Aumictech
Test & measurement · bought, sold, repaired, calibrated

Data Sheet
August 12, 2026

INSTRUMENT

Bristol 871 Series Laser Wavelength Meter

The 871 Series Laser Wavelength Meter uses a proven Fizeau etalon-based design to measure the wavelength of both pulsed and CW lasers that operate from 375 nm to 2.5 µm.

MODEL 871	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU 871	LISTING https://aumictechlabs.com/products/871-2/

NIST-traceable cal · SAM registered · 30-day returns · NAICS 423690 · 811210 · 541380

This unit

The Bristol 871 Series Laser Wavelength Meter measures wavelength for both pulsed and continuous-wave lasers with exceptional accuracy across the ultraviolet through mid-infrared spectrum. Built on a Fizeau etalon design, it delivers traceable wavelength determination from 375 nm to 2.5 µm, making it the instrument of choice for metrology labs, system integrators, and production environments demanding high-fidelity spectral data.Technical Specifications Wavelength Coverage: 375 nm to 2.5 µm. Specific configurations available: VIS (375–1100 nm) and NIR (650–1700 nm). Accuracy: Model 871A: ±0.2 ppm (±0.0001 nm at 500 nm; ±60 MHz at 1000 nm), 99.7% confidence level, traceable to accepted physical standards Model 871B: ±0.75 ppm (±0.001 nm at 1500 nm; ±225 MHz at 1000 nm) Repeatability: Model 871A: ±0.0075 ppm (±2.25 MHz at 1000 nm) Model 871B: ±0.0125 ppm (±3.75 MHz at 1000 nm) Specified as standard deviation over one minute at thermal equilibrium; 10-minute standard deviation approximately doubles 1-minute values Resolution: Approximately two times repeatability. Measurement Performance: 1 kHz sustained rate with 1 ms time resolution. Every pulse measured for lasers at ≤1 kHz repetition rate (VIS: ≤500 Hz); higher rates integrate pulses within the measurement window.

Minimum Input: 20 nJ per pulse (20 µW at 1 kHz). Calibration: Automatic using integrated wavelength standards - stabilized HeNe laser (VIS) or laser diode locked to acetylene absorption per NIST Special Publication 260-133 (NIR). Optical Input: Pre-aligned fiber-optic coupling; no manual pattern optimization required.Key Features Measurement rate to 1 kHz with internal buffer storing up to one million measurements USB or Ethernet connectivity for instrument control and data streaming RS-422 serial interface for high-rate data acquisition Display software and LabVIEW programming support for flexible measurement workflowsTypical Applications Wavelength verification of fiber lasers, solid-state systems, and semiconductor sources in R&D and manufacturing metrology.Compatibility & Integration Standard PC connectivity via USB or Ethernet; RS-422 serial port supports real-time data streaming at maximum measurement rate.

Features & description

From manufacturer datasheet

Technical Specifications

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Specifications

ParameterValue Frequency Range60 MHz to 225 MHz (at 1000 nm reference) | Wavelength Range: 375 nm to 2.5 µm (VIS: 375–1100 nmNIR650–1700 nm)

871 — Repair & Calibration Service

Aumictech offers NIST-traceable calibration and repair for the 871. Calibration covers absolute wavelength accuracy at multiple reference points across the full measurement range, frequency accuracy, wavenumber accuracy, and multi-wavelength channel spacing measurement accuracy. All calibrations ship with a NIST-traceable certificate. Turnaround is typically 1–3 business days after receipt. Standard Cal Pass/fail cert + NIST sticker Cal with Data Full NIST cert with measured values Common 871 faults: interferometer alignment drift, reference etalon or HeNe laser end-of-life, InGaAs detector sensitivity loss, fiber input connector damage. Fizeau interferometer-based instruments (Agilent 86120B/86122A/C) most commonly develop interferometer alignment drift and InGaAs detector degradation over time. Burleigh WA-series scanning Fabry-Perot instruments most commonly fail due to reference HeNe laser end-of-life. Both types are fully repairable with post-repair wavelength accuracy verification. Request Calibration → Request Repair Quote →

871 price

This 871 is listed at . Calibration is available separately from . Contact us for volume pricing or if you need multiple units.

871 calibration cost

NIST-traceable calibration for the 871 is (standard — pass/fail certificate and calibration sticker) or (full measured data at every test point, reference standards documented, traceability chain included). Calibration for this instrument covers absolute wavelength accuracy at multiple reference points across the full measurement range, frequency accuracy, wavenumber accuracy, and multi-wavelength channel spacing measurement accuracy. Turnaround is 1 to 3 business days after receipt. See full calibration details →

Unit notes

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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.

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Typical Applications Wavelength verification of fiber lasers, solid-state systems, and semiconductor sources in R&D and manufacturing metrology.

Compatibility & Integration Standard PC connectivity via USB or Ethernet; RS-422 serial port supports real-time data streaming at maximum measurement rate.

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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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