

AGILENT

81521B

The Agilent 81521B (previously HP 81521B) is a high-performance optical power head designed for precise optical power measurements in the 850 nm to 1700 nm wavelength range. Featuring a cooled Germanium PIN diode detector and built-in non-volatile memory for calibration data, it delivers excellent sensitivity down to -80 dBm and is ideally suited for both parallel-beam and connectorized fiber optic applications.

SPECIFICATIONS

General

Interfaces	Proprietary optical head interface cable to mainframe/interface module
Display	None (uses mainframe display)

Physical

Power Supply	Powered by compatible mainframe or interface module
Operating Temperature	0 to 40 °C °C
Dimensions (W×H×D)	75 mm × 28 mm × 115 mm mm
Weight	0.5 kg kg
Cable Length	2 m

Optical & Sensor Specifications

Detector Element Material	Cooled Germanium (Ge) PIN diode
Sensor Active Area Diameter	5 mm
Wavelength Range	900 to 1700 nm
Optical Power Measurement Range	+3 to -80 dBm
Maximum Power Density	10 mW/mm ²
Applicable Fiber Type	Parallel beam, 9/125 μm to 100/140 μm, NA ≤ 0.3
Calibration Data Storage	On-board non-volatile memory

Measurement Accuracy & Calibration

Reference Calibration Uncertainty	±2.2% (1000 to 1600 nm, at reference conditions)
Noise Level	<50 pW (1200 to 1600 nm)

Compatibility & System Accessories

Compatible Mainframe Models	HP 8153A, HP 8152A
Compatible Interface Modules	HP 81533B (for HP 8153A)

Environmental & Compliance

Storage Temperature	-40 to +70 °C
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Performance

Maximum Safe Input Power	+10 dBm
Linearity	±0.04 dB (+3 to -60 dBm at 23 °C ± 5 °C)
Polarization Dependence	< ±0.01 dB (typical at 1310 nm / 1550 nm)

Environmental

Operating Humidity	0% to 95% R.H. (non-condensing)
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TECHNOLOGY

Cooled Germanium PIN Diode

APPLICATIONS

Fiber optic power measurement and calibration

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