

# Selected Specifications<sup>1)</sup>

## 8163A Lightwave Multimeter

Display: Graphical display, monochrome

Interfaces: GPIB, RS232C, Parallel Printer Interface (Centronics)

Programming\*: SCPI Standard, compatible with programming syntax of 8164A Lightwave Measurement System, 8166A Lightwave Multichannel System, 8153A Lightwave Multimeter.



\*for details please refer to Programming guide P/N 08164-91016

Agilent Power Sensor Modules	81632A (InGaAs)	81635A (InGaAs) dual	81633A (InGaAs)	81634A (InGaAs)
Wavelength Range	800 nm to 1650 nm		800 nm to 1700 nm	
Power Range	+10 dBm to -80 dBm		+10 dBm to -90 dBm	+10 dBm to -110 dBm
Uncertainty (accuracy) at reference conditions	<±3% (1200 nm to 1630 nm)		<±2.5% (1000 nm to 1630 nm)	
Relative Uncertainty due to Polarization due to Spectral Ripple	typ ±0.015 dB typ ±0.015 dB		<±0.005 dB <±0.005 dB	
Linearity (power) at 23°C ±5°C	(CW +10 dBm to -60 dBm) <±0.02 dB ±20 pW		(CW +10 dBm to -70 dBm) <±0.015 dB ±2 pW	(CW +10 dBm to -90 dBm) <±0.015 dB ±0.2 pW

Agilent Optical Heads <sup>2)</sup>	81623A (Ge, ø 5 mm)	81624A (InGaAs, ø 5 mm)	81625A (InGaAs, ø 5 mm)
Wavelength Range	750 nm to 1800 nm	800 nm to 1700 nm	850 nm to 1650 nm
Power Range	+10 dBm to -80 dBm	+10 dBm to -90 dBm	+20 dBm to -80 dBm
Uncertainty (accuracy) at reference conditions	<±2.2% (1000 nm to 1650 nm)	<±2.2% (1000 nm to 1630 nm)	<±2.5% (950 nm to 1630 nm)
Relative Uncertainty due to Polarization due to Spectral Ripple		≤±0.005 dB (typ. ±0.002 dB)	≤±0.005 dB (typ. ±0.002 dB)
Linearity (power) at 23°C ±5°C	(CW +10 dBm to -60 dBm) <±0.025 dB ±100 pW	(CW +10 dBm to -70 dBm) <±0.02 dB ±5 pW	(CW +20 dBm to -60 dBm) <±0.02 dB ±100 pW

<sup>1)</sup> For full specifications, and the test conditions, see the Technical Specifications p/n 5962-9321E

<sup>2)</sup> All optical heads have to be operated with the single (81618A) or dual (81619A) Interface Module.

Agilent Standard Source Modules (Fabry-Perot Laser)	81650A	81651A	81652A	81654A
Center Wavelength	1310 nm ±15 nm	1550 nm ±15 nm	1550 nm/1625 nm ±15 nm	1310 nm/1550 nm ±15 nm
Output Power	>0 dBm			
Short term (15 min) CW power stability	<±0.005 dB typ <±0.003 dB with coherence control active			
Long term (24 h) CW power stability	typ ±0.03 dB			
CW power stability to back reflection (RL ≥14 dB)	typ ±0.003 dB			

Agilent High Power Source Modules (Fabry-Perot Laser)	81655A	81656A	81657A
Center Wavelength	1310 nm ±15 nm	1550 nm ±15 nm	1310 nm/1550 nm ±15 nm
Output Power	>+13 dBm		
Short term (15 min) CW power stability	<±0.005 dB typ <±0.003 dB with coherence control active		
Long term (24 h) CW power stability	typ ±0.03 dB		
CW power stability to back reflection (RL ≥14 dB)	typ ±0.003 dB		



Compact Tunable Laser Source Module	81689A
Wavelength Range	1525 nm to 1575 nm
Output Power	≥+6 dBm
Power Stability	±0.03 dB
Signal to Source Spontaneous Emission Ratio (typ.)	≥39 dB/nm
Wavelength Repeatability	±0.05 nm
Wavelength Stability (typ., 24h)	<±0.02 nm