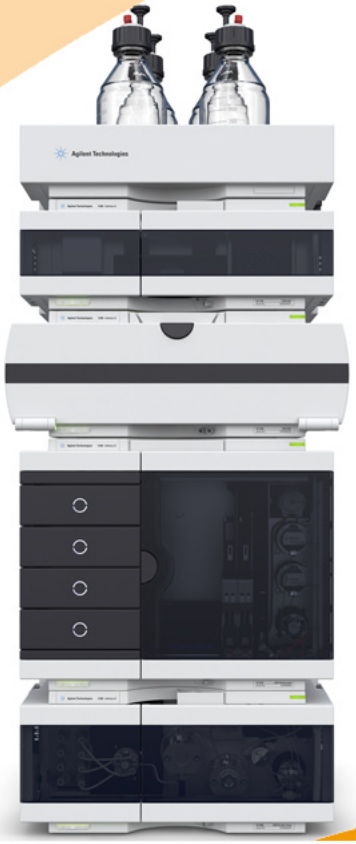
Agilent 1290 Infinity II LC

Specification Compendium



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Notices

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Hewlett-Packard-Strasse 8
76337 Waldbronn

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Pumps

Agilent 1290 Infinity II Flexible Pump (G7104A)

Physical Specifications

Table 1 Physical Specifications

Type	Specification	Comments
Weight	16.1 kg (35.5 lbs)	
Dimensions (height × width × depth)	180 x 396 x 436 mm (7.1 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	120 VA / 110 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.

Performance Specifications

Table 2 Agilent 1290 Infinity II Flexible Pump (G7104A) Performance Specifications

Feature	Specification
Hydraulic system	Dual pistons in series pump with proprietary servo-controlled variable stroke design and smooth motion control for active damping.
Pump resolution step size	300 pL step size
Settable flow range	0.001 – 5 mL/min, in 0.001 mL/min increments (executed in 300 pL/step increments).
Flow precision	≤0.07 % RSD or 0.01 min SD, whatever is greater
Flow accuracy	±1 % or ±10 µL/min, whatever is greater
Pressure range	up to 130 MPa (1300 bar) at 0 – 2 mL/min ramping down to 80 MPa (800 bar) at 5 mL/min
Pressure pulsation	<1 % amplitude or <0.5 MPa (5 bar), whatever is greater
Compressibility compensation	Automatic
Recommended pH-range	1.0 – 12.5, solvents with pH <2.3 should not contain acid which attack stainless steel.
Gradient formation	Low pressure quaternary mixing
Delay volume	As low as 350 µL
Composition range	Settable range: 0 – 100 % Recommended range: 1 – 99 % or 5 µL/min
Composition precision	<0.15 % RSD or 0.02 min SD, whatever is greater
Composition accuracy	±0.4 % absolute (1 – 99 % B)
Number of solvent	4 out of maximum 26 solvents
Solvent selection valve	Internal 4-solvent gradient formation valve included. External 2x 12 solvent valve as option, fully integrated in the pump control interface.

Table 2 Agilent 1290 Infinity II Flexible Pump (G7104A) Performance Specifications

Feature	Specification
Degassing unit	Integrated. Number of channels: 4, Internal volume per channel: 1.5 mL
Materials in contact with solvent	TFE/PDD copolymer, FEP, PEEK, PPS, stainless steel, polyimide
Automatic Purge Valve	Included, allows automatic inline-filter back-flush and automatic mixer change, e.g. for optional TFA-mixer
Active Seal wash	Included
Intelligent System Emulation Technology (ISET)	Included
Communications	Controller-area network (CAN), RS232C, APG remote: ready, start, stop and shutdown signals, LAN
Safety and maintenance	Extensive diagnostics, error detection and display through included Agilent LabAdvisor, leak detection, safe leak handling, leak output signal for shutdown of the pumping system. Low voltage in major maintenance areas.
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of seal wear and volume of pumped mobile phase with pre-defined and user settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials are recyclable.

Agilent 1290 Infinity II High Speed Pump (G7120A)

Physical Specifications

Table 3 Physical Specifications

Type	Specification	Comments
Weight	21.0 kg (46.3 lbs)	
Dimensions (height × width × depth)	200 x 396 x 436 mm (7.9 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	210 VA / 180 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.

