

LIGHTWAVE TEST EQUIPMENT

Optical Average Power Meter

Model 8152A/81520A/81521B/81522A

- Two optical inputs
- Optical heads individually calibrated from 450 to 1700nm
- Multi- and single-mode
- 1% typical linearity



HP 8152A

The HP 8152A Optical Average Power Meter and its optical heads provide the accuracy and versatility for absolute and relative power measurements in a lightwave test environment. Applications range from output power measurement of active optical components, or loss/attenuation measurement of passive optical components, to ratio measurement of power levels at same or different wavelengths.

Individually calibrated optical heads ensure highly precise measurement results over the entire wavelength range from 450 to 1700nm. After entering the operating wavelength, the appropriate sensitivity correction factor will automatically be taken into account to ensure the correct measurement value is displayed.

The combination of 2 independent optical inputs, the capability to perform ratio measurements, plus an HP 81000AS/BS Optical Power Splitter provides a fast, easy solution to determine the insertion loss and attenuation of optical components while eliminating the effect of optical source instabilities.

All functions can be set manually via front panel controls, or programmed via HP-IB for complete remote control. The HP 8152A is therefore an ideal tool for departments such as R&D, production and incoming evaluation.

Due to its excellent traceability accuracy offered over the entire wavelength range, the HP 8152A can also be used as a secondary standard in your metrology lab.

HP 8152A/81520A/81521B/81522A Specifications

	81520A	81521B	81522A
Wavelength Range	450-1020nm	900-1700nm	1000-1650nm
Measurement Range	+10 to -100dBm	+3 to -80dBm	-3dBm to -100dBm
Resolution	0.01dB, 0.1pW	0.01dB, 10pW	0.01dB, 0.1pW
Absolute Accuracy	±4%	±3.5%	±5%
Linearity (typ.)	±0.05dB (1%)	±0.05dB (1%)	±0.05dB (1%)
Sensor Element	cooled Si PIN diode	cooled Ge PIN diode	cooled InGaAs PIN diode
Sensor Diameter	5mm	5mm	500μm
Bandwidth (typ.)	700Hz	700Hz	700Hz

General

HP-IB capability

Interface function: SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1, C0

Recalibration period: 1 year

Warm-up time: 15 minutes

Environmental

Storage temperature: -40°C to +75°C

Operating temperature: 0°C to +55°C

Humidity: <95% R.H. from 0°C to +40°C

Power: 100/120/220/240Vrms, +5%, -10%, 90VA max., 48-400Hz

Weight: HP 8152A: net 4.3kg (9.5lbs), shipping 8.6kg (19lbs)

HP 81520A/21B/22A: net 0.45kg (1lbs), shipping 1kg (2.2lbs)

Size: HP 8152A: 89mm(H) x 212.3mm(W) x 345mm(D)
(3.5" x 8.36" x 13.6")

HP 81520A/21B/22A: 37.7 diameter, 140mm length
(1.5" x 5.5")

Ordering Information

	Price
HP 8152A Optical Average Power Meter	\$3450
Opt. 907: Front handle kit	\$50
Opt. 908: Rack flange kit	\$51
Opt. 916: Additional operating manual	\$40
Opt. H02 Head Rack Mount Kit	\$440
Opt. W30 Extended Repair Service. See page 725.	\$85
HP 81520A Optical Head 450 to 1020nm	\$1550
HP 81521B Optical Head 900 to 1700nm	\$2300
HP 81522A Optical Head 1000 to 1650nm	\$3800

Note: The HP 8152A cannot be used without an optical head, appropriate connector adapter and optical lens. For additional information, see "Lightwave Test Accessories" on page 309.

1) The exchangeable connector interfaces for Diamond® HMS-10/HP, FC/PC, DIN 47256 and ST connectors are available as additional accessories, see page 309.

☎ Fast-Ship product—see page 734.