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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent / Keysight 81980A 1465-1575nm Tunable Laser Source

Agilent Keysight 81980A Compact Tunable Laser Source The Keysight 81980A is a compact single-slot tunable laser module for 8163/8164/8166 lightwave mainframes. OEM compact TLS data sheet 5988-8518EN lists 1465 nm to 1575 nm, 1 pm wavelength resolution, ± 20 pm absolute wavelength accuracy, 50 nm/s maximum sweep speed, and $\geq +13$ dBm output in the high-power band. S- and C-band device characterization, EDFA stimulus, and swept IL of WDM components. Built-in wavelength meter with closed-loop control and sweep logging The Keysight 81980A is a compact single-slot tunable laser module for 8163/8164/8166 lightwave mainframes. OEM compact TLS data sheet 5988-8518EN lists 1465 nm to 1575 nm, 1 pm wavelength resolution, ± 20 pm absolute wavelength accuracy, 50 nm/s maximum sweep speed, and $\geq +13$ dBm output in the high-power band. S- and C-band device characterization, EDFA stimulus, and swept IL of WDM components. Built-in wavelength meter with closed-loop control and sweep logging Mode-hop-free tunability across the full module range



MODEL

**Agilent / Keysight
81980A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81980A

LISTING

<https://aumictechlabs.com/products/81980a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 81980A is a tunable laser source covering the S+C-band (1465–1575 nm) for precision optical component and system characterization. This compact, single-slot plug-in

module integrates into Keysight 8163A/B, 8164A/B, and 8166A/B mainframes, delivering mode-hop free tunability with exceptional wavelength accuracy and flat output power across its 110 nm tuning range. Built-in wavemeter feedback and coherence control enable stable operation in demanding single-channel and DWDM test environments.

Technical Specifications

Wavelength Range: 1465 nm to 1575 nm (110 nm total tuning span) **Output Power:** +13 dBm maximum; mode-hop free at $\geq +10$ dBm flat output power **Wavelength Accuracy & Stability:** Absolute accuracy: ± 20 pm (± 5 pm typical) Relative accuracy: ± 10 pm (± 5 pm typical) **Resolution:** 1 pm / 125 MHz at 1550 nm **Repeatability:** ± 2.5 pm (± 0.3 GHz) typical **24-hour stability:** ± 2.5 pm (± 0.3 GHz) typical

Linewidth & Coherence: Narrow linewidth: 50 MHz at maximum constant output power **Built-in SBS and interference suppression** **Power Control:** Stability (1 hour): ± 0.03 dB typical Stability (24 hours): ± 0.03 dB typical **Flatness (full range):** ± 0.2 dB typical **Repeatability:** ± 0.08 dB typical

Signal Quality: Side-mode suppression ratio: ≥ 50 dB Signal-to-ASE ratio: ≥ 45 dB/nm (full range, +10 dBm); ≥ 50 dB/nm (1525–1620 nm, +12 dBm) Signal-to-total ASE: ≥ 25 dB (full range); ≥ 30 dB (1525–1620 nm) **Relative intensity noise:** -145 dB/Hz (0.1–6 GHz) typical

Tuning Performance: Mode-hop free across entire range; maximum sweep speed 50 nm/s; continuous dynamic wavelength logging

Key Features Closed-loop wavemeter feedback ensures ± 5 pm absolute accuracy (typical) Flat output power response across 110 nm span Stimulated Brillouin scattering suppression prevents reflection-induced anomalies High-resolution 1 pm wavelength stepping Exceptional long-term stability (± 2.5 pm over 24 hours)

Typical Applications Optical amplifier characterization (gain, noise figure) Passive component testing (filters, multiplexers, isolators) DWDM system validation Nonlinear fiber effects investigation Component wavelength-dependent performance mapping

Compatibility & Integration Plug-in module for Keysight 8163A/B, 8164A/B, and 8166A/B optical test mainframes, enabling flexible single-slot configuration for modular test benches.

Features & description

From manufacturer datasheet

Built-in wavelength meter with closed-loop control and sweep logging

Mode-hop-free tunability across the full module range Coherence control and SBS suppression for high launch power Internal modulation for EDFA TDE and transient tests Dynamic power control for sweep-to-sweep reproducibility Technical Specifications Model: 81980A Instrument Type: Compact tunable laser source module Series Family: Keysight 819xxA compact TLS Wavelength Range: 1465 nm to 1575 nm Wavelength Resolution: 1 pm, 125 MHz at 1550 nm Mode Hop Free Tunability: full wavelength range Maximum Sweep Speed: 50 nm/s Absolute Wavelength Accuracy: ± 20 pm (typical ± 5 pm at day of calibration) Relative Wavelength Accuracy: ± 10 pm (typical ± 5 pm) Wavelength Repeatability: ± 2.5 pm (typical ± 1 pm) Wavelength Stability Typical 24 Hours: ± 2.5 pm typical over 24 hours at constant temperature ± 0.5 K Linewidth Typical Coherence Off: 100 kHz typical Effective Linewidth Coherence On Typical: greater than 50 MHz typical, 1525 nm to 1575 nm Maximum Output Power Peak Typical: $\geq +14.5$ dBm peak typical Maximum Output Power High Band: $\geq +13$ dBm, 1525 nm to 1575 nm Maximum Output Power Full Range: $\geq +10$ dBm, 1465 nm to 1575 nm Power Linearity: ± 0.1 dB Power Stability One Hour: ± 0.01 dB over 1 hour (typical ± 0.0075 dB over 1 hour; typical ± 0.03 dB over 24 hours)

