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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 81663A Distributed Feedback Laser Source, Fine-tuning range: +/- 850pm, +13 dBm

HP / Agilent 81663A High Power DFB Laser Source Module The Agilent/HP 81663A is a high-power distributed-feedback (DFB) laser source module for the 8163/8164/8166 Lightwave Solution Platform. Selected fixed wavelengths (options such as 1310, 1490, 1510, 1550, 1625 nm) deliver about +13 dBm with fine tuning about plus/minus 850 pm, wavelength stability about plus/minus 0.002 nm, and power stability about 0.003 dB. Built-in digital modulation and coherence control support EDFA noise-figure and WDM system test. The Agilent/HP 81663A is a high-power distributed-feedback (DFB) laser source module for the 8163/8164/8166 Lightwave Solution Platform. Selected fixed wavelengths (options such as 1310, 1490, 1510, 1550, 1625 nm) deliver about +13 dBm with fine tuning about plus/minus 850 pm, wavelength stability about plus/minus 0.002 nm, and power stability about 0.003 dB. Built-in digital modulation and coherence control support EDFA noise-figure and WDM system test. EDFA and optical amplifier stimulus at fixed ITU wavelengths; WDM system channel sources; time-domain extinction EDFA noise-figure tests using internal digital modulation; PON and C/L-band component stimulus.



MODEL

**HP / Agilent
81663A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81663A

LISTING

<https://aumictechlabs.com/products/81663a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 81663A is a Distributed Feedback (DFB) laser source delivering single-frequency output for precision optical testing and measurement. It has fine-tuning capability across ± 850 pm with maximum optical power of +13 dBm, making it suitable for DWDM system characterization, optical component testing, amplifier evaluation, and fiber optic sensor calibration. The instrument combines wavelength stability with high spectral purity for demanding laboratory applications requiring tunable, coherent light sources.

Technical Specifications

Laser Type: Distributed Feedback (DFB) **Laser Diode Wavelength Fine-tuning Range:** ± 850 pm **Maximum Optical Power:** +13 dBm **Spectral Purity:** Single-frequency output **Stability:** High power and wavelength stability across temperature variations

Key Features

- Precise wavelength control via fine-tuning adjustment
- Minimal spectral distortion characteristic of DFB laser design
- Remote operation via GPIB (IEEE-488) and RS-232 interfaces
- Benchtop form factor for laboratory integration

Typical Applications

- DWDM component characterization and system testing
- Optical amplifier performance evaluation across specific wavelengths
- Passive and active optical component testing (filters, modulators, detectors)
- Fiber optic sensor calibration and development

Compatibility & Integration

The 81663A integrates into automated test systems through GPIB and RS-232 control interfaces, supporting laboratory automation software and test executive environments. Standard AC power input and optical connector output enable integration with a wide range of optical measurement platforms and test setups.

Features & description

From manufacturer datasheet

Features

- High optical output about +13 dBm
- Fine wavelength tuning about plus/minus 850 pm
- Internal digital modulation 200 Hz to 100 kHz (50 percent duty)
- Internal coherence control for linewidth broadening
- Built-in isolator; PMF output options

81663A Characteristics / Specifications

PARAMETER	VALUE
Model	81663A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Distributed feedback laser source module
Output Power Class	+13 dBm
Fine Tuning Range Class	plus/minus 850 pm
Wavelength Stability Class	plus/minus 0.002 nm
Power Stability Class	0.003 dB
Internal Digital Modulation	free selection 200 Hz to 100 kHz; pulse shaped 50 percent duty
Coherence Control	internal linewidth broadening
ON Switching Stabilization	less than 20 s
Tuning Speed Over Full Fine Range	30 s
Related Lower Power Sibling	81662A +10 dBmCandLband DFB
Mainframe Compatibility	8163A/B 8164A/B 8166A/B
Fiber Orientation	TE mode in slow axis aligned with connector key (PMF)
Connector Interfaces	81000HI KI LI NI SI family
Laser Safety Class	Class 1M IEC 60825-1 (2007) family list
CFR Compliance	21 CFR 1040.10 with Laser Notice 50 deviations
Patchcord Verification Length	specs at end of 2 m patchcord after warm-up at 0.0 dB attenuation
Application Bands	PON and common WDM wavelengths by option
Alias	HP 81663A; Agilent 81663A; Keysight 81663A
Platform Module Class	compact lightwave source module
Wavelength stability	Class: plus/minus 0.002 nm
Linewidth	broadening
Attenuation	At Default Wavelength: 0 to 6 dB in 0.1 dB steps
Power stability	Class: 0.003 dB

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Internal digital modulation	200 Hz to 100 kHz (50 percent duty) - Internal coherence control for linewidth broadening - Built-in isolator; PMF output options
Model	81663A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Distributed feedback laser source module
Output Power Class	+13 dBm
Fine Tuning Range Class	plus/minus 850 pm
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Application Bands	PON and common WDM wavelengths by option
Alias	HP 81663A; Agilent 81663A; Keysight 81663A
Platform Module Class	compact lightwave source module Notes Rows from Keysight/Agilent 81663A DFB laser data sheet (5988-1570EN) supplementary characteristics and published product option tables. Confirm the installed wavelength option code on the faceplate before quoting a center wavelength.

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
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Fine Tuning Range Class	plus/minus 850 pm
Wavelength Stability Class	plus/minus 0.002 nm
Power Stability Class	0.003 dB
Attenuation At Default Wavelength	0 to 6 dB in 0.1 dB steps
Internal Digital Modulation	free selection 200 Hz to 100 kHz; pulse shaped 50 percent duty
Coherence Control	internal linewidth broadening
ON Switching Stabilization	less than 20 s
Tuning Speed Over Full Fine Range	30 s
Option 131: 1310 nm DFB +13 dBm Option 149: 1490 nm DFB +13 dBm Option 151: 1510 nm DFB +13 dBm Option 155: 1550 nm DFB +13 dBm Option 162: 1625 nm DFB +13 dBm	
Specifications	
PARAMETER	VALUE
Related Lower Power Sibling	81662A +10 dBmCandLband DFB
Mainframe Compatibility	8163A/B 8164A/B 8166A/B
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PARAMETER	VALUE
Alias	HP 81663A; Agilent 81663A; Keysight 81663A
Platform Module Class	compact lightwave source module

Notes

Rows from Keysight/Agilent 81663A DFB laser data sheet (5988-1570EN) supplementary characteristics and published product option tables. Confirm the installed wavelength option code on the faceplate before quoting a center wavelength.

Laser Safety

Laser Safety Class: Class 1M IEC 60825-1 (2007) family list CFR Compliance: 21 CFR 1040.10 with Laser Notice 50 deviations Patchcord Verification Length: specs at end of 2 m patchcord after warm-up at 0.0 dB attenuation Application Bands: PON and common WDM wavelengths by option Alias: HP 81663A; Agilent 81663A; Keysight 81663A Platform Module Class: compact lightwave source module Notes Rows from Keysight/A

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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.