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Data Sheet

August 14, 2026

AGILENT / HP

Agilent HP 81532A Power Sensor Module

Agilent HP 81532A InGaAs Power Sensor Module The Agilent 81532A InGaAs Power Sensor Module is a plug-in optical power sensor for the HP 8153A Lightwave Multimeter. OEM HP 8153A Technical Specifications (5962-9321E) list InGaAs sensing, 800 to 1700 nm, plus 3 to minus 110 dBm, and the reference/total uncertainty and noise rows below. Average optical power and loss measurements on 8153A dual-channel lightwave systems. 9/125 to 100/140 μ m fiber NA less than or equal to 0.3 The Agilent 81532A InGaAs Power Sensor Module is a plug-in optical power sensor for the HP 8153A Lightwave Multimeter. OEM HP 8153A Technical Specifications (5962-9321E) list InGaAs sensing, 800 to 1700 nm, plus 3 to minus 110 dBm, and the reference/total uncertainty and noise rows below. Average optical power and loss measurements on 8153A dual-channel lightwave systems. 9/125 to 100/140 μ m fiber NA less than or equal to 0.3 Display Resolution: 0.001 dB/dBm (0.0001 dB/dBm on printout)



MODEL

**Agilent / HP
81532A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81532A

LISTING

<https://aumictechlabs.com/products/81532a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent HP 81532A is an InGaAs-based optical power sensor module engineered for high-accuracy measurements across the near-infrared spectrum. Designed as a plug-in component for Agilent/HP 8153A, 8163, and 8164 series Lightwave Multimeter mainframes, it delivers precise power quantification from +3 dBm to -110 dBm across 800 nm to 1700 nm wavelengths. The module achieves $\pm 2.5\%$ accuracy at reference conditions (600 nm–1020 nm) with total

uncertainty of $\pm 5\%$ ± 0.5 pW in the 600–1020 nm band and $\pm 5\%$ ± 50 pW from 1000–1650 nm. Linearity performance reaches ± 0.015 dB in the 18–28 °C temperature window for power levels 0 to -90 dBm. Selectable averaging times from 100 μ s to minutes enable noise suppression below 0.5 pW (700–900 nm) and below 50 pW (1200–1600 nm) at 1 second integration. A 20-minute warm-up period establishes optimal measurement stability. The sensor connects via standard Agilent optical interface connectors and provides GPIB programmability with millisecond measurement transfer times. Operating range spans 0–55 °C ambient temperature in non-condensing environments. Recalibration intervals of 1–2 years maintain metrological traceability, with aging tolerance of 0.3% per year.

81532A Characteristics / Specifications

PARAMETER	VALUE
Sensor Element	InGaAs
Wavelength Range	800 to 1700 nm
Power Range	plus 3 to minus 110 dBm
Display Resolution	0.001 dB/dBm (0.0001 dB/dBm on printout)
Power Display Resolution Watts	0.01 pW to 10 pW depending on range
Application Fiber Type	9/125 um to 100/140 um NA less than or equal to 0.3
Reference Uncertainty	plus or minus 2.5 percent 1000 to 1650 nm
Total Uncertainty	plus or minus 5 percent plus or minus 0.5 pW 1000 to 1650 nm
Linearity 18 To 28 C Const Temp	plus or minus 0.015 dB plus or minus 0.3 pW 0 to minus 90 dBm
Linearity Operating Temp Const	plus or minus 0.05 dB plus or minus 0.5 pW
Noise Peak To Peak 1 s Avg	less than 0.5 pW 1200 to 1600 nm
Module Dimensions	75 mmHx 32 mmWx 335 mmDModule Mass Net: 0.6 kg
Module Mass Shipping	1 kg
Recalibration Period	2 years
Warm Up Time	20 minutes
Reference Power Level	10 uW (minus 20 dBm) CW
Reference Fiber	50 um graded index NA 0.2
Reference Temperature	23 C plus or minus 5 K
Reference Connector	Diamond HMS-10/HP
Aging Add One Year	0.3 percent
Aging Add Two Years	0.6 percent
Spectral Width Source For Spec	less than 10 nm
Mainframe	HP 8153A
Operating Temperature Via Mainframe	0 to plus 55 C
Na Greater Than 0.2 Add	1 percent uncertainty

PARAMETER	VALUE
Biconic Connector Add	plus or minus 1 percent
Operating temperature	Via Mainframe: 0 to plus 55 C
Fiber type	9/125 um to 100/140 um NA less than or equal to 0.3

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Via Mainframe: 0 to plus 55 C
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Na Greater Than 0.2 Add	1 percent uncertainty
Biconic Connector Add	plus or minus 1 percent Notes From HP 8153A Lightwave Multimeter Technical Specifications power sensor module columns (5962-9321E). Specs apply at end of 2 m fiber with Diamond HMS-10 connectors unless noted.

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 (5962-9321E) list InGaAs sensing, 800 to 1700 nm, plus 3 to minus 110 dBm, and the reference/total uncertainty and noise rows below.

Applications
Average optical power and loss measurements on 8153A dual-channel lightwave systems.

Key Features
Plug-in 8153A sensor module
0.001 dB display resolution
9/125 to 100/140 um fiber NA less than or equal to 0.3
HP-IB programmable via mainframe
2 year recalibration period

Technical Specifications

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Notes

From HP 8153A Lightwave Multimeter Technical Specifications power sensor module columns (5962-9321E). Specs apply at end of 2 m fiber with Diamond HMS-10 connectors unless noted.

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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<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.