

Agilent InfinityLab LC Series



Specification Compendium



Agilent Technologies

Notices

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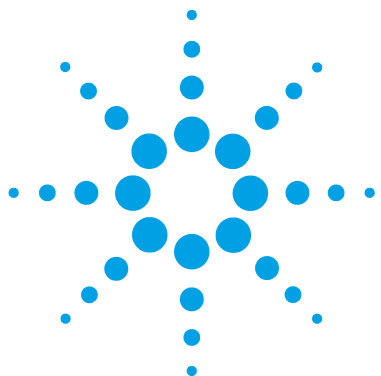
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Agilent 1290 Infinity II Flexible Pump (G7104A)

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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

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
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 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.02.19 or above
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 1260 Infinity II Isocratic Pump (G7110B)

Physical Specifications

Table 3 Physical Specifications

Type	Specification	Comments
Weight	14.0 kg (31 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	80 VA, 65 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

Performance Specifications

Table 4 Performance Specifications Agilent 1260 Infinity II Isocratic Pump (G7110B)

Type	Specification
Hydraulic system	Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons
Settable flow range	Set points 0.001 – 10 mL/min, in 0.001 mL/min increments
Recommended flow range	0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤0.02 min SD whatever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater, pumping degassed H ₂ O at 10 MPa (100 bar)
Pressure operating range	Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi)
Compressibility compensation	User-selectable, based on mobile phase compressibility
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
Communications	Controller-area network (CAN), Enhanced Remote Interface: ready, start, stop and shut-down signals, LAN onboard
Safety and maintenance	Extensive diagnostics, error detection and display through Agilent LabAdvisor, leak detection, safe leak handling, leak output signal for shutdown of the pumping system. Low voltage in major maintenance areas.

Table 4 Performance Specifications Agilent 1260 Infinity II Isocratic Pump (G7110B)

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

NOTE

For use with flow rates below 500 $\mu\text{L}/\text{min}$ a vacuum degasser is required.

Agilent 1260 Infinity II Quaternary Pump (G7111B)

Physical Specifications

Table 5 Physical Specifications

Type	Specification	Comments
Weight	14.7 kg (32 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	80 VA, 65 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

Performance Specifications

Table 6 Performance Specifications Agilent 1260 Infinity II Quaternary Pump (G7111B)

Type	Specification
Hydraulic system	Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons
Settable flow range	Set points 0.001 – 10 mL/min, in 0.001 mL/min increments
Recommended flow range	0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤0.02 min SD whatever is greater, based on retention time at constant room temperature ≤0.07 % RSD, or ≤0.02 min SD whatever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater, pumping degassed H ₂ O at 10 MPa (100 bar)
Pressure operating range	Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.0 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH < 2.3 should not contain acids which attack stainless steel
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure; measured with water at 1 mL/min (water/cafeine tracer)
Settable composition range	0 – 100 % in 0.1 % increments
Composition precision	< 0.2 % RSD or < 0.04 min SD, whatever is greater
Integrated degassing unit	Number of channels: 4 Internal volume per channel: 1.5 mL

Table 6 Performance Specifications Agilent 1260 Infinity II Quaternary Pump (G7111B)

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
Communications	Controller-area network (CAN), Enhanced Remote Interface: ready, start, stop and shut-down signals, LAN onboard
Safety and maintenance	Extensive diagnostics, error detection and display through 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 1260 Infinity II Quaternary Pump VL (G7111A)

Physical Specifications

Table 7 Physical Specifications

Type	Specification	Comments
Weight	14.7 kg (32 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	80 VA, 65 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

Performance Specifications

Table 8 Performance Specifications Agilent 1260 Infinity II Quaternary Pump VL (G7111A)

Type	Specification
Hydraulic system	Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons
Settable flow range	Set points 0.001 – 10 mL/min, in 0.001 mL/min increments
Recommended flow range	0.2 – 10.0 mL/min
Flow precision	≤0.07 % RSD, or ≤0.02 min SD whatever is greater
Flow accuracy	± 1 % or 10 µL/min whatever is greater, pumping degassed H ₂ O at 10 MPa (100 bar)
Pressure operating range	Operating range up to 40 MPa (400 bar, 5880 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.0 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1.0 – 12.5, solvents with pH < 2.3 should not contain acids which attack stainless steel
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure; measured with water at 1 mL/min (water/caffeine tracer)
Settable composition range	0 – 100 % in 0.1 % increments
Composition precision	< 0.2 % RSD or < 0.04 min SD, whatever is greater
Integrated degassing unit	Number of channels: 4 Internal volume per channel: 1.5 mL

Table 8 Performance Specifications Agilent 1260 Infinity II Quaternary Pump VL (G7111A)

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
Communications	Controller-area network (CAN), Enhanced Remote Interface: ready, start, stop and shut-down signals, LAN onboard
Safety and maintenance	Extensive diagnostics, error detection and display through 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 9 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 10 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 solvents	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.

