

KEYSIGHT TECHNOLOGIES (AGILENT HP)

81536A

The Keysight (Agilent HP) 81536A is a high-sensitivity InGaAs optical power sensor module designed for the HP 8153A Lightwave Multimeter mainframe. It provides high-accuracy optical power measurements over a wavelength range of 800 to 1700 nm, supporting both single-mode and multimode fiber types.

SPECIFICATIONS

General

Interfaces	Internal mainframe interface (GPIB and RS-232 available via host mainframe)
Display	None (utilizes host mainframe display)

Physical

Power Supply	Powered directly by host mainframe
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	75 × 32 × 335 mm
Weight	0.5 kg
Shipping Weight	1.2 kg

Optical Performance Specifications

Wavelength Range	800 to 1700 nm
Detector Type	InGaAs
Power Measurement Range	-70 to +3 dBm
Maximum Safe Input Power	+10 dBm
Calibration Uncertainty	±2.5% (1000 to 1600 nm, at reference conditions)
Power Linearity	±0.05 dB (+3 to -60 dBm), ±0.15 dB (-60 to -70 dBm)
Return Loss	> 40 dB

Measurement and Dynamic Characteristics

Noise (Peak-to-Peak)	< 50 pW (1200 to 1600 nm, 1 s averaging time)
----------------------	---

Optical Interface and Compatibility

Compatible Fiber Types	9/125 μm to 100/140 μm
Maximum Numerical Aperture	0.3
Connector Adapter Interface	HP 81000xl series (e.g., FC, SC, ST, DIN adapters)

Mainframe Integration and Interface

Compatible Host Mainframes	HP / Agilent 8153A Lightwave Multimeter
Required Slot Width	1 slot

Environmental

Storage Temperature	-40 °C to +70 °C
Operating Humidity	< 95% R.H. (0 °C to 40 °C, non-condensing)

Operating Features

Warm-up Time	40 minutes
--------------	------------

Optical Specs

Reference Wavelengths	1300 nm, 1550 nm
-----------------------	------------------

Performance

Polarization Dependence	< ±0.02 dB (1250 to 1580 nm)
Temperature Dependence	< ±0.03 dB (1200 to 1600 nm, 0 to 55 °C), < ±0.15 dB (800 to 1700 nm, 0 to 55 °C)
Detector Active Diameter	2 mm
Total Operating Uncertainty	±4% (1000 to 1600 nm, +3 to -60 dBm), ±7% (800 to 1700 nm, +3 to -60 dBm)
Averaging Time Range	20 ms to 10 s (selectable)
Range Selection	Automatic or manual (7 ranges)

Analog Output

Analog Output Voltage	0 to 2 V (into ≥ 10 kΩ, proportional to power in current range)
Analog Output Bandwidth	3 Hz (ranges 1 to 4), 300 Hz (ranges 5 to 7)

TECHNOLOGY

InGaAs Optical Sensor

APPLICATIONS

Optical Power Measurement

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.