



Agilent 1290 Infinity II Variable Wavelength Detector

Data Sheet

Product Description

The Agilent 1290 Infinity II Variable Wavelength Detector (VWD) is the world's most sensitive and fastest detector in its class. Time-programmable wavelength switching provides optimum sensitivity and selectivity for your applications. Even more sample information can be acquired in the dual wavelength mode. Lowest detector noise ($<\pm 1.5 \mu\text{AU}$) and baseline drift ($< 1 \times 10^{-4} \text{ AU/h}$) facilitates precise quantification of trace level components. Ultraproductivity can be achieved with fast analysis at up to 240 Hz data rates.



Features

- Lowest baseline noise and drift results in lowest detection limits for robust quantification of trace level components.
- Dual-wavelength capabilities offer more analyte information per run.
- Up to 100 % resolution gain in ultrafast LC, at up to 240 Hz data acquisition rate.
- Wide linear range ($>2.5 \text{ AU}$ upper limit) - for reliable, simultaneous quantification of primary compounds, by-products and impurities.
- Electronic temperature control (ETC) – for maximum baseline stability and practical sensitivity under fluctuating ambient temperature and humidity conditions.
- Automatic wavelength verification provided through the use of built-in holmium oxide filter.
- Radio frequency identification (RFID) technology for flow cells and lamps provides a new level of data traceability.
- Early maintenance feedback (EMF) for continuous tracking of instrument usage, in terms of lamp burn time, with user-defined limits and message types.
- Extensive diagnostics, error detection and displays provided using Agilent Lab Advisor software.
- Stop-flow wavelength scanning for fast wavelength optimization.

Specifications

Table 1 Physical Specifications

Type	Specification	Comments
Weight	11 kg (24.3 lbs)	
Dimensions (height × width × depth)	140 x 396 x 436 mm (5.5 x 15.6 x 17.2 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	80 VA, 70 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 2000 m (6562 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.

Table 2 Agilent 1290 Infinity II Variable Wavelength Detector (G7114B) Performance Specifications

Feature	Specification
Detection type	Double-beam photometer
Light source	Deuterium lamp
Number of signals	Single and dual wavelength detection
Maximum data rate	240 Hz (single wavelength detection) 2.5 Hz (dual wavelength detection)
Noise	<±0.15·10 ⁻⁵ AU, at 230 nm (single wavelength detection) <±0.80·10 ⁻⁵ AU, at 230 nm and 254 nm (dual wavelength detection)
Drift	<1·10 ⁻⁴ AU/h, at 230 nm
Linearity	>2.5 AU upper limit
Wavelength range	190 – 600 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines, verification with holmium oxide filter
Wavelength precision	<±0.1 nm

Table 2 Agilent 1290 Infinity II Variable Wavelength Detector (G7114B)
Performance Specifications

Feature	Specification
Slit width	6.5 nm typical over whole wavelength range
Time programmable	Wavelength, polarity, peak width, lamp on/off
Flow cells	<p><i>Standard:</i> 14 μL volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum</p> <p><i>Micro:</i> 2 μL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum</p> <p><i>Semi-micro:</i> 5 μL volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum</p> <p><i>Preparative:</i> 4 μL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum</p> <p><i>Preparative:</i> 0.3 mm cell path length and 50 bar (725 psi) pressure maximum</p> <p><i>Preparative:</i> 0.06 mm cell path length and 50 bar (725 psi) pressure maximum</p>
Spectral tools	Stop-flow wavelength scan
Analog output	Recorder/Integrator 100 mV or 1 V, 1 output
Communication	LAN, Controller-area network (CAN), ERI: ready, start, stop and shut-down signals
GLP	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. RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, and usage). Verification of wavelength accuracy with built-in holmium oxide filter.
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent Instant Pilot and Agilent Lab Advisor software. Leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas. Tracking of flow cells and lamps with RFID (radio frequency identification) tags

Ordering Details

Description	Product Number
1290 Infinity II Variable Wavelength Detector	
Includes CAN cable, LAN interface with cable. Must order one flow cell.	G7114B
Standard flow cell 14 μ L cell volume, 10 mm path length, 40 bar	G7114B #018
Semi-micro flow cell 5 μ L cell volume, 6 mm path length, 40 bar	G7114B #016
Micro flow cell 2 μ L cell volume, 3 mm path length, 120 bar	G7114B #010
Prep flow cell, 3 mm path length, 120 bar	G7114B #022
Prep flow cell, 0.3 mm path length, 50 bar	G7114B #024
Prep flow cell, 0.06 mm path length, 50 bar	G7114B #026

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