1 Pumps

Agilent 1290 Infinity II High Speed Pump (G7120A)

Table 10 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
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 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.02.19 or above
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.

Agilent 1260 Infinity II Bio-Inert Pump (G5654A)

Physical Specifications

Table 11 Physical Specifications

Type	Specification	Comments
Weight	14.7 kg (32 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	80 VA, 65 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

Performance Specifications

Table 12 Performance Specifications Agilent 1260 Infinity II Bio-inert Pump (G5654A)

Type	Specification
Hydraulic system	Dual piston in series pump with proprietary servo-controlled variable stroke drive, floating pistons and active inlet valve, integrated 4-channel degassing unit
Settable flow range	0.001 – 10 mL/min, in 0.001 mL/min increments
Flow precision	
Flow accuracy	± 1 % or 10 µL/min whichever is greater
Pressure	Operating range up to 60 MPa (600 bar, 8700 psi) up to 5 mL/min Operating range up to 20 MPa (200 bar, 2950 psi) up to 10 mL/min
Pressure pulsation	< 2 % amplitude (typically < 1.3 %), at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar)
Compressibility compensation	User-selectable, based on mobile phase compressibility
Recommended pH range	1 – 13, short term 14 ¹
Gradient formation	Low pressure quaternary mixing/gradient capability using proprietary high-speed proportioning valve
Delay volume	600 – 900 µL, dependent on back pressure.
Settable composition range	0 – 100 % in 0.1 % increments
Composition precision	< 0.2 % RSD or < 0.04 min SD, whichever is greater
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
Communications	Controller-area network (CAN), USB Extended Remote Interface: ready, start, stop and shut-down signals

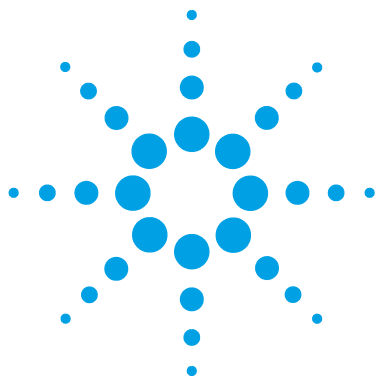
Table 12 Performance Specifications Agilent 1260 Infinity II Bio-inert Pump (G5654A)

Materials in flowpath	Titanium, Gold, Platinum-Iridium, Sapphire, PEEK, PTFE, Ruby, Ceramic, FEP, PFA
Active seal wash	Included

¹ For solvent compatibility, refer to section "Solvent information" in the manual for the Agilent 1260 Infinity Bio-inert LC System.

1 Pumps

Agilent 1260 Infinity II Bio-Inert Pump (G5654A)



2 Injectors

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Agilent 1290 Infinity II Multisampler (G7167B)

Physical Specifications

Table 13 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) ¹	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
Permitted solvents	Boiling point ≥56 °C Auto-ignition temperature ≥200 °C	

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 14 Agilent 1290 Infinity II Multisampler (G7167B) Performance Specifications

Type	Specification	Comment
Injection range for <i>Single-needle</i> instruments	Default: 0.1 – 20 µL in 0.1 µL increments; optional: 40 µL or 100 µL (using 100 µL analytical head)	Up to 1300 bar using 40 µL (default) or optional 100 µL analytical head
	0.1 – 500 µL or 900 µL in 0.1 µL increments (using 900 µL analytical head)	Pressure range up to 400 bar due to 900 µL analytical head
	0.1 – 120 µL in 0.1 µL increments with 1290 Infinity large volume injection kit (hardware modification required) G4216-68711 0.1 – 500 µL or 1500 µL in 0.1 µL increments with 100 µL upgrade kit (hardware modification required) G7167-68711	Pressure range up to 1300 bar Multi-draw modus (Injection into needle-seat capillary)
Injection range for <i>Dual-needle</i> instruments	Default: 0.1 – 20 µL in 0.1 µL increments; optional: 40 µL or 100 µL	Up to 1300 bar using 100 µL analytical head
	Up to 500 µL in 0.1 µL increments depending on installed loop size	Up to 1300 bar using 100 µL analytical head + Multi-load
Precision for <i>Single-needle</i> instruments	<0.15 % RSD or SD <10 nL, whatever is greater	Measured caffeine
Precision for <i>Dual-needle</i> instruments	<0.2 % RSD or SD <10 nL, whatever is greater	Measured caffeine
Pressure range	Up to 1300 bar (G7167B)	Max pressure for basic instrument
Sample viscosity range	0.2 – 5 cp	
Sample capacity	1H Drawer up to 8 drawers and 16 positions Shallow well plates (MTP)	Max. 6144/1536 samples (384MTP/96)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf	3072 samples, 432 vials (2 mL)
	3H Drawer up to 2 drawers and 4 positions MTP, deep well plates, vials up to 6 mL, Eppendorf	1536 samples, 60 vials (6 mL), 384 vials (1 mL), 216 vials (2 mL)

