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Data Sheet
August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81614A Fabry-Perot Laser Source Module

HP Agilent Keysight 81614A Return Loss Module 1550/1625 nm The Agilent/Keysight 81614A isareturn-loss module with internal Fabry-Perot lasers for 8163/8164/8166 mainframes. OEM 81610A/11A/12A/13A/14A Return Loss Module User's Guide Table 4 lists typical output minus 4 dBm, 1550 nm / 1625 nm plus or minus 20 nm typical, 75 dB dynamic range, and InGaAs sensors on 9/125 um SM fiber. Connector, component, and patchcord return-loss measurements at the internal FP wavelengths; plug-and-play or user-calibration modes with the 81610CC reference cable. The Agilent/Keysight 81614A isareturn-loss module with internal Fabry-Perot lasers for 8163/8164/8166 mainframes. OEM 81610A/11A/12A/13A/14A Return Loss Module User's Guide Table 4 lists typical output minus 4 dBm, 1550 nm / 1625 nm plus or minus 20 nm typical, 75 dB dynamic range, and InGaAs sensors on 9/125 um SM fiber. Connector, component, and patchcord return-loss measurements at the internal FP wavelengths; plug-and-play or user-calibration modes with the 81610CC reference cable. Internal dual FP lasers plus InGaAs sensors and couplers

MODEL **Agilent / Keysight 81614A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **81614A**	LISTING **https://aumictechlabs.com/products/81614a-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 81614A Fabry-Perot Laser Source Module is a precision optical light source engineered for component characterization and loss measurement in multichannel test platforms. This stabilized Fabry-Perot laser diode delivers consistent output across demanding optical testing applications, including insertion loss, optical return loss, and polarization dependent loss (PDL) measurements. The module exhibits exceptional insensitivity to back reflections, maintaining performance integrity even in high-reflection optical paths.Technical Specifications Laser Type: Fabry-Perot Laser Diode Output Power: > 0 dBm (> 1 mW) CW Power Stability (short-term, 15 min): < ±0.005 dB (typical) CW Power Stability (long-term, 24 h): ±0.03 dB (typical) Spectral Width (rms): < 3.5 nm at 1310 nm; < 4.5 nm at 1550 nm Output Attenuation Range: 0 dB to 6 dB in 0.1 dB steps Internal Digital Modulation: 270 Hz, 330 Hz, 1 kHz, 2 kHz, and user-selectable 200 kHz to 10 kHz with 50% duty cycle pulse shaping Safety Classification: Class I per IEC 60825-1 (1998) and FDA CFR 21 (1995) Operating Temperature: 0°C to +45°C Humidity: Non-condensing Dimensions (typical): 75 mm × 32 mm × 335 mm Weight (typical): 0.5 kgKey Features Back-reflection insensitivity for stable operation in reflective environments Improved coherence control with linewidth broadening capability Precision output attenuation in 0.1 dB increments Short and long-term power stabilization for extended measurement campaigns Requires straight output connectors; specifications valid at end of 2-meter fiber cableTypical Applications Optical insertion loss measurement Optical return loss characterization PDL testing Component validation in fiber optic systemsCompatibility & Integration The 81614A integrates into the Keysight Multichannel Platform, enabling firmware upgrades and modular expansion. Designed for use with optical power meter modules to form complete optical testing solutions.

81614A Characteristics / Specifications

PARAMETER	VALUE
Model	81614A
Instrument Type	Return loss module with internal source
Series Family	Agilent 8161xA return loss modules
Source Type	Fabry Perot laser, internal
Output Power Typical	typical minus 4 dBm
Center Wavelength	1550 nm / 1625 nm plus or minus 20 nm typical
Sensor Element	InGaAs
Fiber Type	standard single-mode 9/125 um
Dynamic Range	75 dB
Relative Uncertainty Rl 55 User Cal	less than plus or minus 0.5 dB, typical less than plus or minus 0.3 dB, RL less than or equal to 55 dB, user calibration
Relative Uncertainty Rl 60 User Cal	less than plus or minus 0.6 dB, typical less than plus or minus 0.4 dB, RL less than or equal to 60 dB
Relative Uncertainty Rl 65 User Cal	less than plus or minus 0.8 dB, typical less than plus or minus 0.5 dB, RL less than or equal to 65 dB
Relative Uncertainty Rl 70 User Cal	less than plus or minus 1.9 dB, typical less than plus or minus 0.8 dB, RL less than or equal to 70 dB, immediately after calibration
Relative Uncertainty Rl 75 Typical	typical less than plus or minus 2.0 dB, RL less than or equal to 75 dB, immediately after calibration
Plug And Play Rl 55 Typical	typical less than plus or minus 0.6 dB, RL less than or equal to 55 dB
Plug And Play Rl 60 Typical	typical less than plus or minus 1.5 dB, RL less than or equal to 60 dB
Total Uncertainty Add User Cal	add plus or minus 0.2 dB
Total Uncertainty Add Plug And Play Typical	add typical plus or minus 0.2 dB
Maximum Safe Input Power	+16 dBm
Connector Angle Requirement	angled contact 8 degrees at input and output
Reference Cable	81610CC, return loss uncertainty plus or minus 0.2 dB
Reference Cable Wavelengths	1310 nm and 1550 nm plus or minus 20 nm

