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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 81950A tunable laser source

Agilent Keysight 81950A Compact Tunable System Source The Keysight 81950A is a compact step-tunable system-loading source for 8163/8164/8166 mainframes. OEM data sheet 5988-8518EN lists C-band Option 310 from 1527.60 to 1570.01 nm and L-band Option 301 from 1570.01 to 1611.76 nm, ± 22 pm absolute wavelength accuracy, $\geq +13.5$ dBm (typical $\geq +15$ dBm) on Option 310, and linewidth less than 100 kHz typical. Realistic WDM system loading on ITU grids; coherent mixing and complex-modulation experiments; drop-in equivalent to N7711A in 816x mainframes. The Keysight 81950A is a compact step-tunable system-loading source for 8163/8164/8166 mainframes. OEM data sheet 5988-8518EN lists C-band Option 310 from 1527.60 to 1570.01 nm and L-band Option 301 from 1570.01 to 1611.76 nm, ± 22 pm absolute wavelength accuracy, $\geq +13.5$ dBm (typical $\geq +15$ dBm) on Option 310, and linewidth less than 100 kHz typical. Realistic WDM system loading on ITU grids; coherent mixing and complex-modulation experiments; drop-in equivalent to N7711A in 816x mainframes. Grid spacing 100/50/25 GHz or arbitrary grid

**MODEL****Agilent / Keysight
81950A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****81950A****LISTING**<https://aumictechlabs.com/products/81950a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 81950A is a compact, step-tunable laser source engineered for precise wavelength control across C-band and L-band regions. It delivers stable optical output with exceptional spectral purity, making it ideal for DWDM component testing, optical amplifier

characterization, and network loading simulation. The instrument combines fine-tuning capability with grid-defined wavelength setting to support both standard ITU-T spacing and custom channel configurations. Technical Specifications Wavelength and Power Wavelength range options: 1527.60 nm to 1570.01 nm (C-band, Option 310); 1570.01 nm to 1611.76 nm (L-band, Option 301); 1527.6 nm to 1565.50 nm (C-band, Option 210); L-band coverage (Option 101) Maximum output power: ≥ 15 dBm (Option 310), ≥ 13 dBm (Option 301), 15 dBm (Option 210) Power adjustment range: 6 dB Power stability: ± 0.03 dB over 1 hour and 24 hours Power flatness: ± 0.2 dB across full wavelength range Power repeatability: ± 0.08 dB Wavelength Accuracy and Tuning Absolute wavelength accuracy: ± 22 pm Relative wavelength accuracy: ± 12 pm Wavelength repeatability: ± 2.5 pm Wavelength stability (24 hours): ± 2.5 pm Frequency resolution: 100 MHz (0.8 pm at 1550 nm) Fine tuning range: ± 6 GHz Fine tuning resolution: 1 MHz Tuning time: < 30 seconds including power stabilization Grid support: ITU-T standard spacing (50 GHz, 100 GHz, 25 GHz) and arbitrary grids Optical Output Linewidth: < 100 kHz Side-mode suppression ratio: 50 dB Signal to source spontaneous emission ratio: 50 dB/nm, 60 dB/0.1 nm Relative intensity noise: -145 dB/Hz (10 MHz to 40 GHz) Output fiber: Panda polarization maintaining Connector options: Angled and straight contact Physical and Electrical Dimensions: 75 mm H $\times$ 32 mm W $\times$ 335 mm D Weight: 0.45 kg BNC input connector: ± 5 V maximum Storage/shipping temperature: -40°C to $+70^{\circ}\text{C}$ Compatibility & Integration The 81950A installs in 816x lightwave mainframes and operates within Keysight 8163A/B, 8164A/B, and 8166A/B lightwave measurement systems.