Performance Specifications

Table 4 Agilent 1290 Infinity II High Speed Pump (G7120A) Performance Specifications

Feature	Specification
Hydraulic system	Two dual pistons in series, pumps with proprietary servo-controlled variable stroke design and smooth motion control.
Pump resolution step size	300 pL step size
Settable flow range	0.001 – 5 mL/min, in 0.001 mL/min increments (executed in 300 pL/step increments).
Flow precision	≤0.07 % RSD or 0.005 min SD, whatever is greater
Flow accuracy	±1 % or 10 µL/min, whatever is greater
Pressure range	up to 130 MPa (1300 bar) at 0 – 2 mL/min ramping down to 80 MPa (800 bar) at 5 mL/min
Pressure pulsation	<1 % amplitude or <0.5 MPa (5 bar), whatever is greater
Compressibility compensation	Automatic
Recommended pH-range	1.0 – 12.5, solvents with pH <2.3 should not contain acid which attack stainless steel.
Gradient formation	High pressure binary mixing
Delay volume	As low as 45 µL (10 µL without mixer)
Composition precision	<0.15 % RSD or 0.01 min SD, whatever is greater
Composition accuracy	±0.35 % absolute
Number of solvent	2 out of maximum 26 solvents
Solvent selection valve	Internal 4-solvent selection valve included. External 2x 12 solvent valve as option, fully integrated in the pump control interface.
Integrated degassing unit	Included Number of channels: 2 Internal volume per channel: 1.5 mL Materials in contact with solvent: TFE/PDD Copolymer, FEP, PEEK, PPS.

Table 4 Agilent 1290 Infinity II High Speed Pump (G7120A) Performance Specifications

Feature	Specification
Automatic Purge Valve	Included
Active Seal wash	Included
Intelligent System Emulation Technology (ISET)	Included
Communications	Controller-area network (CAN), RS232C, APG remote: ready, start, stop and shutdown signals, LAN
Safety and maintenance	Extensive diagnostics, error detection and display through included Agilent LabAdvisor, leak detection, safe leak handling, leak output signal for shutdown of the pumping system. Low voltage in major maintenance areas.
GLP feature	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of seal wear and volume of pumped mobile phase with pre-defined and user settable limits and feedback messages. Electronic records of maintenance and errors.
Housing	All materials are recyclable.

1 Pumps

Agilent 1290 Infinity II High Speed Pump (G7120A)

2
Injectors

Agilent 1290 Infinity II Multisampler (G7167B)

Physical Specifications

Table 5 Physical Specifications

Type	Specification	Comments
Weight	22 kg (48.5 lbs)	w/o sample cooler
Dimensions (height × width × depth)	320 x 396 x 468 mm (12.6 x 15.6 x 18.4 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	180 VA, 180 W	
Ambient operating temperature	4 - 40 °C (39 - 104 °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.

Performance Specifications

Table 6 Agilent 1290 Infinity II Multisampler (G7167B) Performance Specifications

Feature	Specification
Hydraulic System	Flow through needle design for minimized sample carry-over and sample discrimination. Unique dual needle feature[1] with two independent injection needles and loops optionally available. Different loop sizes for optimized injection range and lowest delay-volume available, user-exchangeable. Optional multi-wash feature for ultra-low carry-over.
Pressure range	up to 130 MPa (1300 bar)
Injection range (Single Needle)	0 – 20 µL or 0 – 100 µL single stroke injection at max. pressure Up to 0.1 – 1500 µL with optional kits
Injection range (Dual Needle[1])	Mix of 20 µL, 40 µL, 100 µL, or 500 µL loops and analytical heads and multi-load Either two identical set-ups for maximum injection speed or two different set-ups for maximum application flexibility are possible.
Injection linearity (for max. 100 µL loop and metering device)	R2 = 0.999 from 5 to max. µL
Precision	<0.15 % RSD or SD<10 nL
Accuracy	0.7 % (10 µL, n=10)
Sample viscosity	0.2 – 5 cp
Sample capacity	Up to 6144 with 16 x 384 shallow well micro titer plates Up to 432 x 2 mL vials Up to 8 single height drawers for 2 micro-titer plate footprint sample containers, each. Free configuration of single height (e.g. for shallow well micro titer plates), double height (e.g. for 2 mL vials or deep-well micro-titer plates) or triple height drawers (e.g. for 6 mL vials) possible.
Injection cycle time	As low as 10 s with Single-needle setup, virtually zero with Dual-needle set-up
Carry Over	<0.0009 % (9 ppm) with Multi-wash <0.003 % (30 ppm) without Multi-wash
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents

Table 6 Agilent 1290 Infinity II Multisampler (G7167B) Performance Specifications

Feature	Specification
Communications	Controller-area network (CAN),Local Area Network (LAN) ERI: ready, start, stop and shut-down signals
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage with user-settable limits and feedback messages. Electronic records of maintenance and errors
Housing	All materials recyclable.
Injector programming	Pretreatment functionality such as multi-draw, mixing, stacked injection and dilution
Performance Specifications Agilent 1290 Infinity II Sample Cooler	
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly R134A coolant (42 g), user-upgradable.
Temperature range	Settable from 4 – 40 °C in 1 °C increments (with a max. temperature of 5 °C below ambient)
Temperature accuracy	±2 °C at set-point of 4 °C

[1] Availability planned early 2015

Physical Specifications of the Sample Cooler

Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 7 Physical Specification of the Sample Cooler

Type	Specification	Comments
Weight	< 6 kg	
Dimensions (height × width × depth)	205 mm X 340 mm X 370 mm	
Refrigerant gas	HFKW-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Line voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 ° C (39.2 – 131 ° F)	
Ambient non-operating temperature	-40 – 70 ° C (-20 – 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 (15091 ft)	
Safety standards: IEC, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Table 8 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Temperature range	from 4 °C to ambient
Temperature settable	from 4 – 40 °C in 1 ° increments
Temperature accuracy (<25°C, <50% r.H.)	2 °C to 6 °C at a setpoint of 4 °C
Temperature accuracy at ambient temperatures and humidity <60 %	2 °C to 8 °C at a setpoint of 4 °C
Temperature Stability	+/- 1°C

3
UV-Detectors

Agilent 1290 Infinity II Variable Wavelength Detector (G7114B)

Physical Specifications

Table 9 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.

Performance Specifications

Table 10 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	$<\pm 0.15 \cdot 10^{-5}$ AU, at 230 nm (single wavelength detection) $<\pm 0.80 \cdot 10^{-5}$ AU, at 230 nm and 254 nm (dual wavelength detection)
Drift	$<1 \cdot 10^{-4}$ 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
Slit width	6.5 nm typical over whole wavelength range
Time programmable	Wavelength, polarity, peak width, lamp on/off
Flow cells	*Standard:* 14 µL volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum *Micro:* 2 µL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum *Semi-micro:* 5 µL volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum *Preparative:* 4 µL volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum *Preparative:* 0.3 mm cell path length and 50 bar (725 psi) pressure maximum *Preparative:* 0.06 mm cell path length and 50 bar (725 psi) pressure maximum
Spectral tools	Stop-flow wavelength scan

Table 10 Agilent 1290 Infinity II Variable Wavelength Detector (G7114B) Performance Specifications

Feature	Specification
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

Agilent 1290 Infinity II DAD FS (G7117A)

Physical Specifications

Table 11 Physical Specifications

Type	Specification	Comments
Weight	11.5 kg (25.4 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	110 VA, 100 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °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.

Performance Specifications

Table 12 Agilent 1290 Infinity II Diode Array Detector FS (G7117A) Performance Specifications

Feature	Specification
Detector type	1024-element diode array
Light source	Deuterium
Number of signals	8
Maximum sampling rate	120 Hz (both spectra and signals)
Short-term noise	with 10 mm Max-Light cartridge cell: $<\pm 3 \cdot 10^{-6}$ AU at 230/4 nm, slit width 4 nm, TC 2 s, ASTM with 60 mm Max-Light cartridge cell: $<\pm 0.6 \cdot 10^{-6}$ AU/cm at 230/4 nm, slit width 4 nm, TC 2 s, ASTM
Drift	$<0.5 \cdot 10^{-3}$ AU/h at 230 nm
Linearity	>2.0 AU (5 %) at 265 nm Typically 2.5 AU (5 %)
Wavelength range	190 – 640 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines
Wavelength precision	<±0.1 nm
Diode width	≈0.5 nm
Wavelength bunching	Programmable, 2 – 400 nm, in steps of 1 nm
Flow cells	User-exchangeable, self-aligning cartridge cells with RFID tags. Max-Light Cartridge Cell (Standard): 10 mm, σV = 1.0 µL Max-Light Cartridge Cell (High Sensitivity): 60 mm, σV = 4 µL Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, σV = 0.6 µL Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, σV = 0.8 µL Maximum Operating Pressure (MOP)[1]: 70 bar Maximum Incidental Pressure (MIP)[2]: 150 bar