PARAMETER	VALUE
Laser Safety Class	Class 1 per IEC 60825-1 (2007)
Laser Max Cw Output 81613A Table	less than 1.8 mW max CW at connector in the 81613A laser-safety table; 9 um beam waist, NA 0.1
Dimensions	75 mm x 32 mm x 335 mm
Weight	1 kg
Recalibration Period	2 years
Operating Temperature	10 C to 40 C
Humidity	non-condensing
Warm Up Time	20 minutes; 60 minutes if not previously stored at the same temperature
Host Mainframes	8163A/B, 8164A/B, 8166A/B
External Source Path	when used with external sources, 81610A specifications apply
Return loss	module with internal source

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	10 C to 40 C
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Warm Up Time	20 minutes; 60 minutes if not previously stored at the same temperature
Host Mainframes	8163A/B, 8164A/B, 8166A/B
External Source Path	when used with external sources, 81610A specifications apply Notes Numeric rows from Keysight 81610A/11A/12A/13A/14A Return Loss Module User's Guide Table 4 (internal source) and Table 3 (81610CC). 81614A is the 1550/1625 nm internal-source column of the same Table 4. The 81613A laser-safety power row is the UG laser table for the internal-source family; 81614A uses the same FP internal-source architecture.

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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Series Family	Agilent 8161xA return loss modules
Source Type	Fabry Perot laser, internal
Output Power Typical	typical minus 4 dBm
Center Wavelength	1550 nm / 1625 nm plus or minus 20 nm typical
Sensor Element	InGaAs
Fiber Type	standard single-mode 9/125 um
Dynamic Range	75 dB
Relative Uncertainty Rl 55 User Cal	less than plus or minus 0.5 dB, typical less than plus or minus 0.3 dB, RL less than or equal to 55 dB, user calibration
Relative Uncertainty Rl 60 User Cal	less than plus or minus 0.6 dB, typical less than plus or minus 0.4 dB, RL less than or equal to 60 dB
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Relative Uncertainty Rl 70 User Cal	less than plus or minus 1.9 dB, typical less than plus or minus 0.8 dB, RL less than or equal to 70 dB, immediately after calibration
Relative Uncertainty Rl 75 Typical	typical less than plus or minus 2.0 dB, RL less than or equal to 75 dB, immediately after calibration
Plug And Play Rl 55 Typical	typical less than plus or minus 0.6 dB, RL less than or equal to 55 dB
Plug And Play Rl 60 Typical	typical less than plus or minus 1.5 dB, RL less than or equal to 60 dB
Total Uncertainty Add User Cal	add plus or minus 0.2 dB
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Reference Cable Wavelengths	1310 nm and 1550 nm plus or minus 20 nm

PARAMETER	VALUE
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Laser Max Cw Output 81613A Table	less than 1.8 mW max CW at connector in the 81613A laser-safety table; 9 um beam waist, NA 0.1
Dimensions	75 mm x 32 mm x 335 mm
Weight	1 kg
Recalibration Period	2 years
Operating Temperature	10 C to 40 C
Humidity	non-condensing
Warm Up Time	20 minutes; 60 minutes if not previously stored at the same temperature
Host Mainframes	8163A/B, 8164A/B, 8166A/B
External Source Path	when used with external sources, 81610A specifications apply

Notes
Numeric rows from Keysight 81610A/11A/12A/13A/14A Return Loss Module User's Guide Table 4 (internal source) and Table 3 (81610CC). 81614A is the 1550/1625 nm internal-source column of the same Table 4. The 81613A laser-safety power row is the UG laser table for the internal-source family; 81614A uses the same FP internal-source architecture.

Laser Safety

Laser Safety Class: Class 1 per IEC 60825-1 (2007) Laser Max Cw Output 81613A Table: less than 1.8 mW max CW at connector in the 81613A laser-safety table; 9 um beam waist, NA 0.1 Dimensions: 75 mm x 32 mm x 335 mm Weight: 1 kg Recalibration Period: 2 years Operating Temperature: 10 C to 40 C Humidity: non-condensing Warm Up Time: 20 minutes; 60 minutes if not previously stored at the same temperature Host Ma

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

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