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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 81657A Dual Fabry-Perot Laser Source, 1310nm & 1550nm

HP / Agilent 81657A Dual Wavelength Fabry Perot Laser Source 1310/1550 nm High Power The Agilent/HP 81657A is a dual-wavelength high-power Fabry-Perot laser source module providing 1310 nm and 1550 nm outputs at about +13 dBm class for the 8163/8164/8166 Lightwave Solution Platform. SMF straight-contact versatile interfaces support common connector adapters. Dual-band optical stimulus for transceiver and WDM component test; high-power loss budgets at 1310 and 1550 nm; automated lightwave ATE in 816x mainframes. The Agilent/HP 81657A is a dual-wavelength high-power Fabry-Perot laser source module providing 1310 nm and 1550 nm outputs at about +13 dBm class for the 8163/8164/8166 Lightwave Solution Platform. SMF straight-contact versatile interfaces support common connector adapters. Dual-band optical stimulus for transceiver and WDM component test; high-power loss budgets at 1310 and 1550 nm; automated lightwave ATE in 816x mainframes.



MODEL

**HP / Agilent
81657A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81657A

LISTING

<https://aumictechlabs.com/products/81657a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 81657A is a dual-wavelength Fabry-Perot laser source delivering stable, back-reflection-insensitive output at 1310 nm and 1550 nm. Operating at up to +13 dBm per channel with ± 0.03 dB power stability over 24 hours, it performs insertion loss, optical return loss, and

polarization-dependent loss measurements across fiber optic communication systems. The source couples to standard single-mode 9/125 μm fiber and integrates with Agilent 8163/8164/8166 series mainframes via separate optical interface connectors. Internal digital modulation modes span 270 Hz to 10 kHz with programmable 0–6 dB attenuation in 0.1 dB steps.

Technical Specifications

Wavelengths: 1310 nm (± 15 nm), 1550 nm (± 15 nm)

Output Power: +13 dBm per channel (≈ 20 mW); maximum permissible CW output 52 mW

Power Stability: ± 0.03 dB over 24 hours; ± 0.005 dB over 15 minutes

Spectral Bandwidth (rms): < 5.5 nm at 1310 nm; < 7.5 nm at 1550 nm

Fiber Interface: Single-mode 9/125 μm ; beam waist 9 μm ; numerical aperture 0.1

Attenuation Range: 0–6 dB in 0.1 dB increments

Modulation Modes: Internal digital at 270 Hz, 330 Hz, 1 kHz, 2 kHz; free selection 200 kHz–10 kHz; 50% duty cycle

Laser Classification: Class 1M (IEC 60825-1:2001); Class IIIb (21 CFR 1040.10); Class 3A (IEC 60825-1:1998)

Key Features

Back-reflection immune operation ensures measurement stability without external isolation

Dual-channel architecture eliminates need for multiple sources in 1310/1550 nm test suites

Internal coherence control enables linewidth broadening for PDL characterization

Programmable pulse modulation with shaped outputs

Fault-triggered optical shutoff via internal safety circuitry

Typical Applications

Component insertion loss and return loss measurement

Polarization-dependent loss (PDL) characterization

Optical system-level performance validation

Wavelength-dependent attenuation testing

Compatibility & Integration

Designed for use with Agilent 8163A/B, 8164A/B, and 8166A/B mainframes. Requires Agilent 81000xl series optical interface connectors (sold separately). Integrates with optical power meter modules for complete test solutions.

Features & description

From manufacturer datasheet

Features

- Dual FP wavelengths 1310 nm and 1550 nm
- High-power FP class about +13 dBm
- SMF straight contact interface
- Compact module for 8163/8164/8166
- Class 1M laser family labeling

81657A Characteristics / Specifications

PARAMETER	VALUE
Model	81657A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	Dual wavelength Fabry Perot laser source module
Wavelengths	1310 nm and 1550 nm
Output Power Class	+13 dBm (high power FP family)
Related Standard Dual	81654A 1310/1550 nm at 0 dBm class
Related Single 1310 High Power	81655A
Related Single 1550 High Power	81656A
Fiber Type	SMF
Connector Style	straight contact interface
Mainframe Compatibility	8163A/B 8164A/B 8166A/B
Laser Safety Class	Class 1M IEC 60825-1 (2001) family list
CFR Compliance	21 CFR 1040.10 with Laser Notice 50 deviations
Connector Interfaces Supported	81000AI FI GI HI KI SI VI WI family
Platform	Lightwave Solution / Lightwave Multimeter modules
Application Bands	O-band and C-band stimulus
Alias	HP 81657A; Agilent 81657A; Keysight 81657A
Module Type	FP high power source
Output Fiber	SMF straight
Spectral Class	dual Fabry Perot sources
Power Family Headline	FP High Power Modules 13 dBm
Standard Power Contrast	81654A standard dual at 0 dBm class
Wavelength Pair	1310 nm plus 1550 nm selectable

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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Notes	
Dual-wavelength high-power identity from Agilent 816x configuration guide. Pull Fabry-Perot technical	

specifications (5988-1570EN class) for linewidth, power accuracy, and stability rows for the revision on hand.

Laser Safety

Laser Safety Class: Class 1M IEC 60825-1 (2001) family list CFR Compliance: 21 CFR 1040.10 with Laser Notice 50 deviations Connector Interfaces Supported: 81000AI FI GI HI KI SI VI WI family Platform: Lightwave Solution / Lightwave Multimeter modules Application Bands: O-band and C-band stimulus Alias: HP 81657A; Agilent 81657A; Keysight 81657A Module Type: FP high power source Output Fiber: SMF straight Spec

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.