2 Injectors

Agilent 1290 Infinity II Multisampler (G7167B)

Table 14 Agilent 1290 Infinity II Multisampler (G7167B) Performance Specifications

Type	Specification	Comment
Injection cycle time	<10 s using following standard conditions: Default draw speed: 100 µL/min	Using standard Single-needle setup
	Default eject speed: 400 µL/min Injection volume: 1 µL	Time between 2 injections is not mechanically limited, time delay depends on communication speed of software, OS or network connections
Carry Over	<0.003 % (30 ppm) Multisampler Standard and Dual Needle <0.0009 % (9 ppm) Multisampler Multiwash	
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents	
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.10 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.02.19 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals	
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	
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.	
Metering device	Metering device in high pressure flow path	

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 15 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	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 158 °F)	
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15091 ft)	
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 16 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below 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

Agilent 1260 Infinity II Multisampler (G7167A)

Physical Specifications

Table 17 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) ¹	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
Permitted solvents	Boiling point ≥56 °C Auto-ignition temperature ≥200 °C	

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications (Agilent 1260 Infinity II Multisampler G7167A)

Table 18 Agilent 1260 Infinity II Multisampler (G7167A) Performance Specifications

Type	Specification	Comment
Injection range for <i>Single-needle</i> instruments	Default: 0.1 – 100 µL in 0.1 µL increments; optional: 20 µL or 40 µL (using optional 40 µL analytical head)	Up to 600 bar using 100 µL (default) or optional 40 µL analytical head
	0.1 – 500 µL or 900 µL in 0.1 µL increments (using 900 µL analytical head)	Pressure range up to 400 bar due to 900 µL analytical head
	0.1 – 120 µL in 0.1 µL increments with 1290 Infinity large volume injection kit (hardware modification required) G4216-68711 0.1 – 500 µL or 1500 µL in 0.1 µL increments with 100 µL upgrade kit (hardware modification required) G7167-68711	Pressure range up to 600 bar Multi-draw modus (Injection into needle-seat capillary)
Injection range for <i>Dual-needle</i> instruments	Default: 0.1 – 100 µL in 0.1 µL increments; optional: 20 µL or 40 µL (using 100 µL analytical head)	Up to 600 bar using 100 µL analytical head
	Up to 900 µL in 0.1 µL increments depending on installed loop size	Up to 600 bar using 100 µL analytical head
Precision for <i>Single-needle</i> instruments	<0.15 % RSD or SD <10 nL, whatever is greater	Measured caffeine
Precision for <i>Dual-needle</i> instruments	<0.2 % RSD or SD <10 nL, whatever is greater	Measured caffeine
Pressure range	Up to 600 bar (G7167A)	Max pressure for basic instrument
Sample viscosity range	0.2 – 5 cp	

2 Injectors

Agilent 1260 Infinity II Multisampler (G7167A)

Table 18 Agilent 1260 Infinity II Multisampler (G7167A) Performance Specifications

Type	Specification	Comment
Sample capacity	1H Drawer up to 8 drawers and 16 positions Shallow well plates (MTP)	Max. 6144/1536 samples (384MTP/96)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf	3072 samples, 432 vials (2 mL)
	3H Drawer up to 2 drawers and 4 positions MTP, deep well plates, vials up to 6 mL, Eppendorf	1536 samples, 60 vials (6 mL), 384 vials (1 mL), 216 vials (2 mL)
Injection cycle time	<10 s using following standard conditions: Default draw speed: 100 µL/min	Using standard Single-needle setup
	Default eject speed: 400 µL/min Injection volume: 1 µL	Time between 2 injections is not mechanically limited, time delay depends on communication speed of software, OS or network connections
Carry Over	<0.003 % (30 ppm) Multisampler Standard and Dual Needle <0.0009 % (9 ppm) Multisampler Multiwash	
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents	
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.10 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.02.19 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals	
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	

