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Data Sheet
August 13, 2026

HP / AGILENT

HP / Agilent 81625B High Power InGaAs Optical Head 27dBm

HP / Agilent 81625B High Power InGaAs Optical Head The Agilent/HP 81625B isahigh-power remote optical power head with a 5 mm InGaAs sensor for low PDL and low spectral ripple component test. Wavelength coverage is 850 to 1650 nm with power range +27 to -70 dBm (1250 to 1650 nm) and +23 to -70 dBm across the full 850 to 1650 nm band. It must be operated through an 81618A single or 81619A dual interface module in 8163/8164/8166 mainframes. Magnetic D-shape adapters provideasafe stand. High-power EDFA and Raman amplifier output measurement; DWDM component characterization; open-beam and connectorized fiber power metrology to +27 dBm class. The Agilent/HP 81625B isahigh-power remote optical power head with a 5 mm InGaAs sensor for low PDL and low spectral ripple component test. Wavelength coverage is 850 to 1650 nm with power range +27 to -70 dBm (1250 to 1650 nm) and +23 to -70 dBm across the full 850 to 1650 nm band. It must be operated through an 81618A single or 81619A dual interface module in 8163/8164/8166 mainframes. Magnetic D-shape adapters provideasafe stand. High-power EDFA and Raman amplifier output measurement; DWDM component characterization; open-beam and connectorized fiber power metrology to +27 dBm class.

MODEL **HP / Agilent 81625B**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **81625B**	LISTING **https://aumictechlabs.com/products/81625b-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 81625B is a high-power InGaAs optical head for near-infrared power measurement across the 850 nm to 1650 nm spectrum. This detector module delivers dynamic range to +27 dBm, making it suited for characterizing optical components and systems with elevated signal levels. The 5 mm diameter InGaAs sensor provides low polarization-dependent loss, low spectral ripple, and high return loss performance. Operation requires integration with either the Agilent 81618A (single-channel) or 81619A (dual-channel) interface modules within Agilent 8163, 8164, or 8166 series multichannel mainframes. The detector operates from 0 °C to +35 °C at relative humidity less than 80%, with wavelength measurement uncertainty of ±5.0% across the 950 nm to 1630 nm range. No analog output is provided. Connector adapters are sold separately. Technical Specifications Sensor Element: InGaAs (Indium Gallium Arsenide) Wavelength Range: 850 nm to 1650 nm Detector Diameter: 5 mm Power Range: +27 dBm to −70 dBm (1250–1650 nm); +23 dBm to −70 dBm (850–1650 nm) Dynamic Range: Up to +27 dBm Wavelength Accuracy: ±5.0% (950 nm to 1630 nm) Polarization Dependent Loss: Low PDL design Spectral Ripple: Low Return Loss: High Operating Temperature: 0 °C to +35 °C Operating Humidity: <80% RH (10 °C to 35 °C) Maximum Altitude: 2000 m Pollution Degree: 2 Power Supply (Mainframe): AC 100–240 V ±10%, 50/60 Hz Power Consumption (Mainframe): 280 VA maximum Key Features InGaAs semiconductor optimized for 900–1700 nm short-wave infrared detection Extended wavelength cutoff to 1.68 µm captures 1.3 µm and 1.55 µm fiber transmission windows 5 mm active aperture Magnetic D-shape adapter with safety stand included Wavelength measurement uncertainty ±5.0% over 950–1630 nm Typical Applications Telecommunications wavelength characterization (1310 nm, 1550 nm) Optical component power verification Fiber-optic system testing SWIR optical power analysis Compatibility & Integration Requires Agilent 81618A (single) or 81619A (dual) interface module Compatible with Agilent 8163A/B, 8164A/B, and 8166A/B mainframes Connector adapter sold separately Mainframe dimensions: 145 mm (H) × 426 mm (W) × 545 mm (L) Mainframe weight: 20 kg net

Features & description

From manufacturer datasheet

Features

• 5 mm InGaAs high-power optical head • +27 dBm upper range in C/L band window • Low polarization and interference ripple uncertainty • Requires 81618A or 81619A interface module • Analog output included on high-power head family

81625B Characteristics / Specifications

PARAMETER	VALUE
Model	81625B
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	High power optical power head
Sensor Element	InGaAs 5 mm diameter
Wavelength Range	850 nm to 1650 nm
Power Range 1250 To 1650 nm	+27 dBm to -70 dBm
Power Range 850 To 1650 nm	+23 dBm to -70 dBm
Applicable Fiber	standard SM and MM to 100 um core NA 0.3; parallel beam max 4 mm
Uncertainty At Reference Conditions	3.0 percent (950 to 1630 nm)
Total Uncertainty	5.0 percent plus 500 pW (950 to 1630 nm)
Relative Uncertainty Polarization	0.005 dB (typ 0.002 dB)
Relative Uncertainty Spectral Ripple	0.005 dB (typ less than 0.002 dB)
Linearity At 23 Plus Minus 5 C	0.04 dB plus 500 pW (CW +27 to -50 dBm; 950 to 1630 nm)
Linearity Operating Temp Range	0.15 dB plus 500 pW
Return Loss	45 dB (greater than 60 dB typical with D-shape adapter and angled SMF)
Noise Peak To Peak	500 pW
Averaging Time Minimal	100 us
Analog Output	included
Dimensions	57 mm x 66 mm x 156 mm
Net Weight	0.5 kg
Recommended Recalibration Period	2 years
Operating Temperature	0 C to +35 C (30 C for greater than +20 dBm input power)
Warmup Time	40 minutes
Interface Modules	81618A single; 81619A dual
Mainframe Compatibility	8163A/B 8164A/B 8166A/B

PARAMETER	VALUE
Related Standard InGaAs Head	81624B (+10 to -90 dBm class)
Related High Power OEM Column	81626B (same high-power InGaAs table in some Agilent 8162xB datasheets)
Alias	HP 81625B; Agilent 81625B; Keysight 81625B

General Specifications & Supplementary Characteristics

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Alias	HP 81625B; Agilent 81625B; Keysight 81625B Notes Numeric table aligns with Agilent high-power InGaAs optical-head specifications published for the +27 dBm remote-head class (81625B product listings / 81626B column in 8162xB technical specifications). Confirm faceplate model marking and interface module before metrology use.

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

Specifications

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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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