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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 81652A, Tunable Laser Source

Stability Temperature Window: controlled environment, deltaTplus or minus 1 C Host Mainframes: 8163A/B, 8164A/B, 8166A/B Return Loss Partner Sources: listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on Wavelength, power, and stability from Agilent 8163A Selected Specifications (81652A row). Attenuation, modulation, mechanical, and safety rows from Agilent 8165xA Fabry-Perot standard-module supplementary table in 5988-1570EN, which applies to the 8165xA standard 0 dBm family. Spectral bandwidth rms for 81652A is not in that selected table and is not invented here. Host Mainframes: 8163A/B, 8164A/B, 8166A/B Return Loss Partner Sources: listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on Wavelength, power, and stability from Agilent 8163A Selected Specifications (81652A row). Attenuation, modulation, mechanical, and safety rows from Agilent 8165xA Fabry-Perot standard-module supplementary table in 5988-1570EN, which applies to the 8165xA standard 0 dBm family. Spectral bandwidth rms for 81652A is not in that selected table and is not invented here.



MODEL

**Agilent / Keysight
81652A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81652A

LISTING

<https://aumictechlabs.com/products/81652a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 81652A is an InGaAsP Fabry-Perot laser source module designed for optical component characterization within the Agilent Lightwave Solution Platform. Operating at 1550 nm

±15 nm with spectral bandwidth below 4.5 nm (rms), this module delivers output power exceeding 0 dBm into single-mode 9/125 µm fiber. The 81652A integrates with optical power meter modules for insertion loss, optical return loss, and PDL measurements, offering the precision and stability required for both short and long-term test applications.

Technical Specifications

Laser Type: InGaAsP Fabry-Perot
Center Wavelength: 1550 nm ±15 nm
Spectral Bandwidth (rms): 0 dBm (1 mW)
CW Power Stability: ±0.03 dB over 24 hours; <±0.005 dB over 15 minutes
Output Attenuation: 0 dB to 6 dB in 0.1 dB steps
Fiber Type: Single-Mode 9/125 µm
Dimensions: 2.8 × 1.3 × 13.2 inches
Weight: 5 lbs

Key Features

- Internal digital modulation with selectable frequencies: 270 Hz, 330 Hz, 1 kHz, 2 kHz, and free selection from 200 Hz to 10 kHz
- Pulse-shaped output signals with 50% duty cycle
- Insensitive to back reflections
- Fine-resolution power control via calibrated attenuator
- Exceptional short-term and long-term power stability

Typical Applications

- Component insertion loss characterization
- Optical return loss measurement
- Polarization-dependent loss (PDL) analysis
- Wavelength-dependent testing at 1550 nm
- Modulated optical signal generation for system validation

Compatibility & Integration

The 81652A mounts into the bottom slot of the 8164A mainframe and integrates with Keysight optical power meter modules and complementary laser source modules. Standard optical interface connectors (81000xl Series sold separately) enable straightforward integration into test setups. Control and modulation interfaces are native to the Agilent modular laser source architecture.

81652A Characteristics / Specifications

PARAMETER	VALUE
Model	81652A
Instrument Type	Dual wavelength Fabry Perot laser source module
Series Family	Agilent 8165xA Fabry Perot laser sources
Laser Type	Fabry Perot
Center Wavelength	1550 nm / 1625 nm plus or minus 15 nm
Output Power	greater than 0 dBm
Cw Power Stability Short Term	less than plus or minus 0.005 dB, 15 minutes
Cw Power Stability Short Term Typical Coherence On	typical less than plus or minus 0.003 dB with coherence control active
Cw Power Stability Long Term Typical	typical plus or minus 0.03 dB, 24 hours
Cw Stability To Back Reflection Typical	typical plus or minus 0.003 dB, RL greater than or equal to 14 dB
Output Attenuation Range	0 dB to 6 dB
Output Attenuation Step	0.1 dB
Internal Modulation Fixed	270 Hz, 330 Hz, 1 kHz, 2 kHz
Internal Modulation Free Select	200 Hz to 10 kHz
Modulation Duty Cycle	50 percent pulse shaped
Coherence Control	internal linewidth broadening
Output Connector Class	straight output connectors required
Specification Path	end of a 2 m fiber cable, attenuation 0.0 dB
Laser Safety Class	Class 1 per IEC 60825-1 (2001)
Dimensions	75 mm x 32 mm x 335 mm
Weight	0.5 kg
Recalibration Period	2 years
Operating Temperature	0 C to 45 C
Humidity	non-condensing
Warm Up Time	60 minutes; 20 minutes if previously stored at the same temperature

