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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81661A, Optical Power Head

Agilent Keysight 81661A DFB Laser Source Module The Agilent 81661A isaCW DFB laser source module for 8163/8164/8166 lightwave mainframes. OEM option listings give center wavelengths such as 1529.55 nm (option 309) or 1310.00 nm (option 998), tuning of plus or minus 0.500 nm, and Panda PMF APC outputs with typical SMSR about 45 dB. Fixed-channel DWDM and amplifier loading, narrow-linewidth optical stimulus on selected ITU or 1310 nm options, and mainframe-based multi-source racks. Option-coded center wavelength and ITU frequency The Agilent 81661A isaCW DFB laser source module for 8163/8164/8166 lightwave mainframes. OEM option listings give center wavelengths such as 1529.55 nm (option 309) or 1310.00 nm (option 998), tuning of plus or minus 0.500 nm, and Panda PMF APC outputs with typical SMSR about 45 dB. Fixed-channel DWDM and amplifier loading, narrow-linewidth optical stimulus on selected ITU or 1310 nm options, and mainframe-based multi-source racks. Option-coded center wavelength and ITU frequency Wavelength tuning of plus or minus 0.500 nm around the option peak

**MODEL****Agilent / Keysight
81661A****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****81661A****LISTING**<https://aumictechlabs.com/products/81661a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 81661A is an optical power head designed for precision measurement of optical signal power in telecommunications and photonics applications. This sensor integrates with compatible mainframe systems to deliver reliable, repeatable power measurements across

defined wavelength bands. It serves optical network testing, research and development, and manufacturing environments where accurate optical power characterization is essential.

Technical Specifications

Measurement Performance

Optical power measurement across telecommunications and general optical testing wavelengths

High measurement accuracy with uncertainty dependent on wavelength, power level, and ambient conditions

Fine resolution enabling detection of small power variations

Rapid measurement speed supporting efficient production testing cycles

High long-term and short-term stability for consistent results over time

Excellent measurement repeatability yielding highly similar sequential measurements

Optical Interface

Standard optical connectors compatible with common fiber optic patch cords (FC/PC, SC)

Compatibility with single-mode (SMF) and multi-mode (MMF) fibers

Electrical Requirements

Powered from compatible mainframe or power meter host instrument

Key Features

Direct integration with Agilent/Keysight mainframe test systems

Stable performance under varying environmental conditions

Optimized for spectral bands relevant to optical communications

Standard fiber optic connector compatibility

Typical Applications

Optical network testing and validation

Research and development in photonics

Manufacturing quality assurance and characterization

Optical signal power verification in telecommunications systems

Compatibility & Integration

The 81661A connects directly to Agilent/Keysight mainframe instruments, requiring no independent power supply. Optical connection is achieved through standard patch cords with FC/PC or SC connectors. Performance characteristics remain consistent across both single-mode and multi-mode fiber applications.

Features & description

From manufacturer datasheet

Polarization Extinction Typical: typ greater than 20 dB

Connector Interface Accessory: 81000NI class interface required separately Operating Temperature Class Compact Dfb: 15 C to 35 C Warm Up Time Class Compact Dfb: 60 minutes Recalibration Period Class Compact Dfb: 1 year Module Dimensions Class Compact Source: 75 mm x 32 mm x 335 mm Module Weight Class Compact Source: 0.5 kg Related Family Sheet: 5988-1570EN DFB source modules Internal Modulation Class Family: 200 Hz to 100 kHz class on later DFB sheets Output Attenuation Class Family: 6 dB in 0.1 dB steps class on later DFB sheets Notes 81661A option wavelength, tuning, repeatability, fiber, SMSR, PER, and power-stability rows from Agilent 81661A option listings. Mechanical/temperature/recalibration class rows mirror compact DFB source module family sheet 5988-1570EN; confirm option power class on the faceplate.

81661A Characteristics / Specifications

PARAMETER	VALUE
Model	81661A
Instrument Type	CW DFB laser source module
Host Mainframes	8163A/B 8164A/B 8166A/B
Center Wavelength Example Option 3	1529.55 nm
Itu Frequency Example Option 3	196.00 THz
Center Wavelength Example Option 9	1310.00 nm
Itu Frequency Example Option 9	228.85 THz
Wavelength Tuning Range	plus or minus 0.500 nm
Wavelength Display Resolution	0.01 nm
Wavelength Repeatability	plus or minus 0.003 nm (typ plus or minus 0.001 nm)
Fiber Type	Panda PMF 9/125 um
Output Connector Class	APC angled contact
Maximum Output Power Option Dependent	typ 0 dBm or 10 dBm by option
Power Stability 15 Min Typical	typ plus or minus 0.005 dB
Sidemode Suppression Typical	typ 45 dB
Polarization Extinction Typical	typ greater than 20 dB
Connector Interface Accessory	81000NI class interface required separately
Operating Temperature Class Compact Dfb	15 C to 35 C
Warm Up Time Class Compact Dfb	60 minutes
Recalibration Period Class Compact Dfb	1 year
Module Dimensions Class Compact Source	75 mm x 32 mm x 335 mm
Module Weight Class Compact Source	0.5 kg
Related Family Sheet	5988-1570EN DFB source modules
Internal Modulation Class Family	200 Hz to 100 kHz class on later DFB sheets

PARAMETER	VALUE
Output Attenuation Class Family	6 dB in 0.1 dB steps class on later DFB sheets
Maximum output power	Option Dependent: typ 0 dBm or 10 dBm by option
Attenuation	Class Family: 6 dB in 0.1 dB steps class on later DFB sheets
Power stability	15 Min Typical: typ plus or minus 0.005 dB
Operating temperature	Class Compact Dfb: 15 C to 35 C

81661A Specifications

PARAMETER	VALUE
Agilent Keysight 81661A DFB Laser Source Module	Overview
APC angled contact optical interface	Fits 8163A/B 8164A/B 8166A/B lightwave mainframes
Technical Specifications	Model: 81661A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class Compact Dfb: 15 C to 35 C
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Warm Up Time Class Compact Dfb	60 minutes
Recalibration Period Class Compact Dfb	1 year
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Related Family Sheet	5988-1570EN DFB source modules
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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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PARAMETER	VALUE
Model	81661A
Instrument Type	CW DFB laser source module
Host Mainframes	8163A/B 8164A/B 8166A/B
Center Wavelength Example Option 309	1529.55 nm
Itu Frequency Example Option 309	196.00 THz
Center Wavelength Example Option 998	1310.00 nm
Itu Frequency Example Option 998	228.85 THz
Wavelength Tuning Range	plus or minus 0.500 nm
Wavelength Display Resolution	0.01 nm
Wavelength Repeatability	plus or minus 0.003 nm (typ plus or minus 0.001 nm)
Fiber Type	Panda PMF 9/125 um
Output Connector Class	APC angled contact
Maximum Output Power Option Dependent	typ 0 dBm or 10 dBm by option
Power Stability 15 Min Typical	typ plus or minus 0.005 dB
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Related Family Sheet	5988-1570EN DFB source modules
Internal Modulation Class Family	200 Hz to 100 kHz class on later DFB sheets
Output Attenuation Class Family	6 dB in 0.1 dB steps class on later DFB sheets

Notes

81661A option wavelength, tuning, repeatability, fiber, SMSR, PER, and power-stability rows from Agilent 81661A option listings. Mechanical/temperature/recalibration class rows mirror compact DFB source module family sheet 5988-1570EN; confirm option power class on the faceplate.

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 ·
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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.