

KEYSIGHT TECHNOLOGIES (AGILENT HP)

N7751A/52A

The Keysight N7751A and N7752A are high-performance optical signal conditioning instruments combining a power-monitored attenuator with two extra front-panel power meter channels. Housed in a compact, half-width 1U rack-mount form factor, these instruments enable fast and precise setting of optical power levels with active power control alongside high-accuracy power measurements, maximizing throughput and reducing CAPEX in fiber optic test setups.

SPECIFICATIONS

General

Interfaces	LAN, USB, GPIB
Display	Graphical display
Power Consumption	70 VA max.
Warm-up Time	20 minutes
Operating Humidity Range	15% to 95% R.H. (non-condensing)

Physical

Power Supply	100 - 240 V AC $\pm 10\%$, 50/60 Hz
Operating Temperature	5 to 40 °C
Dimensions (W×H×D)	213 mm x 44 mm x 348 mm mm
Weight	3.3 kg

Optical Power Meter Specifications

Power Meter Sensor Type	InGaAs
Power Meter Wavelength Range	1250 nm to 1650 nm
Power Meter Measurement Range	-80 dBm to +10 dBm
Power Meter Polarization Dependence	< 0.01 dB
Power Meter Maximum Safe Input Power	+16 dBm
Power Meter Averaging Time Range	100 μ s to 10 s
Power Meter Return Loss (typical)	> 57 dB

Optical Attenuator Specifications

Attenuator Settling Time (Attenuation)	20 ms
Attenuator Settling Time (Power / APC)	100 ms
Attenuation Transition Speed Range	0.1 to 1000 dB/s (selectable)
Attenuator Maximum Input Power	+23 dBm
Attenuator Minimum Insertion Loss	≤ 1.2 dB

Active Power Control (APC) Mode Specifications

Active Power Control (APC) Mode	Supported (keeps output power constant)
---------------------------------	---

Ordering and Calibration Options

N7751A Channel Configuration	1 Attenuator channel and 2 Power Meter channels
N7752A Channel Configuration	2 Attenuator channels and 2 Power Meter channels

Connectivity and Interface Specifications

Optical Connector Interface	Keysight 81000xl exchangeable connector adapters
Remote Command Compatibility	Fully compatible with Agilent 8157x and 8156x modular attenuator SCPI programs

Physical and Environmental Specifications

Form Factor	1U Half-Rack
Storage Temperature Range	-40 °C to +70 °C

Attenuator Specifications

Attenuator Wavelength Range	1260 nm - 1640 nm
Attenuation Range	0 to 45 dB
Attenuation Resolution	0.001 dB
Attenuator Return Loss	> 45 dB

Optical Specifications

Fiber Type	9/125 µm Single-Mode Fiber
------------	----------------------------

Optical Attenuator Performance

Attenuation Repeatability	±0.01 dB
Relative Attenuation Accuracy	±0.05 dB (≤ 15 dB), ±0.10 dB (15 dB to 30 dB), ±0.20 dB (30 dB to 45 dB)
Polarization Dependent Loss (PDL)	< 0.05 dB (at 1310 nm and 1550 nm)
Insertion Loss Stability	< ±0.02 dB (over 24 hours at constant temperature)

Optical Power Meter Performance

Power Meter Total Uncertainty	±4.5% (1250 nm to 1630 nm, -50 dBm to +10 dBm)
Power Meter Linearity	< ±0.05 dB (-60 dBm to +10 dBm)
Power Meter Data Buffer Size	1,000,000 samples per channel
Power Meter Maximum Sampling Rate	1 MHz

TECHNOLOGY

InGaAs Power Meter & Optical Variable Attenuator

APPLICATIONS

Fiber Optic Communications Test, Optical Transceiver Characterization, Receiver Sensitivity Testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.