

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Agilent/Keysight N7747A High Sensitivity Optical Power Meter

Agilent Keysight N7747A High Sensitivity Optical Power Meter 2 Port The Agilent/Keysight N7747A is a 2-port high-sensitivity optical power meter in the N77 compact platform. OEM datasheet 5991-1826 specifies minus 110 dBm to plus 10 dBm power range with InGaAs sensors from 800 nm to 1700 nm. Low-level optical signal monitoring, high dynamic range IL measurements, and multichannel weak-signal optical tests in automated racks. Low noise and drift under 0.1 pW peak to peak class The Agilent/Keysight N7747A is a 2-port high-sensitivity optical power meter in the N77 compact platform. OEM datasheet 5991-1826 specifies minus 110 dBm to plus 10 dBm power range with InGaAs sensors from 800 nm to 1700 nm. Low-level optical signal monitoring, high dynamic range IL measurements, and multichannel weak-signal optical tests in automated racks. Low noise and drift under 0.1 pW peak to peak class

Instrument Type: High sensitivity optical power meter



MODEL

**Agilent / Keysight
N7747A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N7747A

LISTING

<https://aumictechlabs.com/products/n7747a-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight N7747A is a high-sensitivity optical power meter designed for demanding optical testing applications. This two-channel instrument offers exceptional performance in terms of sensitivity, noise, and relative accuracy, making it suitable for measuring weak optical signals and

small signal changes with high precision. The N7747A integrates the proven optical performance of the 81634B sensor modules into the compact N77 series platform, providing enhanced memory capacity, faster data transfer rates, and continuous logging capabilities. This combination allows for efficient, long-term monitoring of optical signals, even in complex multichannel test setups. Its design facilitates integration into automated test systems and is compatible with existing setups utilizing Keysight's modular power meters and tunable laser sources.

Technical Specifications *

- Channels:** 2-port optical power meter
- Wavelength Range:** 800 nm to 1700 nm
- Power Range:** -110 dBm to +10 dBm
- Sensitivity:** As low as -110 dBm
- Noise:** < 0.1 pW peak-peak
- Relative Power Accuracy:** High, with low polarization dependence
- Polarization Dependence:** < ± 0.005 dB
- Linearity:** < ± 0.015 dB; < ± 0.005 dB over a 10 dB span
- Spectral Ripple:** Low
- Logging Memory:** 2 buffers per channel, each with 1 million sample capacity
- Sampling Rate:** Up to 1 MHz (for time-dependent measurements)
- Data Logging Interval:** As low as 25 μ s
- Data Transfer Rate:** Fast
- Continuous Logging:** Supported
- Simultaneous Measurement and Data Transfer:** Supported due to large data buffer
- Power Ranges:** 9 power ranges at 10 dB spacing
- Averaging Time:** 25 μ s to 10 s (typ.), with setting resolution down to 2 μ s
- Analog Output:** 0 to 2 V signal proportional to optical power per channel (scaled by power range); up to 5 kHz bandwidth or 5.0 kHz to 300 Hz bandwidth
- Connector Interface System:** Compatible with interchangeable 81000xl connector interface system
- Rack Unit:** 1 RU height, half-rack width

Electrical Specifications *

- Maximum Power Consumption:** 60 VA (with all options installed)
- Input/Output Signals:** * Trigger In: BNC connector, TTL input, max 5 V external voltage
- * Trigger Out: BNC connector, TTL output
- * Analog Output: BNC connector per optical port, 0 to 2 V

Interfaces *

- Control Interfaces:** USB, LAN, GPIB

Command Set: SCPI (Standard Commands for Programmable Instruments)

Software Compatibility: Compatible with N77xx Viewer user interface program, and 816x VXI Plug&Play drivers

Physical Specifications *

- Dimensions:** 460 mm (D) x 212 mm (W) x 43 mm (H) (1 RU height, half-rack width)
- Weight:** 3.5 kg
- Operating Environment:** * Temperature: Specified range (refer to manual for exact details)
- * Humidity: 15% to 95% non-condensing
- * Maximum Operating Altitude: 2000 m
- * Pollution Protection: Designed for pollution degree 2
- Storage Temperature:** -40°C to +70°C

Compatibility *

- Laser Sources:** Easily synchronizable with Keysight tunable laser sources for spectral measurements
- Test Setups:** Highly compatible with existing test setups based on Keysight's range of modular power meters

Connector Interface System: Utilizes the interchangeable 81000xl connector interface system for adaptability to different fiber connector types

Why Choose Aumictech for Keysight N7747A? At Aumictech, we specialize in supplying high-end optical test and measurement equipment. Whether you need precise optical power measurements, long-term signal monitoring, or integration into automated test systems, our team ensures the Keysight N7747A delivers maximum performance for your application.

Features & description

From manufacturer datasheet

Polarization Dependent Responsivity: less than plus or minus 0.005 dB

Spectral Ripple Due to Interference: less than plus or minus 0.005 dB Linearity at 23 C plus or minus 5 C: less than plus or minus 0.015 dB Linearity Over Operating Temperature: less than plus or minus 0.030 dB In Range Linearity Fixed Range: less than plus or minus 0.005 dB for fixed range at or above minus 20 dBm within 10 dB below range Noise Peak Peak Dark Including Drift: less than 0.1 pW from 1200 nm to 1630 nm Drift: less than plus or minus 0.05 pW Return Loss: greater than 55 dB Averaging Time: 25 us to 10 s Analog Output: 0 to 2 V into open 600 ohm typical impedance Analog Bandwidth Class: up to 5 kHz monitoring bandwidth Power Ranges Count: 9 ranges at 10 dB spacing Dimensions: 460 mm x 212 mm x 43 mm 1 RU half rack Weight: 3.5 kg Line Power: AC 100 to 240 V plus or minus 10 percent 50/60 Hz 60 VA max Remote Interfaces: LAN USB GPIB Operating Temperature: 5 C to plus 40 C Warm Up Time: 20 minutes Recommended Recalibration Period: 2 years Connector Interfaces: 81000xl interchangeable interfaces Notes Numeric rows from Keysight N7747A and N7748A High-Sensitivity Optical Power Meter datasheet 5991-1826 for N7747A.

