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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 81632B Power Sensor Module (single channel)

Agilent 81632B InGaAs Optical Power Sensor Module The Agilent/Keysight 81632B is a single-channel InGaAs optical power sensor plug-in for 8163B/8164B/8166B (and earlier 816xA) lightwave mainframes. It is the economy single-channel sensor: +10 dBm to -80 dBm, 800 nm to 1650 nm class, analog output included. Reference uncertainty is plus/minus 3 percent from 1200 nm to 1630 nm. Dual-channel sibling is 81635A; higher-sensitivity siblings are 81633B (-90 dBm) and 81634B (-110 dBm). Absolute and relative optical power on SM/MM fiber; insertion-loss and source-stability monitoring; synchronized logging with tunable lasers in 816x mainframes. The Agilent/Keysight 81632B is a single-channel InGaAs optical power sensor plug-in for 8163B/8164B/8166B (and earlier 816xA) lightwave mainframes. It is the economy single-channel sensor: +10 dBm to -80 dBm, 800 nm to 1650 nm class, analog output included. Reference uncertainty is plus/minus 3 percent from 1200 nm to 1630 nm. Dual-channel sibling is 81635A; higher-sensitivity siblings are 81633B (-90 dBm) and 81634B (-110 dBm). Absolute and relative optical power on SM/MM fiber; insertion-loss and source-stability monitoring; synchronized logging with tunable lasers in 816x mainframes.



MODEL

**HP / Agilent
81632B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81632B

LISTING

<https://aumictechlabs.com/products/81632b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 81632B is a single-channel optical power sensor module designed for integration into HP/Agilent lightwave measurement systems. Built around an InGaAs sensor element, it delivers precise optical power measurements across the 800 nm to 1650 nm wavelength range with $\pm 3\%$ accuracy in the 1200 nm to 1630 nm band. The module achieves exceptional linearity of ± 0.02 dB ± 20 pW across its full dynamic range from +10 dBm to -60 dBm, ensuring reliable characterization of optical components and communication systems. Measurement speed reaches 200 microseconds, enabling rapid power assessment workflows. Low polarization dependent loss and typical polarization-related uncertainty of ± 0.015 dB minimize measurement errors across all signal states. Output is provided via BNC analog connector, allowing direct integration with external measurement equipment and data acquisition systems.

Technical Specifications

Sensor Type:	InGaAs
Wavelength Range:	800 nm to 1650 nm
Power Range:	+10 dBm to -80 dBm
Accuracy:	$\pm 3\%$ from 1200 nm to 1630 nm
Power Linearity:	± 0.02 dB ± 20 pW (+10 dBm to -60 dBm)
Relative Uncertainty due to Polarization:	Typ. ± 0.015 dB
Polarization Dependent Loss:	Low PDL
Measurement Speed:	200 microseconds
Output:	BNC Analog Output connector

Key Features

- Single-channel configuration for dedicated power measurement
- InGaAs sensor optimized for near-infrared wavelengths
- High linearity performance across dynamic range ensures minimal distortion
- Fast measurement acquisition supports high-throughput testing
- Low polarization sensitivity reduces environmental variables

Typical Applications

- Optical power characterization in telecom and datacom systems
- Component-level testing of optical transceivers and modules
- Lightwave system calibration and verification
- Fiber-optic signal monitoring

Compatibility & Integration

The 81632B integrates with HP/Agilent 8163A, 8164A, 8166A, and 8163B mainframes and multichannel measurement systems. The module is obsolete and no longer manufactured by Keysight.

Features & description

From manufacturer datasheet

Features

- Single InGaAs channel with analog output (81635A dual has no analog output)
- 0.0001 dB display resolution
- Autorange CW linearity less than plus/minus 0.02 dB plus 20 pW at 23 plus/minus 5 C
- Return loss greater than 40 dB
- Interchangeable 81000-series connector adapters
- 100 us minimum averaging

81632B Characteristics / Specifications

PARAMETER	VALUE
Model	81632B
Manufacturer	Agilent / Keysight
Instrument Type	Optical power sensor module (plug-in)
Sensor Element	InGaAs (single)
Wavelength Range	800 nm to 1650 nm
Power Range	+10 dBm to -80 dBm
Display Resolution	0.0001 dB/dBm; 0.01 pW to 10 pW depending on range
Applicable Fiber	standard SM and MM up to 62.5 um core, NA 0.24 or less
Uncertainty At Reference	plus/minus 3 percent (1200 nm to 1630 nm)
Total Uncertainty	plus/minus 5 percent plus 20 pW (1200 nm to 1630 nm)
Relative Uncertainty Polarization Typical	plus/minus 0.015 dB
Spectral Ripple Typical	plus/minus 0.015 dB
Linearity At 23 plus/minus 5 C	less than plus/minus 0.02 dB plus 20 pW (CW +10 to -60 dBm, 1200 to 1630 nm)
Linearity Over Operating Temp	less than plus/minus 0.06 dB plus 20 pW
Return Loss	greater than 40 dB
Noise Peak To Peak	less than 20 pW
Averaging Time Minimal	100 us
Analog Output	included
Analog Output Voltage	0 to 2 V into open
Analog Output Impedance Typical	600 ohm
Dimensions	75 mm x 32 mm x 335 mm
Weight	0.5 kg
Recommended Recalibration	2 years
Operating Temperature	+10 C to +40 C
Humidity	non-condensing

PARAMETER	VALUE
Warm Up	20 min
Reference Power	10 uW (-20 dBm) CW
Host Mainframes	8163B, 8164B, 8166B and 816xA
Related Dual Channel	81635A +10 to -80 dBm no analog output
Related High Sensitivity	81634B +10 to -110 dBm
Bandwidth	At +10 dBm Range: 5.0 kHz (3 dB)

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
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Host Mainframes	8163B, 8164B, 8166B and 816xA
Related Dual Channel	81635A +10 to -80 dBm no analog output
Related High Sensitivity	81634B +10 to -110 dBm Notes Specs from the Agilent 81632B/3B/4B/6B/7B and 81635A Power Sensor Modules user's guide specification tables. For 62.5 um graded-index NA 0.24 add plus/minus 2 percent. Add plus/minus 0.06 percent per nm above 1600 nm and plus/minus 0.02 dB above 2 mW.

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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Notes

Specs from the Agilent 81632B/3B/4B/6B/7B and 81635A Power Sensor Modules user's guide specification tables. For 62.5 um graded-index NA 0.24 add plus/minus 2 percent. Add plus/minus 0.06 percent per nm above 1600 nm and plus/minus 0.02 dB above 2 mW.

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 ·
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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.