



Agilent 1260 Infinity II Multiple Wavelength Detector

Data Sheet

Product Description

The diode array design of the Agilent 1260 Infinity II Multiple Wavelength Detector offers very low detector noise (less than $\pm 7 \mu\text{AU}$) for precise quantification of trace levels, regardless of the number of signals recorded. Over a wavelength range from 190 to 950 nm, simultaneous detection of up to eight compound-specific wavelengths for optimum selectivity is provided. High-speed UV detection with up to 120 Hz data rates keeps pace with the analysis speed of fast LC.



Features

- Increased sensitivity and selectivity - with simultaneous acquisition of up to eight compound-specific wavelengths.
- Low detection limits - low noise front-end electronics and special flow cell design deliver lowest detection limits thanks to minimization of short-term noise (less than $\pm 7 \mu\text{AU}$ ASTM).
- Up to 100 % resolution gain in fast LC - by 120 Hz data acquisition rate.
- Electronic temperature control (ETC) - maximum baseline stability and practical sensitivity under fluctuating ambient temperature and humidity conditions.
- Wide linear range - for reliable, simultaneous quantification of primary compounds, by-products, and impurities.
- Rapid optimization of sensitivity and linearity - programmable slit (1 to 16 nm).
- New levels of data security and traceability – provided by radio frequency identification (RFID) technology.
- Automatic wavelength verification - by built-in holmium oxide filter.
- Maximum flexibility, compatibility, and investment protection – with a range of 12 analytical, preparative, and SFC flow cells.
- Extensive analytics, error detection, and display - with Agilent 1200 Series Instant Pilot controller and Agilent Lab Advisor software.



Specifications

Table 1 Physical Specifications

Type	Specification	Comments
Weight	12 kg (26.5 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.0 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	110 VA / 100 W	
Ambient operating temperature	4–55 °C (39–131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F)	Non-condensing
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15092 ft)	For storing the module
Safety standards: IEC, EN, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Table 2 Performance specifications G7165A

Type	Specification	Comments
Detection type	1024-element photodiode array	
Light source	Deuterium and tungsten lamps	The UV-lamp is equipped with RFID tag that holds lamp typical information.
Data rate	up to 120 Hz	
Wavelength range	190 – 950 nm	
Short term noise (ASTM) Single and Multi-Wavelength	< ± 0.7·10 ⁻⁵ AU at 254 and 750 nm	
Drift	< 0.9·10 ⁻³ AU/h at 254 nm	
Linear absorbance range	> 2 AU (5 %) at 265 nm	

Table 2 Performance specifications G7165A

Type	Specification	Comments
Wavelength accuracy	± 1 nm	Self-calibration with deuterium lines, verification with holmium oxide filter
Wavelength bunching	1 – 400 nm	Programmable in steps of 1 nm
Slit width	1, 2, 4, 8, 16 nm	Programmable slit
Diode width	< 1 nm	
Flow cells	<p>Standard: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Standard bio-inert: 13 µL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Semi-micro: 5 µL volume, 6 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Micro: 2 µL volume, 3 mm cell path length, 120 bar (1740 psi) pressure maximum</p> <p>Semi-nano: 500 nL volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>Nano: 80 nL volume, 6 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p>High pressure: 1.7 µL volume, 6 mm cell path length and 400 bar (5800 psi) pressure maximum</p> <p>Prep SST: 3 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Prep Quartz: 0.3 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>Prep Quartz: 0.06 mm cell path length and 20 bar (290 psi) pressure maximum</p> <p>SFC Flow Cell: Light path 10 mm, Pressure Rating 400 bar, Internal Volume 13 µL</p> <p>SFC Flow Cell LD: Light Path 3 mm, Pressure Rating 400 bar, Internal Volume 2 µL</p>	<p>All flow cells are equipped with RFID tags that hold cell typical information.</p> <p>pH range 1.0 – 9.5 (12.5 solvent dependent with bio-inert version)</p>
Time programmable	Wavelength, polarity, peak width, lamp bandwidth, autobalance, wavelength range, threshold, spectra storage mode	

Table 2 Performance specifications G7165A

Type	Specification	Comments
Instrument Control	Lab Advisor B.02.08 or above LC and CE Drivers A.02.14 or above	For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers
Local Control	Agilent Instant Pilot (G4208A)	B.02.20 or above
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, two outputs	
Communications	Controller-area network (CAN), USB Extended Remote Interface (ERI): ready, start, stop and shut-down signals	
Safety and maintenance	Extensive diagnostics, error detection and display (through control module and ChemStation), leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.	
GLP features	RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, usage) Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter.	
Housing	All materials recyclable.	
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit	

Ordering Details

Description	Product Number
1260 Infinity II Multiple Wavelength Detector For fast, multiwavelength analysis, 8 signals, 120 Hz data acquisition rate. Includes RFID tracking technology for flow cells and UV lamp. Flow cell must be ordered as option.	G7165A
Micro flow cell 2 µL volume, 3 mm path length, 120 bar pressure limit, with identification tag.	G7165A#010
Nano flow cell 80 nL volume, 6 mm path length, 50 bar pressure limit.	G7165A#012
Semi-nano flow cell 500 nL volume, 10 mm path length, 50 bar pressure limit.	G7165A#014
Semi-micro flow cell 5 µL volume, 6 mm path length, 120 bar pressure limit, with identification tag.	G7165A#016
Standard flow cell 13 µL volume, 10 mm path length, 120 bar pressure limit.	G7165A#018
High-pressure micro flow cell 1.7 µL volume, 6 mm path length, 400 bar pressure limit.	G7165A#020
Flow cell SFC-LD, SST For low dispersion SFC, 400 bar pressure limit.	G7165A#021
Preparative flow cell SS 3 mm path length, 120 bar pressure limit.	G7165A#022
Flow cell for SFC High-pressure std flow cell for SFC	G7165A#023
Preparative flow cell Quartz, 0.3 mm path length, 20 bar pressure limit	G7165A#024
Preparative flow cell Quartz, 0.6 mm path length, 20 bar pressure limit	G7165A#026
Bio-inert standard flow cell 13 µL volume, RFID tag, 10 mm path length, 120 bar pressure limit	G7165A#028

www.agilent.com/chem/infinitylab-lc-series

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