

	HP 8167B	HP 8168D	HP 8168E	HP 8168F
Wavelength Range	1255nm to 1365nm	1490nm to 1565nm	1475nm to 1575nm	1450nm to 1590nm
Absolute Wavelength Accuracy, typ¹	±0.1nm	±0.2nm	±0.1nm	
Relative Wavelength Accuracy	±0.035nm (1310-1350nm) ±0.050nm (1255-1365nm) typ ±0.001nm ²	±0.1nm	±0.035nm, typ ±0.001nm ²	±0.035nm (1475-1575nm) ±0.050nm (1450-1590nm), typ ±0.001nm ²
Wavelength Resolution	0.001nm, 170MHz at 1300nm	0.1nm	0.001nm, 125MHz at 1550nm	
Wavelength Stability (typ over 1 hour at constant temperature)	<±100MHz	±1GHz	<±100MHz	
Wavelength Repeatability	±0.035nm (1310-1350nm) ±0.050nm (1255-1365nm) typ ±0.001nm ²	±0.1nm	±0.035nm, typ ±0.001nm ²	±0.035nm (1475-1575nm) ±0.050nm (1450-1590nm), typ ±0.001nm ²
Sidemode Suppression Ratio, typ³	>40dB (1260-1360nm at -3dBm)	n/a	>40dB (1500-1570nm at 0dBm)	>50dB (1475-1575nm at 1dBm)
Source Spontaneous Emission⁴	<-45dB/0.1nm (1310-1350nm) <-40dB/0.1nm (1260-1360nm) <-35dB/0.1nm (1255-1365nm)	<-40dB/0.1nm (1500-1565nm) <-35dB/0.1nm (1490-1565nm)	<-45dB/0.1nm (1500-1570nm) <-35dB/0.1nm (1475-1575nm)	<-55dB/0.1nm (1520-1570nm) <-45dB/0.1nm (1475-1575nm) <-35dB/0.1nm (1450-1590nm)
Relative Intensity Noise (RIN), typ	<-145dB/Hz			
Linewidth (typ), coherence control off	100kHz			
Effective Linewidth (typ), coherence control on⁵	10-500MHz (1260-1360nm)	30-500MHz (1500-1565nm)	50 to 500MHz (1500-1570nm)	50 to 500 MHz (1475-1575nm)

¹ Measured with a wavelength meter in a vacuum.

² Performance when controlled with appropriate wavelength meter.

³ Measured by heterodyning method. Reduce output power if options are attached.

⁴ Measured with optical spectrum analyzer at 0.1nm resolution bandwidth at maximum specified output power.

⁵ At power levels larger than CC uncal value.

	HP 8167B	HP 8168D	HP 8168E	HP 8168F
Tuning Speed (typ for a 1/10/100nm step)⁶ ⁷ <i>with #003⁸</i>		200ms/300ms/2s		
Output Power⁹	<p>> +4dBm peak typ > +3dBm (1310-1350nm) >-3dBm (1260-1360nm) >-7dBm (1255-1365nm)</p> <p>for #023⁸ for #003⁸ for #007⁸ for #023 and #003⁸</p>	<p>>-3dBm peak typ >4dBm (1500-1565nm) >-10dBm (1490-1565nm)</p> <p>reduce by 1dB reduce by 1.5dB reduce by 1dB reduce by 2.5dB</p>	<p>>+1dBm peak typ >0dBm (1500-1570nm) >-10dBm (1475-1575nm)</p> <p>n/a</p>	<p>>+8dBm peak typ > +7dBm (1520-1570nm) >1dBm (1475-1575nm) >-7dBm (1450-1590nm)</p> <p>reduce by 1dB reduce by 1.5dB reduce by 1dB reduce by 2.5dB</p>
Minimum Output Power with #003⁸	-7dBm -47dBm	n/a	-10dBm -50dBm	-7dBm -47dBm
Power Linearity with #003⁸	±0.3dB ¹¹	n/a	±0.1dB ±0.3dB	±0.1dB ¹⁰ ±0.3dB ¹⁰
Power Stability (over 1 hour)	±0.03dB ¹² (typ ±0.01dB)		±0.03dB (typ ±0.01dB)	
Power Repeatability (typ)	±0.04dB ¹¹		±0.04dB	±0.04dB ¹⁰
Power Flatness versus Wavelength with #003⁸	±0.1dB ±0.2dB ¹²	±0.2dB n/a	±0.1dB ±0.2dB	±0.1dB ¹⁰ (1475-1575nm) ±0.2dB ¹⁰ (1450-1590nm) ±0.2dB ¹⁰ (1475-1575nm) ±0.3dB ¹⁰ (1450-1590nm)

⁶ Applicable for CW operation.

⁷ The Tuning Speed increases when Modulation is on.

⁸ Listed options are described in the Supplementary Performance Characteristics

⁹ The Maximum power is lower when Modulation is on.

¹⁰ For power settings below -3dBm (with option 003:P_{REF} <-3dBm, independent of attenuator setting, or power setting below -43dBm), the values shown may increase by up to 5 times.

¹¹ with option #003: at constant Relative Humidity (±5%)

¹² with option #003: at 1355.0 nm and 1359.5 nm, power may vary by up to ±0.25 typically, depending on ambient relative humidity and related water absorption.

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C-6 Specifications