Table 12 Agilent 1290 Infinity II Diode Array Detector FS (G7117A) Performance Specifications

Feature	Specification
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions
Analog output	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, one output
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals
GLP features	Data recovery card to prevent data losses. 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 deuterium lines.
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.
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit

[1] Maximum operating pressure (MOP): Maximum pressure at which a system can operate continuously under normal conditions.

[2] Maximum incidental pressure (MIP): The maximum pressure which the system can experience during a short time.

Agilent 1290 Infinity II DAD (G7117B)

Physical Specifications

Table 13 Physical Specifications

Type	Specification	Comments
Weight	11.5 kg (25.4 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	110 VA, 100 W	
Ambient operating temperature	4 – 40 °C (39 – 104 °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.

Performance Specifications

Table 14 Agilent 1290 Infinity II Diode Array Detector (G7117B) Performance Specifications

Feature	Specification
Detector type	1024-element diode array
Light source	Deuterium
Number of signals	8
Maximum sampling rate	240 Hz (both spectra and signals)
Short-term noise	with 10 mm Max-Light cartridge cell: $<\pm 3 \cdot 10^{-6}$ AU at 230/4 nm, slit width 4 nm, TC 2 s, ASTM with 60 mm Max-Light cartridge cell: $<\pm 0.6 \cdot 10^{-6}$ AU/cm at 230/4 nm, slit width 4 nm, TC 2 s, ASTM
Drift	$<0.5 \cdot 10^{-3}$ AU/h at 230 nm
Linearity	>2.0 AU (5 %) at 265 nm Typically 2.5 AU (5 %)
Wavelength range	190 – 640 nm
Wavelength accuracy	±1 nm, self-calibration with deuterium lines
Wavelength precision	<±0.1 nm
Slit width	Programmable: 1, 2, 4, 8 nm
Diode width	~0.5 nm
Wavelength bunching	Programmable, 2 – 400 nm, in steps of 1 nm
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions

Table 14 Agilent 1290 Infinity II Diode Array Detector (G7117B) Performance Specifications

Feature	Specification
Flow cells	User-exchangeable, self-aligning cartridge cells with RFID tags. Max-Light Cartridge Cell (Standard): 10 mm, σV = 1.0 µL Max-Light Cartridge Cell (High Sensitivity): 60 mm, σV = 4 µL Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, σV = 0.6 µL Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, σV = 0.8 µL Maximum Operating Pressure (MOP)[1]: 70 bar Maximum Incidental Pressure (MIP)[2]: 150 bar
Analog output	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, one output
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals
GLP features	Data recovery card to prevent data losses. 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 deuterium lines.
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.
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit

1 Maximum operating pressure (MOP): Maximum pressure at which a system can operate continuously under normal conditions.

2 Maximum incidental pressure (MIP): The maximum pressure which the system can experience during a short time.

4
Special Detectors

Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A)

Physical Specifications

Table 15 Physical Specifications

Type	Specification	Comments
Weight	11 kg (non-cooled), 13 kg (cooled)	
Dimensions (height × width × depth)	415 x 200 x 450 mm (16.3 x 7.9 x 17.7 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	150 W (max)	Maximum
Ambient operating temperature	10–35 °C (50–95 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 80 % 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, CSA, UL	Installation category II, Pollution degree 2	For indoor use only.

