

HP 81531A Specifications

Sensor Element	In GaAs
Wavelength range	800-1700nm
Power range	+3 to -90dBm
Display resolution	
dBm, dB	0.001
	0.0001 on printout
Watt	0.01 to 10
	(depending on power range)
Applicable fiber type	9/125 μ m - 100/140 μ m, NA \leq 0.3
Uncertainty (Accuracy)	$\pm 2.5\%$ (1000-1650nm) ^[1]
Total Uncertainty	$\pm 5\% \pm 1.5\text{pW}$ (1000-1650nm) ^[2]
Linearity	(0 to -70dBm)
18°C to 28°C const. temp	$\pm 0.015\text{dB} \pm 1\text{pW}$
0°C to 55°C const. temp	$\pm 0.05\text{dB} \pm 1.5\text{pW}$
Noise	<1.5pW (1200-1600nm)
peak-peak, avg. time 1sec	
Dimensions	75mm H, 32mm W, 335mm D (2.8" \times 1.3" \times 13.2")
Weight	net 0.6kg (1.3lbs), shipping 1kg (2.2lbs)
Recalibration period	2 years
Warmup time	20 min.

Information on the traceability of power meters is available on request

[1] at the following reference conditions:

- Power level 10 μ W (-20dBm), Continuous Wave (CW).
- Fiber 50 μ m graded index, NA=0.2, fully excited.
- Ambient temperature 23°C \pm 5K.
- Connector Diamond HMS-10/HP.
- At day of calibration (add 0.3% for aging over one year, add 0.6% over two years).
- Spectral width of source <10nm.

[2] at the following operating conditions:

- Fiber $\leq 50\mu\text{m}$, NA ≤ 0.2 .
- For NA >0.2 add 1%.