

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8158B

The HP 8158B is a high-performance optical attenuator designed by Keysight Technologies (formerly Agilent / Hewlett-Packard) for both single-mode and multimode fiber applications. It offers a 60 dB attenuation range with a high-resolution digital display and full remote programability via HP-IB, making it ideal for precision testing in fiber optic communications.

SPECIFICATIONS

General

Interfaces	HP-IB (GPIB)
Display	Digital display, range 0.00 to 60.00 dB

Physical

Power Supply	100 / 120 / 220 / 240 V AC (+10% / -15%), 48 - 66 Hz, 55 VA max
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	212.3 mm × 88.1 mm × 345.4 mm mm
Weight	5.3 kg

Optical Performance

Attenuation Range	60 dB
Attenuation Resolution	0.01 dB
Attenuation Repeatability	0.04 dB
Wavelength Correction Range (Option 001)	600 nm to 1200 nm
Wavelength Correction Range (Option 002)	1200 nm to 1650 nm
Calibrated Wavelength (Option 001)	850 nm
Calibrated Wavelengths (Option 002)	1300 nm, 1550 nm
Maximum Numerical Aperture (NA)	0.3

Optical Connections and Interfaces

Connector Interfaces	Diamond HMS-10/HP, DIN 47256
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Control and Programming

Display Range	0.00 to 60.00 dB
Display Resolution	0.01 dB (minimum step size)
Remote Programming	Full HP-IB programmability
Attenuation Correction	Wavelength entry in memory for attenuation correction

Ordering Information and Accessories

Option 001 Calibration	850 nm calibration
Option 002 Calibration	1300 nm and 1550 nm calibration

Performance

Insertion Loss (Option 001)	<= 3.0 dB (with HMS-10/HP connectors)
Insertion Loss (Option 002)	<= 4.0 dB (with HMS-10/HP connectors)
Maximum Input Power	+20 dBm

Environmental

Storage Temperature	-40 to +75 °C
Humidity Range	< 95% R.H. from 0 to 40 °C

Optical Shutter

Shutter Isolation	> 80 dB
Shutter Switching Time	< 100 ms

Power & Electrical

Power Consumption	55 VA max.
Line Frequency	48 Hz to 66 Hz

TECHNOLOGY

Fiber Optics

APPLICATIONS

Optical Signal Attenuation / Optical Margining

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