

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 8164A Lightwave Measurement System Mainframe

Agilent / Keysight 8164A Lightwave Measurement System Mainframe The Agilent/Keysight 8164A is a lightwave measurement system mainframe with one back-loadable large slot and four front-loadable slim module slots. OEM 816x user documentation lists support for tunable laser modules in the rear slot plus compact 816x front modules for power, source, attenuator, and switch functions. Tunable laser based optical component characterization and multi-module lightwave measurements. One rear large module slot for tunable lasers The Agilent/Keysight 8164A is a lightwave measurement system mainframe with one back-loadable large slot and four front-loadable slim module slots. OEM 816x user documentation lists support for tunable laser modules in the rear slot plus compact 816x front modules for power, source, attenuator, and switch functions. Tunable laser based optical component characterization and multi-module lightwave measurements. One rear large module slot for tunable lasers Instrument Type: Lightwave Measurement System mainframe



MODEL Agilent / Keysight 8164A	CALIBRATION Available on request
CONDITION Used	STATUS In stock
RFQ / SKU 8164A	LISTING https://aumictechlabs.com/products/8164a-2/

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 8164A Lightwave Measurement System Mainframe is a modular platform for automated optical test and measurement in laboratory and production environments. It integrates

tunable laser sources, power meters, and specialized optical modules into a single chassis, delivering high-resolution measurements across the C-band and extended wavelength regions. The system combines graphical display capability with multi-interface connectivity for both standalone operation and remote instrument control.

Technical Specifications

Optical Module Architecture

1 slot for back-loadable Tunable Laser Source (TLS) 4 slots for compact modules: power meters, return loss modules, compact tunable lasers, or fixed laser sources

Compatible with Agilent 8153A and 8163A/B Lightwave Multimeter series modules

Display High-resolution color graphical display: 640 × 480 points, 4 updates/second Monochrome graphical display: 190 × 300 points

Power meter resolution: 0.0001 dB/dBm, 0.01 pW to 10 pW (range-dependent), up to 6½ digits user-definable

Interface Connectivity GPIB for remote control LAN and RS-232 serial interfaces VGA port for external monitor output PC Card interface Configurable hardware trigger input/output ports Keyboard and parallel printer (Centronics) connections

Power & Environment

AC Input: 100–240 V ±10%, 50/60 Hz **Power Consumption:** 280 VA max **Operating Temperature:** +10°C to +35°C **Storage Temperature:** +40°C to +70°C **Humidity:** <95% RH (0°C to 45°C) **Maximum Altitude:** 2000 m **Pollution Degree** 2 **Physical Dimensions:** 88 mm H × 213 mm W × 380 mm L (3.5" × 8.4" × 15") **Net Weight:** 4.2 kg (9.3 lbs)

Key Features Built-in passive component test, stability monitoring, and data logging applications High-resolution power measurement down to 0.01 pW across configurable ranges Real-time graphical display with 4 Hz update rate Support for wavelength-agile tunable lasers across 1460–1640 nm bands Dual display option: integrated color or external VGA monitor

Typical Applications Optical component characterization, wavelength-dependent loss measurement, laser source validation, and production test automation for telecom and datacom optical subsystems.

Compatibility & Integration The 8164A mainframe accepts tunable laser modules spanning 1460–1640 nm with output power to 6 dBm and wavelength accuracy of ±0.01 nm. All Agilent 8163A/B multimeter series modules integrate directly; 8163B modules require code verification for HP 8153A compatibility. PC Card and GPIB interfaces enable both local and networked test automation.

8164A Characteristics / Specifications

PARAMETER	VALUE
Model	8164A
Instrument Type	Lightwave Measurement System mainframe
Front Module Slots	4
Back Module Slots	1 (slot 0 for back loadable tunable laser)
Display Type	graphical display (8164A generation)
Remote Interface	GPIB
Default GPIB Address	20
GPIB Address Range	0 to 30
Module Compatibility	816x compact modules and 8153A series modules in front slots
Rear Slot Compatibility	large form factor tunable laser modules such as 81600B class
Supported Module Classes	TLS power sensors sources attenuators switches return loss
Slot Numbering Front	1 to 4 left to right
Slot Numbering Rear	0
Trigger Connectors	supported for module triggering class
Serial Interface	available for module firmware update class
Form Factor	benchtop lightwave mainframe
Brand Lineage	Agilent / Keysight / HP
Sibling Models	8164B
Series Family	8164A/B Lightwave Measurement System
Operating Environment Class	laboratory optical test class
Firmware Update Path	GPIB or serial module update utility
User Interface	softkeys hardkeys modify knob class
Return loss	Slot Numbering Front: 1 to 4 left to right

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	
Specifications	
PARAMETER	VALUE
Model	8164A
Instrument Type	Lightwave Measurement System mainframe
Front Module Slots	4
Back Module Slots	1 (slot 0 for back loadable tunable laser)
Display Type	graphical display (8164A generation)
Remote Interface	GPIB
Default GPIB Address	20
GPIB Address Range	0 to 30
Module Compatibility	816x compact modules and 8153A series modules in front slots
Rear Slot Compatibility	large form factor tunable laser modules such as 81600B class
Supported Module Classes	TLS power sensors sources attenuators switches return loss
Slot Numbering Front	1 to 4 left to right
Slot Numbering Rear	0
Trigger Connectors	supported for module triggering class
Serial Interface	available for module firmware update class
Form Factor	benchtop lightwave mainframe
Brand Lineage	Agilent / Keysight / HP
Sibling Models	8164B
Series Family	8164A/B Lightwave Measurement System
Operating Environment Class	laboratory optical test class
Firmware Update Path	GPIB or serial module update utility
User Interface	softkeys hardkeys modify knob class
Notes	
From Keysight 8163A/B, 8164A/B, and 8166A/B Lightwave Mainframes User Guide for 8164A. Exact TLS and sensor performance depend on installed modules.	

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
NAICS 423690 · 811210 · 541380
Generated August 14, 2026

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