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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81511A – Optical Head

The HP 81511A is a silicon optical head for the HP 8151A Optical Pulse Power Meter family. OEM HP Journal January 1985 and AssetRelay summaries list 550 to 950 nm wavelength coverage and plus 10 dBm to minus 60 dBm measurement range when used with the 8151A mainframe (dc to 250 MHz to minus 20 dBm; 4 kHz bandwidth to minus 60 dBm). Peak and average optical pulse power measurements on short-wavelength fiber links and components from 550 to 950 nm. Peak high/low and average power with 8151A Power Measurement Range: plus 10 dBm to minus 60 dBm Instrument Family: HP 8151 lightwave pulse power Amplitude Flatness Use: host parametric flatness measurements Threshold Measurement Use: host parametric threshold measurements From Hewlett-Packard Journal January 1985 HP 8151A/81511A article and AssetRelay 81511A product summary (550-950 nm, 10 to -60 dBm). Binding bandwidth/power tradeoffs are those of the HP 8151A mainframe.



MODEL

**Agilent / Keysight
81511A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81511A

LISTING

<https://aumictechlabs.com/products/81511a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 81511A is an optical head designed for integration with Agilent/Keysight 8151A Optical Pulse Power Meters and compatible interface modules. It performs accurate power measurements across fiber optic communication systems, supporting peak power, average power, and extinction ratio characterization for component testing, system verification, and manufacturing quality control. Technical Specifications Wavelength Range: 550 nm to 950 nm;

factory calibrated for 850 nm Maximum Core Diameter: 200 μ m Measurement Range: +10 dBm to -60 dBm Resolution: 3 digits (Watts) with 1 pW minimum; 4 digits (dB) with 0.01 dB minimum Accuracy: $\pm 2.5\%$ Dimensions: 60 mm (H) $\times$ 96 mm (W) $\times$ 200 mm (D) Weight: 1.3 kg net; 2 kg shipping Operating Temperature: 0°C to +55°C Storage Temperature: -40°C to +70°C Humidity Rating: 95% RH from 0°C to +40°C

Key Features Peak and average power measurements for digital and non-repetitive signal evaluation Median power and amplitude measurement capability Extinction ratio measurement for on/off state signal analysis O/E transducer functionality HP-IB interface support (functions: SH1, AH1, T6, L4, SR1, RL1, PPO, DC1, DT1, CO) Calibration grid indicates correction factors for wavelengths outside 850 nm primary calibration Supports multiple fiber connector types and bare fiber configurations

Typical Applications Fiber optic component and module characterization Digital optical signal threshold and amplitude assessment Optical system verification and performance validation Manufacturing quality control for fiber optic assemblies

Compatibility & Integration The 81511A integrates with the 8151A Optical Pulse Power Meter mainframe and supports the Agilent 81618A (single-channel) and 81619A (dual-channel) interface modules. Legacy support extends to Keysight N7749C platforms. Connector adapters accommodate standard Diamond HMS-10 fiber optics and optional NEC/D3 (FC) configurations.

81511A Characteristics / Specifications

PARAMETER	VALUE
Wavelength Range	550 to 950 nm
Power Measurement Range	plus 10 dBm to minus 60 dBm
Wideband Power Range With 8151A	plus 10 dBm to minus 20 dBm
Wideband Bandwidth With 8151A	dc to 250 MHz
High Sensitivity Floor With 8151A	minus 60 dBm
High Sensitivity Bandwidth With 8151A	4 kHz
Host Instrument	HP 8151A Optical Pulse Power Meter
Related Longwave Heads	HP 81512A/B 950 to 1750 nm
Measurement Modes With Host	peak high peak low average
Extinction Ratio Path	supported via host parametric measurements
Electrical Monitor	optical to electrical transducer output
Form Factor	remote optical head
Detector Technology	silicon
Connector Interface	host optical head interface
Operating Use	fiber optic digital systems characterization
Programming	fully programmable via 8151A
Display Path	via 8151A mainframe
Calibration Path	host system calibration
Instrument Family	HP 8151 lightwave pulse power
Amplitude Flatness Use	host parametric flatness measurements
Threshold Measurement Use	host parametric threshold measurements
Bandwidth	With 8151A: dc to 250 MHz

81511A Specifications

PARAMETER	VALUE
Agilent HP 81511A Optical Head	Overview
Applications	Peak and average optical pulse power measurements on short-wavelength fiber links and components from 550 to 950 nm.
Key Features	550 to 950 nm Si head
Electrical O/E monitor output	Works with HP 8151A pulse power meter
Technical Specifications	Wavelength Range: 550 to 950 nm

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	
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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

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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.