PARAMETER	VALUE
Stability Temperature Window	controlled environment, deltaTplus or minus 1 C
Host Mainframes	8163A/B, 8164A/B, 8166A/B
Return Loss Partner Sources	listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on
Linewidth	broadening
Attenuation	Range: 0 dB to 6 dB
Power stability	Short Term: less than plus or minus 0.005 dB, 15 minutes
Return loss	Partner Sources: listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 C to 45 C
Operating Temperature	0 C to 45 C
Humidity	non-condensing
Warm Up Time	60 minutes; 20 minutes if previously stored at the same temperature
Stability Temperature Window	controlled environment, deltaTplus or minus 1 C
Host Mainframes	8163A/B, 8164A/B, 8166A/B
Return Loss Partner Sources	listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on Notes Wavelength, power, and stability from Agilent 8163A Selected Specifications (81652A row). Attenuation, modulation, mechanical, and safety rows from Agilent 8165xA Fabry-Perot standard-module supplementary table in 5988-1570EN, which applies to the 8165xA standard 0 dBm family. Spectral bandwidth rms for 81652A is not in that selected table and is not invented here.
Internal digital modulation	200 Hz to 10 kHz
Return loss	Partner Sources: listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on
Model	81652A
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Series Family	Agilent 8165xA Fabry Perot laser sources
Laser Type	Fabry Perot
Center Wavelength	1550 nm / 1625 nm plus or minus 15 nm
Output Power	greater than 0 dBm
Cw Power Stability Short Term	less than plus or minus 0.005 dB, 15 minutes
Cw Power Stability Short Term Typical Coherence On	typical less than plus or minus 0.003 dB with coherence control active
Cw Power Stability Long Term Typical	typical plus or minus 0.03 dB, 24 hours
Cw Stability To Back Reflection Typical	typical plus or minus 0.003 dB, RL greater than or equal to 14 dB
Output Attenuation Range	0 dB to 6 dB

PARAMETER	VALUE
Output Attenuation Step	0.1 dB
Internal Modulation Fixed	270 Hz, 330 Hz, 1 kHz, 2 kHz
Internal Modulation Free Select	200 Hz to 10 kHz
Modulation Duty Cycle	50 percent pulse shaped
Coherence Control	internal linewidth broadening
Output Connector Class	straight output connectors required
Specification Path	end of a 2 m fiber cable, attenuation 0.0 dB
Laser Safety Class	Class 1 per IEC 60825-1 (2001)
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Weight	0.5 kg
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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 list 1550 nm / 1625 nm plus or minus 15 nm, output greater than 0 dBm, short-term CW stability less than plus or minus 0.005 dB (15 minutes), and typical long-term stability plus or minus 0.03 dB (24 hours). Family attenuation and modulation come from the 8165xA Fabry-Perot data sheet supplementary table.

Applications

C- plus L-band FP stimulus for IL and return-loss work at 1550 nm and 1625 nm; coherence-control mode for back-reflection tolerance.

Key Features

Dual 1550 nm and 1625 nm FP sources

Internal digital modulation 200 Hz to 10 kHz

0 to 6 dB output attenuation in 0.1 dB steps

Slim 816x source module

Technical Specifications

Technical Specifications

PARAMETER	VALUE
Model	81652A
Instrument Type	Dual wavelength Fabry Perot laser source module
Series Family	Agilent 8165xA Fabry Perot laser sources
Laser Type	Fabry Perot
Center Wavelength	1550 nm / 1625 nm plus or minus 15 nm
Output Power	greater than 0 dBm
Cw Power Stability Short Term	less than plus or minus 0.005 dB, 15 minutes

Cw Power Stability Short Term Typical Coherence On: typical less than plus or minus 0.003 dB with coherence control active

Specifications

PARAMETER	VALUE
Cw Power Stability Long Term Typical	typical plus or minus 0.03 dB, 24 hours
Cw Stability To Back Reflection Typical	typical plus or minus 0.003 dB, RL greater than or equal to 14 dB
Output Attenuation Range	0 dB to 6 dB
Output Attenuation Step	0.1 dB
Internal Modulation Fixed	270 Hz, 330 Hz, 1 kHz, 2 kHz
Internal Modulation Free Select	200 Hz to 10 kHz
Modulation Duty Cycle	50 percent pulse shaped
Coherence Control	internal linewidth broadening
Output Connector Class	straight output connectors required

PARAMETER	VALUE
Specification Path	end of a 2 m fiber cable, attenuation 0.0 dB
Laser Safety Class	Class 1 per IEC 60825-1 (2001)
Dimensions	75 mm x 32 mm x 335 mm
Weight	0.5 kg
Recalibration Period	2 years
Operating Temperature	0 C to 45 C
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Warm Up Time	60 minutes; 20 minutes if previously stored at the same temperature
Stability Temperature Window	controlled environment, deltaTplus or minus 1 C
Host Mainframes	8163A/B, 8164A/B, 8166A/B
Return Loss Partner Sources	listed with 81650A/81651A/81654A as FP sources for 81610A RL measurements with coherence control on

Notes

Wavelength, power, and stability from Agilent 8163A Selected Specifications (81652A row). Attenuation, modulation, mechanical, and safety rows from Agilent 8165xA Fabry-Perot standard-module supplementary table in 5988-1570EN, which applies to the 8165xA standard 0 dBm family. Spectral bandwidth rms for 81652A is not in that selected table and is not invented here.

Laser Safety

Laser Safety Class: Class 1 per IEC 60825-1 (2001) Dimensions: 75 mm x 32 mm x 335 mm Weight: 0.5 kg
Recalibration Period: 2 years Operating Temperature: 0 C to 45 C Humidity: non-condensing Warm Up
Time: 60 minutes; 20 minutes if previously stored at the same temperature Stability Temperature Window:
controlled environment, deltaTplus or minus 1 C Host Mainframes: 8163A/B, 8164A/B, 8166A/B Return Loss
Partne

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In
stock.

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documentation and unit condition.