N7747A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	High sensitivity optical power meter
Series Family	Keysight N77 optical power meters
Optical Ports	2
Sensor Element	InGaAs
Wavelength Range	800 nm to 1700 nm
Power Range	minus 110 dBm to plus 10 dBm
Maximum Safe Input Power	plus 16 dBm
Applicable Fiber	standard SM and MM up to 100 um core NA 0.3 or less
Uncertainty at Reference Conditions	plus or minus 2.5 percent from 1000 nm to 1630 nm
Total Uncertainty	plus or minus 4.5 percent from 1000 nm to 1630 nm
Polarization Dependent Responsivity	less than plus or minus 0.005 dB
Spectral Ripple Due to Interference	less than plus or minus 0.005 dB
Linearity at 23 C plus or minus 5 C	less than plus or minus 0.015 dB
Linearity Over Operating Temperature	less than plus or minus 0.030 dB
In Range Linearity Fixed Range	less than plus or minus 0.005 dB for fixed range at or above minus 20 dBm within 10 dB below range
Noise Peak Peak Dark Including Drift	less than 0.1 pW from 1200 nm to 1630 nm
Drift	less than plus or minus 0.05 pW
Return Loss	greater than 55 dB
Averaging Time	25 us to 10 s
Analog Output	0 to 2 V into open 600 ohm typical impedance
Analog Bandwidth Class	up to 5 kHz monitoring bandwidth
Power Ranges Count	9 ranges at 10 dB spacing
Dimensions	460 mm x 212 mm x 43 mm 1 RU half rack
Weight	3.5 kg
Line Power	AC 100 to 240 V plus or minus 10 percent 50/60 Hz 60 VA max

PARAMETER	VALUE
Remote Interfaces	LAN USB GPIB
Operating Temperature	5 C to plus 40 C
Warm Up Time	20 minutes
Recommended Recalibration Period	2 years
Connector Interfaces	81000xl interchangeable interfaces
Bandwidth	Class: up to 5 kHz monitoring bandwidth

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	less than plus or minus 0.030 dB
Operating Temperature	less than plus or minus 0.030 dB
In Range Linearity Fixed Range	less than plus or minus 0.005 dB for fixed range at or above minus 20 dBm within 10 dB below range
Noise Peak Peak Dark Including Drift	less than 0.1 pW from 1200 nm to 1630 nm
Drift	less than plus or minus 0.05 pW
Return Loss	greater than 55 dB
Averaging Time	25 us to 10 s
Analog Output	0 to 2 V into open 600 ohm typical impedance
Analog Bandwidth Class	up to 5 kHz monitoring bandwidth
Power Ranges Count	9 ranges at 10 dB spacing
Dimensions	460 mm x 212 mm x 43 mm 1 RU half rack
Weight	3.5 kg
Line Power	AC 100 to 240 V plus or minus 10 percent 50/60 Hz 60 VA max
Remote Interfaces	LAN USB GPIB
Warm Up Time	20 minutes
Recommended Recalibration Period	2 years
Connector Interfaces	81000xI interchangeable interfaces Notes Numeric rows from Keysight N7747A and N7748A High-Sensitivity Optical Power Meter datasheet 5991-1826 for N7747A.

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
Instrument Type	High sensitivity optical power meter
Series Family	Keysight N77 optical power meters
Optical Ports	2
Sensor Element	InGaAs
Wavelength Range	800 nm to 1700 nm
Power Range	minus 110 dBm to plus 10 dBm
Maximum Safe Input Power	plus 16 dBm
Applicable Fiber	standard SM and MM up to 100 um core NA 0.3 or less
Uncertainty at Reference Conditions	plus or minus 2.5 percent from 1000 nm to 1630 nm
Total Uncertainty	plus or minus 4.5 percent from 1000 nm to 1630 nm
Polarization Dependent Responsivity	less than plus or minus 0.005 dB
Spectral Ripple Due to Interference	less than plus or minus 0.005 dB
Linearity at 23 C plus or minus 5 C: less than plus or minus 0.015 dB	
Specifications	
PARAMETER	VALUE
Linearity Over Operating Temperature	less than plus or minus 0.030 dB
In Range Linearity Fixed Range	less than plus or minus 0.005 dB for fixed range at or above minus 20 dBm within 10 dB below range
Noise Peak Peak Dark Including Drift	less than 0.1 pW from 1200 nm to 1630 nm
Drift	less than plus or minus 0.05 pW
Return Loss	greater than 55 dB
Averaging Time	25 us to 10 s
Analog Output	0 to 2 V into open 600 ohm typical impedance
Analog Bandwidth Class	up to 5 kHz monitoring bandwidth
Power Ranges Count	9 ranges at 10 dB spacing
Dimensions	460 mm x 212 mm x 43 mm 1 RU half rack

PARAMETER	VALUE
Weight	3.5 kg
Line Power	AC 100 to 240 V plus or minus 10 percent 50/60 Hz 60 VA max
Remote Interfaces	LAN USB GPIB
Operating Temperature	5 C to plus 40 C
Warm Up Time	20 minutes
Recommended Recalibration Period	2 years
Connector Interfaces	81000xI interchangeable interfaces

Notes
Numeric rows from Keysight N7747A and N7748A High-Sensitivity Optical Power Meter datasheet 5991-1826 for N7747A.

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.