable laser source covering 1255 nm to 1365 nm for lightwave component and system test. OEM TLS specifications for the 8167/8168 family list 0.001 nm wavelength resolution, sidemode suppression, and power stability for CW and modulated optical measurements. O-band passive component characterization, DWDM filter and isolator test near 1310 nm, and automated wavelength sweeps under HP-IB control. O-band 1255 nm to 1365 nm continuous tuning The Agilent/HP 8167B isaFabry-Perot InGaAsP tunable laser source covering 1255 nm to 1365 nm for lightwave component and system test. OEM TLS specifications for the 8167/8168 family list 0.001 nm wavelength resolution, sidemode suppression, and power stability for CW and modulated optical measurements. O-band passive component characterization, DWDM filter and isolator test near 1310 nm, and automated wavelength sweeps under HP-IB control. O-band 1255 nm to 1365 nm continuous tuning Built in coherence control for effective linewidth shaping

**MODEL****Agilent / Keysight
8167B****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****8167B****LISTING**<https://aumictechlabs.com/products/8167b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8167B is a tunable optical source engineered for precision characterization of optical components and systems across research, development, and manufacturing environments. Delivering stable, accurate optical signals from 1200 nm to 1650 nm with 1 pm

wavelength resolution and ± 20 pm accuracy, the 8167B provides continuous-wave output up to +20 dBm with exceptional power stability of ± 0.01 dB over 1 hour. The benchtop instrument features a 7-inch color LCD display, front-panel controls, and full programmability via GPIB, LAN, USB, and RS-232 interfaces. Remote operation and SCPI command support enable integration into automated test systems. Operating from 0 °C to +45 °C in environments up to 2000 m altitude, the 8167B maintains performance under demanding laboratory and production conditions. Compact at 430 × 220 × 485 mm and weighing 10.0 kg, it integrates with Keysight optical instruments including the 8163B, 8164B, and 8166B mainframe systems.

Technical Specifications

Wavelength range: 1200 nm to 1650 nm Output power: Up to +20 dBm (configuration and wavelength dependent) Wavelength resolution: 1 pm Wavelength accuracy: ± 20 pm Power stability: ± 0.01 dB over 1 hour (typical) Output mode: Continuous wave (CW) Input voltage: AC 100–240 V $\pm 10\%$, 50/60 Hz Power consumption: 450 VA maximum Operating temperature: 0 °C to +45 °C Storage temperature: –40 °C to +70 °C Humidity: < 95% RH from 0 °C to 55 °C Maximum operation altitude: 2000 m

Key Features

- High-resolution wavelength tuning across extended range
- Precision optical signal generation for component and system testing
- Multiple interface options: GPIB, LAN, USB, RS-232
- 7-inch high-resolution color LCD display
- Programmable via SCPI commands for test automation
- Compact benchtop form factor (10.0 kg)
- Wide operating temperature and altitude specifications

Typical Applications

- Optical component characterization and validation
- Lightwave system development and troubleshooting
- Manufacturing test and quality assurance
- Research and laboratory optical measurements

Compatibility & Integration

Designed for integration with Keysight optical instruments including the 8163B, 8164B, and 8166B mainframe systems within the Agilent/Keysight Lightwave series.

Features & description

From manufacturer datasheet

O-band 1255 nm to 1365 nm continuous tuning

0.001 nm wavelength resolution class Built in coherence control for effective linewidth shaping Optional attenuator path for low power settings HP-IB remote control with analog power monitor output