Table 18 Agilent 1260 Infinity II Multisampler (G7167A) Performance Specifications

Type	Specification	Comment
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.	
Metering device	Metering device in high pressure flow path	

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 19 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	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 158 °F)	
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15091 ft)	
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 20 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below 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

Agilent 1290 Infinity II Vialsampler (G7129B)

Physical Specifications

Table 21 Physical Specifications

Type	Specification	Comments
Weight	19 kg (41.9 lbs)	w/o sample cooler
Dimensions (height × width × depth)	324 x 396 x 468 mm (12.8 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	350 VA / 350 W / 1195 BTU/h	
Ambient operating temperature	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F) ¹	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
Permitted solvents	Boiling point ≥56 °C Auto-ignition temperature ≥200 °C	

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non-condensing operation.

Performance Specifications

Table 22 Performance Specifications (G7129B)

Type	Specification	Comment
Injection range	0.1 – 20 µL in 0.1 µL increments (default) 0.1 – 40 µL in 0.1 µL increments if 40 µL loop is installed 0.1 – 120 µL in 0.1 µL increments with 1290 Infinity large volume injection kit (hardware modification required) 0.1 – 100 µL in 0.1 µL (if 100 µL-loop and 100 µL-head is installed)	Up to 1500 µL with 1400 µL-multi-draw kit and 100 µL-analytical head up to 130 MPa (1300 bar, 18854 psi) up to 60 MPa (600 bar, 8702 psi)
Precision	<0.25 % RSD of peak areas from 5 µL to 100 µL	Measured caffeine
Pressure range	Up to 130 MPa (1300 bar, 18854 psi)	
Sample viscosity range	0.2 – 5 cp	
Sample capacity	132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) 36 x 6 mL vials (two trays optional)	
Carry over	<0.004 % (40 ppm) with needle wash	
Injection cycle time	18 s for draw speed 200 µL/min Ejection speed: 200 µL/min Injection volume: 1 µL	
Minimum sample volume	1 µL from 5 µL sample in 100 µL microvial, or 1 µL from 10 µL sample in 300 µL microvial.	Needle height offset has to be adapted to ensure that needle doesn't touch vial bottom. Default needle height = 0 equates to 2 mm above the vial bottom.
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 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.02.19 or above
Communications	Controller-area network (CAN),Local Area Network (LAN) ERI: ready, start, stop and shut-down signals	

Table 22 Performance Specifications (G7129B)

Type	Specification	Comment
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	
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.	
Metering device	Metering device in high pressure flow path	

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 23 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	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 158 °F)	
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15091 ft)	
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 24 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below 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

Agilent 1260 Infinity II Vialsampler (G7129A)

Physical Specifications

Table 25 Physical Specifications

Type	Specification	Comments
Weight	19 kg (41.9 lbs)	w/o sample cooler
Dimensions (height × width × depth)	324 x 396 x 468 mm (12.8 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	350 VA / 350 W / 1195 BTU/h	
Ambient operating temperature	4 - 40 °C (39 - 104 °F), without chiller up to 55 °C (131 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F) ¹	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
Permitted solvents	Boiling point ≥56 °C Auto-ignition temperature ≥200 °C	

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non-condensing operation.

Performance Specifications

Table 26 Performance Specifications (G7129A)

Type	Specification	Comment
Injection range	0.1 – 100 µL in 0.1 µL increments with 100 µL up to 60 MPa 0.1 – 900 µL in 0.1 µL increments with 900 µL up to 40 MPa	Up to 1800 µL with multiple draw (hardware modification required) Requires 900 µL analytical head
Precision	<0.25 % RSD of peak areas from 5 µL to 100 µL	Measured caffeine
Pressure range	0 – 60 MPa (0 – 600 bar, 0 – 8702 psi) 0 – 40 MPa (0 – 400 bar, 0 – 5801 psi)	for 900 µL Analytical Head
Sample viscosity range	0.2 – 5 cp	
Sample capacity	132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) 36 x 6 mL vials (two trays optional)	
Carry over	<0.004 % (40 ppm) with needle wash	
Injection cycle time	18 s for draw speed 200 µL/min Ejection speed: 200 µL/min Injection volume: 1 µL	
Minimum sample volume	1 µL from 5 µL sample in 100 µL microvial, or 1 µL from 10 µL sample in 300 µL microvial.	Needle height offset has to be adapted to ensure that needle doesn't touch vial bottom. Default needle height = 0 equates to 2 mm above the vial bottom.
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 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.02.19 or above
Communications	Controller-area network (CAN), Local Area Network (LAN) ERI: ready, start, stop and shut-down signals	

Table 26 Performance Specifications (G7129A)

Type	Specification	Comment
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	
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.	
Metering device	Metering device in high pressure flow path	

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 27 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	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 158 °F)	
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15091 ft)	
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 28 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below 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

Agilent 1260 Infinity II Bio-Inert Multisampler (G5668A)

Physical Specifications

Table 29 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) ¹	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
Permitted solvents	Boiling point ≥56 °C Auto-ignition temperature ≥200 °C	

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non–condensing operation.

