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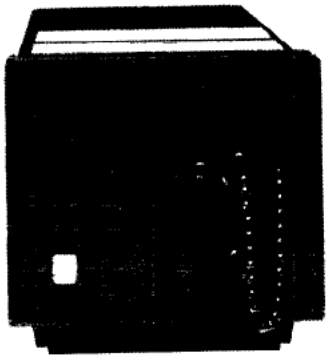
Find the *Keysight / Agilent 81519A* at our website: ***Click HERE***

FIBER OPTIC TEST EQUIPMENT

Optical Receiver, Optical Switch

Model 81519A, 8159A

- Calibrated O/E conversion
- DC to 400 MHz bandwidth
- ± 0.3dB conversion accuracy



HP 81519A

The HP 81519A is a linear transducer which converts optical signals into their electrical equivalents. The instrument is designed as a front-end interface to conventional electronic test equipment and as a general purpose receiving device for testing fiber optic modules and systems.

A PIN diode, calibrated at 850nm, serves as opto/electric converter in the range between 550 and 950nm. The characteristic curve on top of the instrument indicates the transducer gain in this range.

With the wide demodulation frequency band of DC to 400 MHz and an intrinsic transition time of less than 1.1 ns, the HP 81519A is a valuable tool for testing fiber optic devices in computer, local area network and aerospace applications. When operating in conjunction with other equipment, measurements such as pulse response and bandwidth in the time and frequency domains can be performed accurately.

With the adjustable offset, the conversion window can be conveniently shifted between 0 and 1 mW in accordance with the optical input power.

HP 81519A Specifications

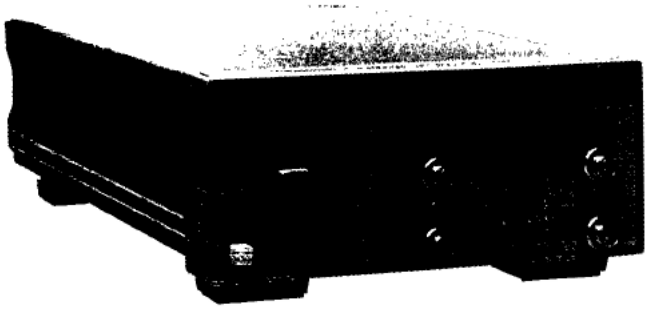
Optical Characteristics
Wavelength range: 550 to 950 nm, cal for 850 nm
Input: Adapts to core diameters up to 80 μm; N.A. ≤ 0.2
Input swing: 1 mW (min. low level 0mW, max. high 1.5 mW)
Input connector: Diamond® HFS1
Connector uncertainty: ± 0.1 dB

Transducer Characteristics
Conversion, opto/electric
Conversion gain: − 1 V/mW; **Accuracy:** ± 0.3dB ± 10uW
Small signal bandwidth: DC to 400 MHz (@ − 3.0dB)
Flatness of conversion: ± 0.3dB (DC to 150 MHz)
NEP: < 700nW (rms); **Distortion:** typ. 20dB (40dBel.)
Output (into 50 Ohm)
Range: ± 0.5V; Output impedance: 50 Ohm ± 2%
Response
Transition time: ≤ 1.1 ns; Perturbations: < 10% of ampl.

General
Environmental
Storage temperature: − 40°C to + 70°C
Operating temperature: 0°C to + 55°C
Humidity: 95% R.H. from 0°C to + 40°C
Power: 115/230 Vrms, + 10%, − 22%, 48 to 66 Hz, 16VA max.
Weight: net 1.7 kg (3.6 lbs), shipping 2,4 kg (5 lbs)
Size: 95mm(H) x 105mm(W) x 345mm(D) (3.8″ x 4.3″ x 13.6″)

Ordering Information	Price
HP 81519A Optical Receiver	$3100
Opt 910: Extra operating and service manual	$ 20

- Insertion loss < 3.5dB incl. two connectors
- Crosstalk attenuation > 50dB
- Repeatability 0.2dB



HP 8159A

DESIGNED FOR HP-IB SYSTEMS

The HP 8159A Optical Switch features two optical inputs, A_{in} and B_{in}, and two outputs, A_{out} and B_{out}. The following switch combinations can be chosen either manually or via HP-IB: A_{in} to A_{out}, B_{in} to B_{out} or A_{in} to B_{out}.

In areas where reference measurements are of great interest, e.g. in production environments, the HP 8159A helps to save valuable test time, formerly spent for time-consuming re-connections between the device under test and the reference power meter. Full programmability permits R&D or production engineers to truly automate their measurements.

The high switching rate of 20Hz shortens the measuring time, thus increasing the throughput. With excellent switching repeatability of 0.2dB and high performance Diamond® connectors, the HP 8159A specifically assists the user in performing accurate, reliable and repeatable measurements.

The HP 8159A features customer-exchangeable connector adapters to accomodate Diamond® HMS-10/HP, FC/PC, DIN 47256 and ST connectorized optical cables.

HP 8159A Specifications

Optical Characteristics
Fiber type: 50/125μm, G.I.
Numerical aperture: 0.2 ± 0.02
Input/Output connector: Diamond® HMS-10/HP, FC/PC, DIN 47256, ST
Insertion loss (incl. 2 connectors, for all switching paths): < 3.5dB
Typical: < 2.8dB
Switch repeatability (1000 cycles, ± 2°C window): 0.2dB window
Crosstalk attenuation: > 50dB

Supplementary Performance Characteristics
Wavelength range: 780 - 1350nm
Switching rate: 20 Hz
Settling time: < 25ms
Lifetime: 10^6 cycles

General
HP-IB capability
Interface function: SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT0, C0
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, 48 - 400Hz, + 5%, −10%, 35VA max
Weight: net 3.75kg (8.3lbs), shipping 7.8kg (17.2lbs)
Size: 89mm(H) x 212,3mm(W) x 345mm(D) (3.5″ x 8.36″ x 13.6″)

Ordering Information	Price
HP 8159A Optical Switch	$4785
Opt 907: Front handle kit HP P/N 5061-9688	$50☎
Opt 908: Rack flange kit HP P/N 5061-9672	$50☎
Opt 910: Add. operating and service manual	$40
P/N 5061-9701 Bail handle kit	$38☎

☎ Fast-Ship product—see page 758.

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