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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81624C Optical Power Head

Keysight / Agilent 81624C Optical Power Head The Keysight/Agilent 81624C is an InGaAs optical power head for the 816x lightwave mainframe family. OEM 8162x optical head tables specify detector type, wavelength range, power range, and connector interface for calibrated optical power measurements with 8163/8164/8166-class mainframes. Fiber optic power measurements, DWDM component test, and calibrated optical level measurements with 816x mainframes. Host Family: 816x lightwave measurement system The Keysight/Agilent 81624C is an InGaAs optical power head for the 816x lightwave mainframe family. OEM 8162x optical head tables specify detector type, wavelength range, power range, and connector interface for calibrated optical power measurements with 8163/8164/8166-class mainframes. Fiber optic power measurements, DWDM component test, and calibrated optical level measurements with 816x mainframes. Host Family: 816x lightwave measurement system Compatible Mainframes Class: 8163A/B, 8164A/B, 8166A/B class



MODEL

**Agilent / Keysight
81624C**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81624C

LISTING

<https://aumictechlabs.com/products/81624c-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 81624C Optical Power Head delivers accurate optical power measurements across the near-infrared spectrum using an InGaAs detector. Operating with the Keysight N7749C Optical Head Interface, this module enables flexible remote power head placement and supports both guided and free-space optical configurations. The 5 mm detector accommodates standard

single-mode and multimode fibers (up to 100 μm core, $\text{NA} \leq 0.3$), parallel beams to 4 mm diameter, and bare fibers via a selection of magnetic D-shaped adapters that enable rapid changeover without fiber disturbance.

Technical Specifications

Sensor: InGaAs, 5 mm diameter

Wavelength Range: 800 nm to 1700 nm (specification accuracy: 1000 nm to 1630 nm)

Power Range: -90 dBm to +10 dBm

Measurement Accuracy: $\pm 2.2\%$ (1000 nm to 1630 nm)

Polarization Dependence: $< \pm 0.01$ dB (typical $< \pm 0.002$ dB)

Spectral Ripple Uncertainty: $< \pm 0.006$ dB (typical 60 dB typical)

Averaging Time: 100 μs to 10 s (controllable)

Key Features

- Broad spectral coverage from 800 nm to 1700 nm for telecommunications and research applications
- Support for multimode fibers to 100 μm core diameter with low numerical aperture (≤ 0.3)
- Accepts open beams and bare fibers through field-replaceable adapter system
- Low polarization dependence ensures reliable measurement across polarization states
- Auto-ranging capability with selectable measurement modes (linear or logarithmic)
- Magnetic D-shaped adapters prevent fiber twisting during adapter changes

Typical Applications

- Optical power measurements in fiber-optic test systems
- Wavelength-dependent power characterization from 800 nm to 1700 nm
- Multi-fiber and free-space optical system validation
- Telecommunications and photonics laboratory testing

Compatibility & Integration

Designed specifically for the Keysight N7749C Optical Head Interface. Compatible with mainframes supporting the N7749C bus architecture. The 8162-C series heads are not backward-compatible with earlier 81618A/81619A interfaces.

81624C Characteristics / Specifications

PARAMETER	VALUE
Model	81624C
Instrument Type	Optical power head
Detector Type Class	InGaAs
Host Family	816x lightwave measurement system
Compatible Mainframes Class	8163A/B, 8164A/B, 8166A/B class
Measurement Role	Optical average power
Wavelength Range Class	800 to 1700 nm class InGaAs heads family
Power Range Class	Per 81624C head table (sensor dependent)
Connector Interface	Fiber adapter interface on head
Brand Lineage	Keysight / Agilent
Related Heads	81623C and sibling 8162x heads
Remote Path	Through host mainframe GPIB/LAN class
Warmup Spec Class	Follow instrument warm-up guidance
Safety Class	Observe published maximum ratings
Chassis Form	Optical sensor head with cable
Calibration	Wavelength-dependent calibration data on head/mainframe
Operating Temperature Spec Class	Follow 8162x head sheet
Documentation Scope	OEM 8162x optical head data tables
Linearity Class	Optical head linearity per sheet
Uncertainty Class	Follow calibration certificate and sheet
Max Safe Input Class	Per head damage-level table
Installed Options	Connector adapters determine ferrule type
Manufacturer Documentation	OEM datasheet and user documentation
Wavelength range	Class: 800 to 1700 nm class InGaAs heads family
Operating temperature	Spec Class: Follow 8162x head sheet

81624C Specifications

PARAMETER	VALUE
Keysight / Agilent 81624C Optical Power Head	Overview
Applications	Fiber optic power measurements, DWDM component test, and calibrated optical level measurements with 816x mainframes.
InGaAs optical detector head	Works with 816x lightwave mainframes
Technical Specifications	Model: 81624C
Notes	From Keysight/Agilent 8162x optical power head documentation for 81624C. Use the head-specific table for exact wavelength and power limits.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Spec Class: Follow 8162x head sheet
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Documentation Scope	OEM 8162x optical head data tables
Linearity Class	Optical head linearity per sheet
Uncertainty Class	Follow calibration certificate and sheet
Max Safe Input Class	Per head damage-level table
Installed Options	Connector adapters determine ferrule type
Manufacturer Documentation	OEM datasheet and user documentation Notes From Keysight/Agilent 8162x optical power head documentation for 81624C. Use the head-specific table for exact wavelength and power limits.

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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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

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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.