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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 81536A POWER SENSOR MODULE

HP 81536A InGaAs Optical Power Sensor Module 800 to 1700 nm The HP 81536A is an InGaAs optical power sensor plug-in module for the 8153A Lightwave Multimeter family. It covers 800 to 1700 nm with a power range of +3 to -70 dBm, display resolution 0.001 dB/dBm, and application fiber 9/125 μ m to 100/140 μ m (NA less than or equal to 0.3). Uncertainty at reference conditions is plus/minus 2.5 percent (1000 to 1650 nm). Fiber optic power measurement in the 8153A mainframe; component loss and absolute power tests; automated lightwave ATE via HP-IB through the mainframe. The HP 81536A is an InGaAs optical power sensor plug-in module for the 8153A Lightwave Multimeter family. It covers 800 to 1700 nm with a power range of +3 to -70 dBm, display resolution 0.001 dB/dBm, and application fiber 9/125 μ m to 100/140 μ m (NA less than or equal to 0.3). Uncertainty at reference conditions is plus/minus 2.5 percent (1000 to 1650 nm). Fiber optic power measurement in the 8153A mainframe; component loss and absolute power tests; automated lightwave ATE via HP-IB through the mainframe.



Artisan Technology Group

MODEL

**HP / Agilent
81536A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81536A

LISTING

<https://aumictechlabs.com/products/81536a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 81536A Power Sensor Module is a plug-in optical power measurement instrument for HP/Agilent lightwave multimeter mainframes. It delivers precise power readings across the near-infrared spectrum using an InGaAs sensor element, making it essential for

telecommunications and photonics characterization work. The module inserts into compatible 8153A, 8163A, and 8166A mainframes and provides calibrated measurements with $\pm 2.5\%$ uncertainty across the 1000–1650 nm window. Technical Specifications Sensor Element: InGaAs (Indium Gallium Arsenide) Wavelength Range: 800 nm to 1700 nm Power Measurement Range: +3 dBm to –70 dBm Uncertainty (Reference Conditions): $\pm 2.5\%$ over 1000–1650 nm; $\pm 5\%$ ± 50 pW total Linearity: ± 0.015 dB ± 30 pW (19–38 °C, 0 to –50 dBm); ± 0.05 dB ± 50 pW (0–55 °C) Noise (1200–1600 nm, 1 sec average): < 50 pW peak-to-peak Display Resolution: 0.001 dBm or 0.0001 dBm (printout); 100 pW watt resolution Applicable Fiber: 9/125 μm to 100/140 μm , $\text{NA} \leq 0.3$ Analog Output: DC to 700 Hz or DC to 4000 Hz depending on range; 0–2 V into open circuit; 600 Ω typical impedance Warm-up Time: 20 minutes Recalibration Interval: 1 year Key Features InGaAs photodetector optimized for telecom and datacom wavelengths Wide dynamic range measurement: +3 dBm to –70 dBm Analog output for real-time signal monitoring and external logging HP-IB interface support (SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1, C0, E2) Operating temperature range 0–55 °C; storage to –40–+70 °C Compact module footprint: 89 mm (H) $\times$ 212.3 mm (W) $\times$ 355 mm (D) Typical Applications Fiber-optic power monitoring in production test Optical component and subsystem characterization Wavelength-dependent power measurements across 800–1700 nm Return loss and insertion loss validation Compatibility & Integration Inserts directly into HP/Agilent 8153A, 8163A, and 8166A lightwave multimeter mainframes. Operates with standard Agilent optical connectors (FC/PC, SC/PC). Optional 12–30 V DC input available (Option 050).

Features & description

From manufacturer datasheet

Features

- InGaAs sensor 800 to 1700 nm • Power range +3 to -70 dBm • Linearity plus/minus 0.015 dB plus 30 pW (0 to -50 dBm, 18 to 28 C) • Noise less than 50 pW peak to peak (1200 to 1600 nm, 1 s averaging) • Module size 75 × 32 × 335 mm; net 0.6 kg

81536A Characteristics / Specifications

PARAMETER	VALUE
Model	81536A
Manufacturer	Hewlett Packard / Agilent
Instrument Type	Optical power sensor module
Sensor Element	InGaAs
Wavelength Range	800 to 1700 nm
Power Range	+3 to -70 dBm
Display Resolution	0.001 dB/dBm (0.0001 dB/dBm on printout)
Application Fiber Type	9/125 um to 100/140 um; NA less than or equal to 0.3
Uncertainty At Reference Conditions	plus/minus 2.5 percent (1000 to 1650 nm)
Total Uncertainty Operating	plus/minus 5 percent plus 50 pW (1000 to 1650 nm)
Linearity 18 To 28 C 0 To Minus 50 dBm	plus/minus 0.015 dB plus 30 pW
Linearity 0 To 55 C 0 To Minus 50 dBm	plus/minus 0.05 dB plus 50 pW
Noise Peak To Peak 1 s Avg	less than 50 pW (1200 to 1600 nm)
Reference Power Level	10 uW (-20 dBm) CW
Reference Fiber	50 um graded index NA 0.2
Reference Temperature	23 C plus/minus 5 K
Reference Connector	Diamond HMS-10/HP
Module Dimensions	75 mmHx 32 mmWx 335 mmDNet Weight: 0.6 kg (1.3 lb)
Shipping Weight	1 kg (2.2 lb)
Recalibration Period	2 years
Warmup Time	20 minutes
Mainframe Compatibility	8153A Lightwave Multimeter
Related Deeper Range Sibling	81532A +3 to -110 dBm
Related Si Sensor	81530A 450 to 1020 nm
Alias	HP 81536A; Agilent 81536A

PARAMETER	VALUE
Fiber type	9/125 um to 100/140 um; NA less than or equal to 0.3

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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Application Fiber Type	9/125 um to 100/140 um; NA less than or equal to 0.3
Uncertainty At Reference Conditions	plus/minus 2.5 percent (1000 to 1650 nm)

PARAMETER	VALUE
Total Uncertainty Operating	plus/minus 5 percent plus 50 pW (1000 to 1650 nm)

Linearity 18 To 28 C 0 To Minus 50 dBm: plus/minus 0.015 dB plus 30 pW
Linearity 0 To 55 C 0 To Minus 50 dBm: plus/minus 0.05 dB plus 50 pW

Specifications

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Notes
Sensor rows from HP 81531A/81536A specifications extract for the 8153A platform. Confirm connector interface and mainframe firmware on the system.

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
NAICS 423690 · 811210 · 541380
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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.