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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81636B Optical Power Sensor Module

Agilent / Keysight 81636B Fast Optical Power Sensor Module The Agilent/Keysight 81636B is a single-channel fast optical power sensor module for 8163/8164/8166 mainframes. OEM 81636B specifications list InGaAs sensor, wavelength 1250 to 1640 nm, power +10 to -80 dBm, uncertainty +3 percent at reference conditions (1260 to 1630 nm), linearity less than plus or minus 0.02 dB plus or minus 20 nW at 23 C plus or minus 5 C, return loss greater than 40 dB, and minimal averaging time 25 us. Fast optical power logging and dynamic measurements needing short averaging times. The Agilent/Keysight 81636B is a single-channel fast optical power sensor module for 8163/8164/8166 mainframes. OEM 81636B specifications list InGaAs sensor, wavelength 1250 to 1640 nm, power +10 to -80 dBm, uncertainty +3 percent at reference conditions (1260 to 1630 nm), linearity less than plus or minus 0.02 dB plus or minus 20 nW at 23 C plus or minus 5 C, return loss greater than 40 dB, and minimal averaging time 25 us. Fast optical power logging and dynamic measurements needing short averaging times.



MODEL

**Agilent / Keysight
81636B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81636B

LISTING

<https://aumictechlabs.com/products/81636b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight 81636B is an InGaAs optical power sensor module that delivers accurate measurements across the 1250–1640 nm wavelength band. Designed for integration into Keysight

816x Lightwave mainframes, this module measures optical power from +10 dBm to -80 dBm with $\pm 3\%$ accuracy (1260–1630 nm) and total uncertainty of $\pm 5\%$ ± 20 pW. The sensor provides >55 dB dynamic range in manual mode and features low polarization dependence of 55 dB (manual range mode) Linearity: CW +10 to -60 dBm (1260–1630 nm) Analog bandwidth: 17 kHz Data acquisition time: 25 μ s (minimum averaging time) Data logging capacity: 100,000 samples Polarization dependence: $<\pm 0.015$ dB; ± 0.01 dB typ. (angled connector) Applicable fiber: Standard SM and MM up to 62.5 μ m core, NA ≤ 0.24 Analog output: Voltage proportional to optical signal strength

Key Features Low polarization dependence for stable readings across fiber types High-speed data logging captures transient behavior and long-term stability trends Triggered synchronization with tunable laser modules enables automated spectral sweeps Parallel measurement capability - use multiple modules simultaneously for multichannel characterization NIST and PTB traceability for calibrated confidence

Typical Applications Data logging and minimum/maximum value recording over extended periods Spectral characterization via triggered synchronization with tunable sources Optical component alignment and power optimization Multichannel device power verification

Compatibility & Integration Fits all Keysight 816x Lightwave mainframes Supports single or multiple-module configurations Requires Agilent 81000xl Series optical interface connectors (sold separately) Connector adapter sold separately

Features & description

From manufacturer datasheet

Polarization Spectral Ripple Typical: plus or minus 0.015 dB

Mainframe Compatibility: 8163A/B 8164A/B 8166A/B Brand Lineage: Agilent / Keysight / HP Module Form Factor: slim front loadable 816x module Connector Interface: uses 81000 series connector interfaces Notes From Agilent 81636B Fast Power Sensor module specification sheet used with 8163A mainframes.

81636B Characteristics / Specifications

PARAMETER	VALUE
Model	81636B
Channels	1
Sensor Element	InGaAs
Wavelength Range	1250 nm to 1640 nm
Power Range	+10 dBm to -80 dBm
Applicable Fiber	standard SM and MM up to 62.5 um core, NA less than 0.24
Uncertainty At Reference Conditions	+3 percent (1260 nm to 1630 nm)
Total Uncertainty	plus or minus 5 percent to plus or minus 20 pW (1260 nm to 1630 nm)
Linearity At 23 C Plus Or Minus 5 C	less than plus or minus 0.02 dB plus or minus 20 nW (CW +10 to -60 dBm, 1280 to 1630 nm)
Linearity Over Operating Temp	less than plus or minus 0.06 dB plus or minus 20 nW
Return Loss	greater than 40 dB
Noise Peak To Peak	less than 20 pW
Averaging Time Minimal	25 us
Dynamic Range Manual 0 dBm Range Typical	greater than 55 dB
Polarization Spectral Ripple Typical	plus or minus 0.015 dB
Mainframe Compatibility	8163A/B 8164A/B 8166A/B
Brand Lineage	Agilent / Keysight / HP
Module Form Factor	slim front loadable 816x module
Connector Interface	uses 81000 series connector interfaces

81636B Specifications

PARAMETER	VALUE
Key Features	Fast power sensor with 25 us minimal averaging time
Single channel InGaAs detector	Compatible with 8163 8164 8166 mainframes
High dynamic range in manual ranges	Return loss greater than 40 dB
Technical Specifications	Model: 81636B
Notes	From Agilent 81636B Fast Power Sensor module specification sheet used with 8163A mainframes.

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 list InGaAs sensor, wavelength 1250 to 1640 nm, power +10 to -80 dBm, uncertainty +3 percent at reference conditions (1260 to 1630 nm), linearity less than plus or minus 0.02 dB plus or minus 20 nW at 23 C plus or minus 5 C, return loss greater than 40 dB, and minimal averaging time 25 us.

Applications

Fast optical power logging and dynamic measurements needing short averaging times.

Key Features

Fast power sensor with 25 us minimal averaging time

Single channel InGaAs detector

Compatible with 8163 8164 8166 mainframes

High dynamic range in manual ranges

Return loss greater than 40 dB

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	81636B
Channels	1
Sensor Element	InGaAs
Wavelength Range	1250 nm to 1640 nm
Power Range	+10 dBm to -80 dBm
Applicable Fiber	standard SM and MM up to 62.5 um core, NA less than 0.24
Uncertainty At Reference Conditions	+3 percent (1260 nm to 1630 nm)
Total Uncertainty	plus or minus 5 percent to plus or minus 20 pW (1260 nm to 1630 nm)

Linearity At 23 C Plus Or Minus 5 C: less than plus or minus 0.02 dB plus or minus 20 nW (CW +10 to -60 dBm, 1280 to 1630 nm)

Specifications

PARAMETER	VALUE
Linearity Over Operating Temp	less than plus or minus 0.06 dB plus or minus 20 nW
Return Loss	greater than 40 dB
Noise Peak To Peak	less than 20 pW
Averaging Time Minimal	25 us

Dynamic Range Manual +10 dBm Range Typical: greater than 55 dB

Dynamic Range Manual 0 dBm Range Typical: greater than 55 dB

Dynamic Range Manual -10 dBm Range Typical: greater than 52 dB

Dynamic Range Manual -20 dBm Range Typical: greater than 45 dB

Specifications

PARAMETER	VALUE
Polarization Spectral Ripple Typical	plus or minus 0.015 dB
Mainframe Compatibility	8163A/B 8164A/B 8166A/B
Brand Lineage	Agilent / Keysight / HP
Module Form Factor	slim front loadable 816x module
Connector Interface	uses 81000 series connector interfaces

Notes
From Agilent 81636B Fast Power Sensor module specification sheet used with 8163A mainframes.

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.