Performance Specifications

The instrument is suitable for indoor use only and is classified suitable under the following categories (EN 61010- 1):2010

- Installation category II
- Pollution degree 2
- Safety class 1

Table 16 Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A) Performance Specifications

Type	Specification
Light Source	LASER 405 nm, 10 mW (Class 3B)
Detector	Dual PMT with digital signal processing
Nebuliser	OFF, 25 – 90 °C
Evaporator	
Non-cooled	OFF, 25 – 120 °C
Cooled	OFF, 10 – 80 °C
Gas Flow Range	0.9 – 3.25 SLM (controlled gas shut-off)
Dynamic Raange	4 orders of magnitude
Short Term Noise	<0.1 LSU/h (1 mL/min water).
Drift	<1 LSU/h (1 mL/min water).
Operating Pressure	60 – 100 psi (4.1 – 6.9 bar)
Eluent Flow range	0.2 – 5.0 mL/min
Digital Output	10, 40 or 80 Hz (24 bit)
Remote Operation	Remote Start Input
Communication	Ethernet Serial (RS232) Remote Start Input Pump Stop: 1 Contact closure

Table 16 Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A) Performance Specifications

Type	Specification
PC Control	ELSD driver for OpenLAB ChemStation edition ELSD driver for OpenLAB EZChrom edition
Safety and maintenance	Gas shut-off Valve, Leak Detection, Laser Interlock

5
Multicolumn Thermostat

Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)

Physical Specifications

Table 17 Physical Specifications

Type	Specification	Comments
Weight	12.5 kg (27.6 lbs)	
Dimensions (height × width × depth)	160 x 435 (472) x 436 mm (6.3 x 17.1 (18.6) x 17.2 inches)	
Line voltage	100 – 240 V~, ± 10 %	Wide-ranging capability
Line frequency	50 or 60 Hz, ± 5 %	
Power consumption	150 VA, 150 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.

Performance Specifications

Table 18 Agilent 1290 Infinity II Multicolumn Thermostat (G7116B) Performance Specifications

Feature	Specification
Operating principle	Dual, independent Peltier-element thermostatted column compartment. Solvent pre-heating and still-air operation for reduction of chromatographic band-broadening under UHPLC-conditions. Up to three devices can be clustered and controlled by a single user interface for additional flexibility[1].
Temperature range	4 °C to 110 °C, (minimum 20 °C below ambient)
Temperature stability	±0.05 °C
Temperature accuracy	±0.5 °C (with calibration)
Independent Temperature zones	2 (in single device) up to 6 in clustered configuration[1]
Column capacity	8 columns of 100 mm length plus Quick-Connect fittings or pre-columns 4 columns of 300 mm length plus Quick-Connect fittings or pre-columns Selection of columns by single optional integrated 8-column selection valve (1300 bar) Maximum of 24 columns of 100 mm length plus Quick-Connect fittings or pre-columns 12 columns of 300 mm length plus Quick-Connect fittings or pre-columns with clustering[1] of three devices.
Heat-up/cool-down time	5 min from ambient to 40 °C 10 min from 40 °C to 20 °C
Solvent heat exchangers	Individually quick-installable for every column. Available at 1.0 µL (ultra-low dispersion), 1.6 µL (standard) and 3 µL (high-flow) volume.
Valve options	1x integrated valve drive as option 2x external valve drives as option to host user-exchangeable Quick-Change valve heads of different formats, materials and pressure ratings (up to 1300 bar): 2-position/6-port, 2-position/10-port, 6-column selection (6-pos/14-port), 8-column selection (8-pos/18-port). Equipped with tags, valve heads are automatically identified by SW

Table 18 Agilent 1290 Infinity II Multicolumn Thermostat (G7116B) Performance Specifications

Feature	Specification
Communications	Controller-area network (CAN).
Safety and maintenance	Extensive diagnostics, error detection and display (through Instant Pilot control module and Agilent LabAdvisor), leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in main maintenance areas. Door-open sensor.
GLP	Valve heads carrying tags with serial number, pressure rating, number of switches and valve type.

[1] Availability planned early 2015

Extended Specifications

The G7116B MCT comes along with one 1.6 µL Low Dispersion Heat Exchanger that is suitable for most applications.

Additional Heater devices are available for optimization regarding better heating performance at higher flow rates (>2.5 mL) or for reducing the dispersion volume for low flow applications.

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In This Book

The compendium contains specifications of Agilent 1290 Infinity II modules:

- pumps
- injector
- UV-detectors
- special detectors
- multicolumn thermostat

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