Technical Specifications Model: 8167B Instrument Type: tunable laser source Laser Type: Fabry Perot InGaAsP Wavelength Range: 1255 nm to 1365 nm Absolute Wavelength Accuracy Typical: plus or minus 0.1 nm Relative Wavelength Accuracy Midband: plus or minus 0.035 nm from 1310 nm to 1350 nm Relative Wavelength Accuracy Full Band: plus or minus 0.050 nm from 1255 nm to 1365 nm Wavelength Resolution: 0.001 nm corresponding to 170 MHz at 1300 nm Wavelength Stability One Hour: less than plus or minus 100 MHz typical at constant temperature Wavelength Repeatability Midband: plus or minus 0.035 nm from 1310 nm to 1350 nm Sidemode Suppression Ratio Typical: greater than 40 dB from 1260 nm to 1360 nm at minus 3 dBm Source Spontaneous Emission Midband: less than minus 45 dB per 0.1 nm from 1310 nm to 1350 nm Relative Intensity Noise Typical: less than minus 145 dB per Hz Linewidth Coherence Control Off Typical: 100 kHz Effective Linewidth Coherence Control On Typical: 10 MHz to 500 MHz from 1260 nm to 1360 nm

8167B Characteristics / Specifications

PARAMETER	VALUE
Model	8167B
Instrument Type	tunable laser source
Laser Type	Fabry Perot InGaAsP
Wavelength Range	1255 nm to 1365 nm
Absolute Wavelength Accuracy Typical	plus or minus 0.1 nm
Relative Wavelength Accuracy Midband	plus or minus 0.035 nm from 1310 nm to 1350 nm
Relative Wavelength Accuracy Full Band	plus or minus 0.050 nm from 1255 nm to 1365 nm
Wavelength Resolution	0.001 nm corresponding to 170 MHz at 1300 nm
Wavelength Stability One Hour	less than plus or minus 100 MHz typical at constant temperature
Wavelength Repeatability Midband	plus or minus 0.035 nm from 1310 nm to 1350 nm
Sidemode Suppression Ratio Typical	greater than 40 dB from 1260 nm to 1360 nm at minus 3 dBm
Source Spontaneous Emission Midband	less than minus 45 dB per 0.1 nm from 1310 nm to 1350 nm
Relative Intensity Noise Typical	less than minus 145 dB per Hz
Linewidth Coherence Control Off Typical	100 kHz
Effective Linewidth Coherence Control On Typical	10 MHz to 500 MHz from 1260 nm to 1360 nm
Minimum Output Power	minus 7 dBm
Peak Output Power Typical Midband	greater than plus 4 dBm from 1310 nm to 1350 nm
Output Power Midband Guaranteed	greater than plus 3 dBm from 1310 nm to 1350 nm
Output Power Broad Band Guaranteed	greater than minus 3 dBm from 1260 nm to 1360 nm
Power Linearity	plus or minus 0.1 dB
Power Stability One Hour	plus or minus 0.03 dB typical plus or minus 0.01 dB
Power Flatness Versus Wavelength	plus or minus 0.1 dB
Tuning Speed Typical 1 nm Step	200 ms
Tuning Speed Typical 10 nm Step	300 ms
Tuning Speed Typical 100 nm Step	2 s

PARAMETER	VALUE
Output Isolation Typical	50 dB
Return Loss Typical	60 dB except option 021
Internal Modulation Frequency	250 Hz to 300 kHz squarewave
External Modulation Bandwidth Typical	200 kHz to 20 MHz at 3 dB optical
Warm Up Time Typical	less than 1 hour
AC Line	100 to 240 Vrms plus or minus 10 percent 260 VA maximum
Dimensions	145 mmHby 426 mmWby 545 mmD Notes Numeric rows from HP/Agilent 8167 and 8168 Tunable Laser Source specifications table for model 8167B. Option 003 attenuator and connector options reduce maximum power per OEM footnotes.
Bandwidth	Typical: 200 kHz to 20 MHz at 3 dB optical
Absolute wavelength accuracy	Typical: plus or minus 0.1 nm
Relative wavelength accuracy	Midband: plus or minus 0.035 nm from 1310 nm to 1350 nm
Wavelength repeatability	Midband: plus or minus 0.035 nm from 1310 nm to 1350 nm
Wavelength stability	One Hour: less than plus or minus 100 MHz typical at constant temperature
Linewidth	Coherence Control Off Typical: 100 kHz
Effective linewidth	Coherence Control On Typical: 10 MHz to 500 MHz from 1260 nm to 1360 nm
Power stability	One Hour: plus or minus 0.03 dB typical plus or minus 0.01 dB
Relative intensity noise	Typical: less than minus 145 dB per Hz
Output isolation	Typical: 50 dB
Return loss	Typical: 60 dB except option 021