81980A Characteristics / Specifications

PARAMETER	VALUE
Model	81980A
Instrument Type	Compact tunable laser source module
Series Family	Keysight 819xxA compact TLS
Wavelength Range	1465 nm to 1575 nm
Wavelength Resolution	1 pm, 125 MHz at 1550 nm
Mode Hop Free Tunability	full wavelength range
Maximum Sweep Speed	50 nm/s
Absolute Wavelength Accuracy	±20 pm (typical ±5 pm at day of calibration)
Relative Wavelength Accuracy	±10 pm (typical ±5 pm)
Wavelength Repeatability	±2.5 pm (typical ±1 pm)
Wavelength Stability Typical 24 Hours	±2.5 pm typical over 24 hours at constant temperature ±0.5 K
Linewidth Typical Coherence Off	100 kHz typical
Effective Linewidth Coherence On Typical	greater than 50 MHz typical, 1525 nm to 1575 nm
Maximum Output Power Peak Typical	≥+14.5 dBm peak typical
Maximum Output Power High Band	≥+13 dBm, 1525 nm to 1575 nm
Maximum Output Power Full Range	≥+10 dBm, 1465 nm to 1575 nm
Power Linearity	±0.1 dB
Power Stability One Hour	±0.01 dB over 1 hour (typical ±0.0075 dB over 1 hour; typical ±0.03 dB over 24 hours)
Power Flatness High Band	±0.2 dB, typical ±0.1 dB, 1525 nm to 1575 nm
Power Flatness Full Range	±0.3 dB, typical ±0.15 dB, full range
Power Repeatability Typical	±0.01 dB typical
Smsr Typical	≥50 dB typical
Signal To Sse Ratio	≥45 dB/nm; ≥48 dB/nm in high-power band
Rin Typical	minus 145 dB/Hz typical, 0.1 GHz to 6 GHz

PARAMETER	VALUE
Host Mainframes	8163A/B, 8164A/B, 8166A/B single-slot modules
Fiber Type	Panda PMF, TE in slow axis aligned to connector key
Module Dimensions	75 mm x 32 mm x 335 mm
Module Weight	0.95 kg
Recommended Recalibration Period	2 years
Operating Temperature	+10 C to +35 C
Storage Temperature	minus 40 C to +70 C
Internal Digital Modulation	200 Hz to 1 MHz, 50% duty cycle, extinction ratio greater than 30 dB
Wavelength stability	Typical 24 Hours: ± 2.5 pm typical over 24 hours at constant temperature ± 0.5 K
Linewidth	Typical Coherence Off: 100 kHz typical
Effective linewidth	Coherence On Typical: greater than 50 MHz typical, 1525 nm to 1575 nm
Maximum output power	Peak Typical: $\geq +14.5$ dBm peak typical
Power repeatability	Typical: ± 0.01 dB typical
Power stability	One Hour: ± 0.01 dB over 1 hour (typical ± 0.0075 dB over 1 hour; typical ± 0.03 dB over 24 hours)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 C to +70 C
Operating temperature	+10 C to +35 C
Operating Temperature	+10 C to +35 C
Internal Digital Modulation	200 Hz to 1 MHz, 50% duty cycle, extinction ratio greater than 30 dB Notes Numeric rows from Keysight 81980A, 81960A, 81940A, 81989A, 81949A, and 81950A Compact Tunable Laser Sources data sheet 5988-8518EN. Specs verified at the end of a 2 m patchcord after warm-up.
Internal digital modulation	200 Hz to 1 MHz, 50% duty cycle, extinction ratio greater than 30 dB

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	81980A
Instrument Type	Compact tunable laser source module
Series Family	Keysight 819xxA compact TLS
Wavelength Range	1465 nm to 1575 nm
Wavelength Resolution	1 pm, 125 MHz at 1550 nm
Mode Hop Free Tunability	full wavelength range
Maximum Sweep Speed	50 nm/s
Absolute Wavelength Accuracy	±20 pm (typical ±5 pm at day of calibration)
Relative Wavelength Accuracy	±10 pm (typical ±5 pm)
Wavelength Repeatability	±2.5 pm (typical ±1 pm)
Wavelength Stability Typical 24 Hours	±2.5 pm typical over 24 hours at constant temperature ±0.5 K
Linewidth Typical Coherence Off	100 kHz typical
Effective Linewidth Coherence On Typical	greater than 50 MHz typical, 1525 nm to 1575 nm
Maximum Output Power Peak Typical	≥+14.5 dBm peak typical
Maximum Output Power High Band	≥+13 dBm, 1525 nm to 1575 nm
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Power Linearity	±0.1 dB
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Power Flatness High Band	±0.2 dB, typical ±0.1 dB, 1525 nm to 1575 nm
Power Flatness Full Range	±0.3 dB, typical ±0.15 dB, full range
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Smsr Typical	≥50 dB typical
Signal To Sse Ratio	≥45 dB/nm; ≥48 dB/nm in high-power band
Rin Typical	minus 145 dB/Hz typical, 0.1 GHz to 6 GHz
Host Mainframes	8163A/B, 8164A/B, 8166A/B single-slot modules

PARAMETER	VALUE
Fiber Type	Panda PMF, TE in slow axis aligned to connector key
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Notes
Numeric rows from Keysight 81980A, 81960A, 81940A, 81989A, 81949A, and 81950A Compact Tunable Laser Sources data sheet 5988-8518EN. Specs verified at the end of a 2 m patchcord after warm-up.

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