

AGILENT

81624A

The Agilent 81624A is a high-performance optical power head designed for precise measurements of fiber optic power. Featuring a large-area 5 mm Indium Gallium Arsenide (InGaAs) detector, it covers a broad wavelength range of 800 nm to 1700 nm and provides exceptional linearity and low noise floor performance.

SPECIFICATIONS

General

Interfaces	Proprietary connection cable to interface module
Recommended Calibration Interval	2 years

Physical

Power Supply	Powered via the 81618A or 81619A interface module from the mainframe
Operating Temperature	0 °C to 40 °C °C
Dimensions (W×H×D)	58 mm × 55 mm × 80 mm mm
Weight	0.25 kg kg

Optical & Sensor Specifications

Detector Element Material	InGaAs (Indium Gallium Arsenide)
Sensor Active Area Diameter	5 mm
Wavelength Range	800 nm to 1700 nm
Optical Power Measurement Range	-90 dBm to +10 dBm
Maximum Safe Input Power	+16 dBm
Return Loss	> 40 dB
Polarization Dependence	< ±0.01 dB (typically)

Measurement Accuracy & Calibration

Reference Calibration Uncertainty	±2.2% (1000 nm to 1630 nm)
Reference Calibration Uncertainty (Extended Range)	±4.0% (800 nm to 999 nm, 1631 nm to 1700 nm)
Total Operating Power Uncertainty	±3.0% (1000 nm to 1630 nm)
Total Operating Power Uncertainty (Extended Range)	±5.0% (800 nm to 999 nm, 1631 nm to 1700 nm)
Linearity (Power Range +10 to -70 dBm)	±0.015 dB (at 23 °C ± 5 °C)
Linearity (Power Range -70 to -80 dBm)	±0.05 dB (at 23 °C ± 5 °C)
Noise (Peak-to-Peak)	< 20 fW (1200 nm to 1630 nm, 1 s average, constant temperature)
Zeroing Drift	< 20 fW (over 30 minutes, constant temperature)

Connectivity & Interfaces

Mainframe Connection Cable Length	2 m
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Physical & Mechanical Properties

Aperture Diameter	5 mm
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Environmental & Compliance

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

Compatibility & System Accessories

Compatible Mainframe Models	Agilent / Keysight 8163A, 8163B, 8164A, 8164B, 8166A, 8166B
Compatible Interface Modules	Agilent / Keysight 81618A (single channel), 81619A (dual channel)

Operating Conditions

Warm-up Time	40 min
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TECHNOLOGY

Indium Gallium Arsenide (InGaAs) Photodiode

APPLICATIONS

Fiber Optic 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.