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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 5517DL

HP Agilent Keysight 5517DL Low Heat HeNe Laser Head The Keysight 5517DL 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 4.4 MHz, minimum output greater than 180 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 5517DL 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 4.4 MHz, minimum output greater than 180 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
5517DL**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

5517DL

LISTING

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

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Keysight 5517DL is a helium-neon laser head delivering stabilized 633 nm output for precision interferometry and metrology. This Class II HeNe laser provides wavelength stability of 2 ppb over

one hour and accuracy to ± 0.1 ppm standard, with optional calibration reducing this to ± 0.02 ppm. Output power ranges from 180 μW nominal (120 μW after three years) to 1 mW maximum, with power stability maintained at $\pm 0.3\%$ and long-term drift under 1% per 8 hours. Technical Specifications Laser Performance Wavelength: 633 nm (632.8 nm or 632.991 nm) Wavelength stability: 2 ppb (1 hour), 20 ppb (lifetime) Wavelength accuracy: ± 0.1 ppm standard; ± 0.02 ppm with optional calibration Power stability: $\pm 0.3\%$; long-term drift $< 1\%$ per 8 hours Output power: 180 μW nominal to 1 mW maximum Beam diameter: 6 mm standard (9 mm option available) Beam divergence: 50,000 hours typical Physical & Electrical Dimensions: 145 $\times$ 124 $\times$ 260 mm; Weight: 3.2 kg Input power: +15 V $\pm$ 0.3 V @ 3.0 A max; -15 V $\pm$ 0.3 V @ 0.3 A max Power supply: Keysight 10884B or equivalent required Heat dissipation: 23 W operational, 35 W warmup Operating temperature: 10–40 $^{\circ}\text{C}$ Mounting: Three feet with M8 $\times$ 1.25 tapped holes Warm-up time: 45 minutes (with vented cover); < 10 minutes typical (5517A); 90 minutes (5517D with vent body) Key Features Orthogonally polarized frequency components (f1 Horizontal, f2 Vertical) Beam height: 80.8 mm $\pm$ 1.0 mm (5517xL heads) Minimal power degradation: 50 μW after three years (Option 300) Compact footprint suitable for integration into measurement systems Typical Applications VME and PC-based laser interferometer systems Semiconductor lithography and flat panel manufacturing Precision dimensional metrology and calibration Advanced measurement systems requiring sub-ppm wavelength accuracy Compatibility & Integration Integrates with Keysight 5529A Dynamic Calibrator systems. Requires E1709A receiver for specified linear velocity performance.

5517DL Characteristics / Specifications

PARAMETER	VALUE
Model	5517DL
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 4.4 MHz
Minimum Output Power	greater than 180 uW
Warm Up Time	45 minutes (fan connected to vent body)
Available Beam Diameter	6 or 9 mm
Max Linear Velocity 10897D 10898D N12	1329 mm/s (requires E1709A receiver)
Max Linear Velocity N1225A	1234 mm/s
Velocity Optics Basis	linear single pass lambda/2 worst-case direction (fact sheet note 1)
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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Model	5517DL
Instrument Type	Two-frequency HeNe laser head
Series Family	Keysight 5517/5519 laser heads
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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 4.4 MHz
Minimum Output Power	greater than 180 uW
Warm Up Time	45 minutes (fan connected to vent body)
Available Beam Diameter	6 or 9 mm
Max Linear Velocity 10897D 10898D N1231	1329 mm/s (requires E1709A receiver)
Max Linear Velocity N1225A	1234 mm/s
Velocity Optics Basis	linear single pass lambda/2 worst-case direction (fact sheet note 1)
Maximum Beam Power Output Family	less than 1 mW (Class II)
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Mass 5517CL Class	3.2 kg (5517CL data sheet)
Plus 15 V Current 5517CL	2.2 A maximum (5517CL data sheet)

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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.