

Source Module Specifications

Specifications apply to the end of a 2 m long fiber cable (as specified under fiber type) with Diamond HMS-10 connectors attached. All specifications are valid for an attenuation setting of 0.0 dB.

	Agilent 81551MM	Agilent 81552SM	Agilent 81553SM	Agilent 81554SM	Agilent 81542MM
Type	Fabry-Perot Laser				LED
Central wavelength [1]	850 ± 10 nm	1310 ± 20 nm	1550 ± 20 nm	1310 ± 20 nm 1550 ± 20 nm	1300 ± 40 nm
Fiber type	multimode 50/125 μm	single-mode 9/125 μm	single-mode 9/125 μm	single-mode 9/125 μm	multimode 50/125 μm
Spectral bandwidth [2]	< 1.5 nm rms	< 2.5 nm rms	< 4 nm rms	< 2.5/4 nm rms	< 90 nm FWHM
Output power	> -2 dBm [3]	> 0 dBm [4]	> 0 dBm [4]	> -1 dBm [4]	> -20 dBm
CW stability [5] Short term (15 min., T=const.) Long term (6 h, T=0 °C to 55 °C ± 1 k)	± 0.01 dB  ± 0.06 dB	± 0.003 dB  ± 0.03 dB	± 0.003 dB  ± 0.03 dB	± 0.005 dB  ± 0.05 dB	± 0.002 dB  ± 0.01 dB
Operating temperature	0 °C to +55 °C				
Dimensions	75 mm H, 32 mm W, 335 mm D (2.8" x 1.3" x 13.2")				
Weight	net 0.7 kg (1.5 lbs), shipping 1 kg (2.2 lbs)				
Recalibration period	1 year				

[1] Central wavelength is shown on the display.  
[2] rms: root mean square, FWHM: Full Width Half Maximum.  
[3] Class 3A according to IEC 825-1 (1993), Class 1 according to FDA CFR 21 (1986).  
[4] Class 1 according to IEC 825-1 (1993) and FDR CFR 21 (1986).  
[5] After a warm-up time of 60 min. with output enabled. If previously stored at the same temperature, 20 min. only.

Analog output:

**Bandwidth:** ≥ DC, ≤ 300 to 1000 Hz, depending on range and optical head.

**Output voltage:** 0–2 V into open.

**Output impedance:**  
600 Ω typical.

**Max. input voltage:** ± 10 V.

**Internal digital modulation mode:**  
270 Hz, 1 kHz, selectable. All output signals are pulse-shaped. Duty cycle 50%.

**Output attenuation:**  
The output power of all source modules can be attenuated from 0 dB to 6 dB (4 dB for Agilent 81551MM) in steps of 0.1 dB.

**Stability:**  
The value for the long term CW stability will increase by a factor of two with just one minute of warm-up time (laser enabled).