

Table 1-1. Specifications

Specifications describe the instrument's warranted performance. They are measured with Diamond® HMS-10/HP connector interfaces (Opt.011) and Diamond® HMS-10/HP connectors, if not otherwise specified. The connectors must have Manufacturing Date Code 31-87 or higher to achieve the warranted return loss values.

Optical Characteristics

Specifications are measured at 1300nm and 1550nm using a CW laser diode source with constant output power and single-mode fibers with 9/125 μm (NA=0.1).

Wavelength Range:
1200nm to 1650nm

Attenuation Range (excl. insertion loss): 60.00dB

Insertion Loss (incl. both connectors)

	HMS-10/HP Opt.011	FC/PC, DIN, ST Opts.012,013,014
worst case	< 4.0dB	< 6.0dB
typical	2.0dB	2.0dB

Linearity: ±0.20dB, typically 0.05dB

Return Loss (incl. two Diamond® HMS-10/HP connector interfaces and a terminated fiber end*): >33dB

Typical Return Loss (incl. two connector interfaces and a terminated fiber end*):

HMS-10/HP	PC	ST	DIN 47256	FC**
> 36dB	> 30dB	> 20dB	> 33dB	< 14dB

* Far end of fiber connected to the output port is terminated reflection-free.

** Note: FC is not a physical contact connector, therefore return loss is < 14dB.

Repeatability (of attenuation after any parameter has been changed and reset): < ±0.04dB

Display

Display Range: 0.00 to 64.00dB

Display Resolution: 0.01dB (min. step size)

Supplementary Performance Characteristics

(Description of non-warranted typical performance parameters)

Repeatability (of attenuation after a max. of 6 matings of same connector pair): <0.2dB

Operating Modes

Output disable: Optical signal path interrupted.

λ : Entry of wavelength for automatic correction of attenuation using typical correction values

Att: Attenuation is displayed and can be varied

Cal: Entry of calibration factor to adjust display so that displayed value indicates actual power level at output connector of attenuator. Range: ± 99.99 dB

General

Recalibration period: 1 year

No warm-up time required if previously stored within operating temperature range.

HP-IB Capability

All modes and parameters can be programmed.

Listen (time for HP 8157A to receive, verify and execute a message).

Output disable/enable, attenuation, λ : < 20 to 550ms (depending on actual setting/programmed parameter)

Cal: < 5ms

Talk (time for HP 8157A to transmit a message).

Query commands: < 1ms/character

HP-IB Interface Function Code: 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, +5%, -10%, 90VA max., 48-400Hz

Battery back-up (for non-volatile memory): with instrument switched off all current modes and data will be maintained for at least 10 years after instrument delivery

Dimensions: 89mm H, 212.3mm W, 345mm D (3.5"x8.36"x13.6")

Weight: net 6.3 kg (13.9 lbs), shipping 10.6 kg (23.4 lbs)

For adapter cables and other accessories see latest Ordering Guide.

Data subject to change.