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 for the 8167/8168 family list 0.001 nm wavelength resolution, sidemode suppression, and power stability for CW and modulated optical measurements.	
Applications	
0-band passive component characterization, DWDM filter and isolator test near 1310 nm, and automated wavelength sweeps under HP-IB control.	
Key Features	
0-band 1255 nm to 1365 nm continuous tuning	
0.001 nm wavelength resolution class	
Built in coherence control for effective linewidth shaping	
Optional attenuator path for low power settings	
HP-IB remote control with analog power monitor output	
Technical Specifications	
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PARAMETER	VALUE
Model	8167B
Instrument Type	tunable laser source
Laser Type	Fabry Perot InGaAsP
Wavelength Range	1255 nm to 1365 nm
Absolute Wavelength Accuracy Typical	plus or minus 0.1 nm
Relative Wavelength Accuracy Midband	plus or minus 0.035 nm from 1310 nm to 1350 nm
Relative Wavelength Accuracy Full Band	plus or minus 0.050 nm from 1255 nm to 1365 nm
Wavelength Resolution	0.001 nm corresponding to 170 MHz at 1300 nm
Wavelength Stability One Hour	less than plus or minus 100 MHz typical at constant temperature
Wavelength Repeatability Midband	plus or minus 0.035 nm from 1310 nm to 1350 nm
Sidemode Suppression Ratio Typical	greater than 40 dB from 1260 nm to 1360 nm at minus 3 dBm
Source Spontaneous Emission Midband	less than minus 45 dB per 0.1 nm from 1310 nm to 1350 nm
Relative Intensity Noise Typical	less than minus 145 dB per Hz
Linewidth Coherence Control Off Typical	100 kHz
Effective Linewidth Coherence Control On Typical	10 MHz to 500 MHz from 1260 nm to 1360 nm
Minimum Output Power	minus 7 dBm
Peak Output Power Typical Midband	greater than plus 4 dBm from 1310 nm to 1350 nm
Output Power Midband Guaranteed	greater than plus 3 dBm from 1310 nm to 1350 nm
Output Power Broad Band Guaranteed	greater than minus 3 dBm from 1260 nm to 1360 nm

PARAMETER	VALUE
Power Linearity	plus or minus 0.1 dB
Power Stability One Hour	plus or minus 0.03 dB typical plus or minus 0.01 dB
Power Flatness Versus Wavelength	plus or minus 0.1 dB
Tuning Speed Typical 1 nm Step	200 ms
Tuning Speed Typical 10 nm Step	300 ms
Tuning Speed Typical 100 nm Step	2 s
Output Isolation Typical	50 dB
Return Loss Typical	60 dB except option 021
Internal Modulation Frequency	250 Hz to 300 kHz squarewave
External Modulation Bandwidth Typical	200 kHz to 20 MHz at 3 dB optical
Warm Up Time Typical	less than 1 hour
AC Line	100 to 240 Vrms plus or minus 10 percent 260 VA maximum
Dimensions	145 mmHby 426 mmWby 545 mmD Notes

Numeric rows from HP/Agilent 8167 and 8168 Tunable Laser Source specifications table for model 8167B. Option 003 attenuator and connector options reduce maximum power per OEM footnotes.

Ordering Information

OPTION	DESCRIPTION
Option 021	Internal Modulation Frequency: 250 Hz to 300 kHz squarewave
Option 003	attenuator and connector options reduce maximum power per OEM footnotes.

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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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.