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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 5517FL

HP Agilent Keysight 5517FL Low Heat HeNe Laser Head The Keysight 5517FL isaClass II helium-neon two-frequency laser head in the 5517xL low-heat family. OEM 5517 series product fact sheet 5990-5634 lists reference frequency greater than or equal to 7.0 MHz, minimum output greater than 65 uW, 45 minute warm-up with fan on the vent body, 2 ppb vacuum wavelength stability (1 hour) and 20 ppb lifetime, plus or minus 0.1 ppm accuracy standard (plus or minus 0.02 ppm with optional calibration), and MTBF greater than 50,000 hours typical. The Keysight 5517FL isaClass II helium-neon two-frequency laser head in the 5517xL low-heat family. OEM 5517 series product fact sheet 5990-5634 lists reference frequency greater than or equal to 7.0 MHz, minimum output greater than 65 uW, 45 minute warm-up with fan on the vent body, 2 ppb vacuum wavelength stability (1 hour) and 20 ppb lifetime, plus or minus 0.1 ppm accuracy standard (plus or minus 0.02 ppm with optional calibration), and MTBF greater than 50,000 hours typical. Machine-tool and semiconductor interferometers needing higher slew rate than 5517C with forced-air thermal management on the L-series vented cover.



MODEL

**Agilent / Keysight
5517FL**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

5517FL

LISTING

<https://aumictechlabs.com/products/5517fl-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 5517FL is a Class II helium-neon laser source engineered for high-precision dual-frequency interferometry in demanding metrology and positioning applications. Operating at 632.99139 nm, this laser delivers stable output exceeding 65 μ W (minimum, with degradation to

50 μ W after 3 years) and supports measurement ranges to 40 meters across all axes. The 5517FL is optimized for VME and PC-based laser interferometer systems requiring high-velocity motion, particularly in semiconductor lithography and flat panel display manufacturing environments.

Technical Specifications

Optical Performance Wavelength: 632.99139 nm (nominal, vacuum) Wavelength accuracy: ± 0.1 ppm (3 sigma, lifetime); ± 0.02 ppm with factory calibration to MIL-STD 45663 Wavelength stability: ± 0.002 ppm (1 hour, typical); ± 0.02 ppm (lifetime) Output power (minimum): > 65 μ W standard; > 300 μ W with option H01 Maximum output power: 1 mW Beam diameter: 6 mm standard; 9 mm with option 009 Beam height: 80.8 ± 1.0 mm

Measurement & Performance Maximum linear velocity: 2 m/s with E1709A receiver (linear optics) Reference frequency: ≥ 7.0 MHz standard; 7.2 MHz with option 300 Measurement range: 40 meters (sum of all axes) Warm-up time: 45 minutes (vented cover with fan); 90 minutes (vent body with fan)

Electrical Power requirement: +15 V ± 0.3 V at 2.2 A maximum; -15 V ± 0.3 V at 0.03 A maximum

Heat dissipation: 23 W operating; 35 W warm-up MTBF: $> 50,000$ hours typical

Key Features Class II laser conforming to 21 CFR 1040.10 and 1040.11 Compact 3.2 kg form factor with 10.16 cm clearance required for cabling High wavelength accuracy enabling precision optical alignment

Typical Applications VME-based laser interferometer systems PC-based positioning systems Semiconductor lithography equipment Flat panel display manufacturing

Compatibility & Integration Requires Agilent 10884B power supply or equivalent 15 V source. Keysight E1709A receiver required for maximum linear velocity specification.

5517FL Characteristics / Specifications

PARAMETER	VALUE
Model	5517FL
Instrument Type	Two-frequency HeNe laser head
Series Family	Keysight 5517/5519 laser heads
Laser Type	helium-neon, continuous, two-frequency
Wavelength Accuracy Standard	plus or minus 0.1 ppm
Wavelength Accuracy Optional Cal	plus or minus 0.02 ppm
Vacuum Wavelength Stability 1 Hour	2 ppb
Vacuum Wavelength Stability Lifetime	20 ppb
Mtbf Typical	greater than 50,000 hours typical
Reference Frequency	greater than or equal to 7.0 MHz
Minimum Output Power	greater than 65 uW
Warm Up Time	45 minutes (fan connected to vent body)
Available Beam Diameter	6 or 9 mm
Max Linear Velocity 10897D 10898D N12	1361 mm/s (requires E1709A receiver)
Max Linear Velocity N1225A	2057 mm/s
Max Linear Velocity 10898D N1231 Alt	2152 mm/s (requires E1709A receiver)
Maximum Beam Power Output Family	less than 1 mW (Class II)
Beam Height 5517xL	80.8 mm
Power Supply	Keysight 10884B or equivalent plus/minus 15 V
Laser Class	Class II / 21 CFR 1040.10 and 1040.11
Documentation	Keysight 5517 series product fact sheet 5990-5634
Vacuum Wavelength Nominal Family	632.99137 nm class (5517CL data sheet 632.99137 nm)
Airflow 5517CL Class	4 m/s min exiting 50 mm duct (5517CL data sheet)
Enclosure 5517CL Class	IP10 per IEC 529 (5517CL data sheet)
Mass 5517CL Class	3.2 kg (5517CL data sheet)

PARAMETER	VALUE
Plus 15 V Current 5517CL	2.2 A maximum (5517CL data sheet)
Minus 15 V Current 5517CL	0.02 A maximum (5517CL data sheet)
Wavelength stability	1 Hour: 2 ppb

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
Minus 15 V Current 5517CL	0.02 A maximum (5517CL data sheet)

Notes

Numeric rows from Keysight 5517A/B/C/CL/D/DL/EL/FL/GL Laser Heads for Transducer Systems product fact sheet 5990-5634. 5517CL electrical, mass, airflow, and vacuum wavelength rows also from the 5517CL Laser Head data sheet. High-velocity rows marked with E1709A on the fact sheet require that receiver.

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 ·
30-day returns
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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.