81950A Characteristics / Specifications

PARAMETER	VALUE
Model	81950A
Instrument Type	Compact tunable system loading source
Series Family	Keysight 819xxA compact TLS
Wavelength Range Option 3	1527.60 nm to 1570.01 nm (196.25 THz to 190.95 THz)
Frequency Resolution	100 MHz, 0.8 pm at 1550 nm
Fine Tuning Range Typical	±6 GHz typical
Fine Tuning Resolution Typical	1 MHz typical
Absolute Wavelength Accuracy	±22 pm (±2.5 GHz)
Relative Wavelength Accuracy	±12 pm (±1.5 GHz)
Wavelength Repeatability Typical	±2.5 pm typical (±0.3 GHz)
Wavelength Stability Typical 24 Hours	±2.5 pm typical, 24 hours at constant temperature ±0.5 K
Tuning Time Typical	less than 30 s typical including power stabilization
Maximum Output Power Option 3	≥+13.5 dBm (typical ≥+15 dBm)
Power Stability Typical	±0.03 dB typical over 1 hour and over 24 hours
Power Flatness Typical	±0.2 dB typical, full wavelength range
Power Repeatability Typical	±0.08 dB typical
Linewidth Typical Sbs Off	less than 100 kHz typical
Smsr Typical	50 dB typical
Signal To Sse Ratio Typical	50 dB/1 nm typical; 60 dB/0.1 nm typical
Rin Typical	minus 145 dB/Hz typical, 10 MHz to 40 GHz
Power Attenuation Range	8 dB
Power Setting Resolution	0.1 dB
Residual Output Power Shutter Closed	≤ minus 45 dBm
Module Dimensions	75 mm x 32 mm x 335 mm
Module Weight	0.45 kg

PARAMETER	VALUE
Host Mainframes	8163A/B, 8164A/B, 8166A/B
Wavelength range	Option 310: 1527.60 nm to 1570.01 nm (196.25 THz to 190.95 THz)
Wavelength repeatability	Typical: ± 2.5 pm typical (± 0.3 GHz)
Wavelength stability	Typical 24 Hours: ± 2.5 pm typical, 24 hours at constant temperature ± 0.5 K
Linewidth	Typical Sbs Off: less than 100 kHz typical
Maximum output power	Option 310: $\geq +13.5$ dBm (typical $\geq +15$ dBm)
Attenuation	Range: 8 dB
Power repeatability	Typical: ± 0.08 dB typical
Power stability	Typical: ± 0.03 dB typical over 1 hour and over 24 hours

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	
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PARAMETER	VALUE
Model	81950A
Instrument Type	Compact tunable system loading source
Series Family	Keysight 819xxA compact TLS
Wavelength Range Option 310	1527.60 nm to 1570.01 nm (196.25 THz to 190.95 THz)
Wavelength Range Option 301	1570.01 nm to 1611.76 nm (190.95 THz to 186.00 THz)
Frequency Resolution	100 MHz, 0.8 pm at 1550 nm
Fine Tuning Range Typical	±6 GHz typical
Fine Tuning Resolution Typical	1 MHz typical
Absolute Wavelength Accuracy	±22 pm (±2.5 GHz)
Relative Wavelength Accuracy	±12 pm (±1.5 GHz)
Wavelength Repeatability Typical	±2.5 pm typical (±0.3 GHz)
Wavelength Stability Typical 24 Hours	±2.5 pm typical, 24 hours at constant temperature ±0.5 K
Tuning Time Typical	less than 30 s typical including power stabilization
Maximum Output Power Option 310	≥+13.5 dBm (typical ≥+15 dBm)
Maximum Output Power Option 301	≥+11.5 dBm (typical ≥+13 dBm)
Power Stability Typical	±0.03 dB typical over 1 hour and over 24 hours
Power Flatness Typical	±0.2 dB typical, full wavelength range
Power Repeatability Typical	±0.08 dB typical
Linewidth Typical Sbs Off	less than 100 kHz typical
Smsr Typical	50 dB typical
Signal To Sse Ratio Typical	50 dB/1 nm typical; 60 dB/0.1 nm typical
Rin Typical	minus 145 dB/Hz typical, 10 MHz to 40 GHz
Power Attenuation Range	8 dB
Power Setting Resolution	0.1 dB
Residual Output Power Shutter Closed	≤ minus 45 dBm
Module Dimensions	75 mm x 32 mm x 335 mm

PARAMETER	VALUE
Module Weight	0.45 kg
Host Mainframes	8163A/B, 8164A/B, 8166A/B

Notes

Numeric rows from Keysight 81950A section of compact TLS data sheet 5988-8518EN. Specifications apply to wavelengths on the 50 GHz ITU-T grid after warm-up. Same optical feature set as N7711A.

Ordering Information

OPTION	DESCRIPTION
Option 310	from 1527.60 to 1570.01 nm and L-band Option 301 from 1570.01 to 1611.76 nm, ± 22 pm absolute wavelength accuracy, $\geq +13.5$ dBm (typical $\geq +15$ dBm) on Option 310, a

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