Performance Specifications

Table 30 Agilent 1260 Infinity II Bio-inert Multisampler (G5668A) Performance Specifications

Type	Specification	Comment
Injection range	Default: 0.1 – 100 µL in 0.1 µL increments	Up to 600 bar using 100 µL
	Default: 0.1 – 250 µL or 1000 µL in 0.1 µL increments with Multidraw upgrade kit (Bio-inert) (G5667-68711)	Pressure range up to 400 bar Multi-draw mode (Injection into needle-seat capillary)
Precision	<0.15 % RSD or SD <10 nL, whatever is greater	Measured caffeine
Pressure range	Up to 600 bar	Max pressure for basic instrument
Sample viscosity range	0.2 – 5 cp	
Sample capacity	1H Drawer up to 8 drawers and 16 positions Shallow well plates (MTP)	Max. 6144/1536 samples (384MTP/96)
	2H Drawer up to 4 drawers and 8 positions MTP, deep well plates, vials, Eppendorf	3072 samples, 432 vials (2 mL)
	3H Drawer up to 2 drawers and 4 positions MTP, deep well plates, vials up to 6 mL, Eppendorf	1536 samples, 60 vials (6 mL), 384 vials (1 mL), 216 vials (2 mL)
Injection cycle time	<10 s using following standard conditions: Default draw speed: 100 µL/min	Using standard Single-needle setup
	Default eject speed: 400 µL/min Injection volume: 1 µL	Time between 2 injections is not mechanically limited, time delay depends on communication speed of software, OS or network connections
Carry Over	<0.003 % (30 ppm) Multisampler Standard <0.0009 % (9 ppm) Multisampler Multiwash	
Multiwash	Outer needle wash and seat backflush for carryover reduction with up to 3 different solvents	
Materials in flow path	Titanium, gold, PTFE, PEEK, ceramic	Upstream of sample-introduction
	PEEK, ceramic	Downstream of sample-introduction

Table 30 Agilent 1260 Infinity II Bio-inert Multisampler (G5668A) Performance Specifications

Type	Specification	Comment
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
Communications	Controller-area network (CAN), Local Area Network (LAN), USB ERI: ready, start, stop and shut-down signals	
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	
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.	
Metering device	Metering device in high pressure flow path	

Physical Specifications of the Sample Cooler

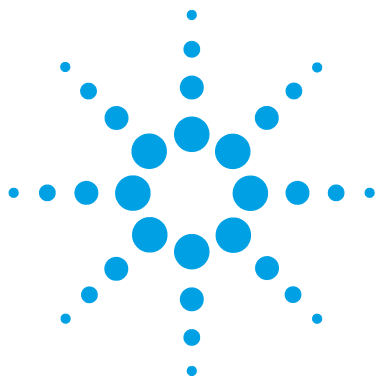
Cooling unit is designed as vapor-compression refrigeration system. Contains fluorinated greenhouse gas (refrigerant) according to the Kyoto protocol. For specifications of refrigerant, charge capacity, carbon dioxide equivalent (CDE), and global warming potential (GWP) see instrument label.

Table 31 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	HFC-134a (0.042 kg)	Ozone depletion potential (ODP) = 0
Supply voltage	24 VDC (nominal)	
Current	10 A max.	
Ambient operating temperature	4 – 40 °C (39.2 – 104 °F)	
Ambient non-operating temperature	-40 – 70 °C (-20 – 158 °F)	
Operating altitude	Up to 3000 m (9842 ft)	
Non-operating altitude	Up to 4600 m (15091 ft)	
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 32 Performance Specifications Agilent 1290 Sample Cooler

Type	Specifications
Operating principle	High performance, low-energy consumption micro-compressor based cooler with ozone-friendly HFC-134a coolant (42 g), user-upgradable.
Temperature range	from 4 °C to 5 °C below 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



3 UV-Detectors

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Agilent 1290 Infinity II Variable Wavelength Detector (G7114B)

Physical Specifications

Table 33 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 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

Performance Specifications

Table 34 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
Slit width	6.5 nm typical over whole wavelength range
Time programmable	Wavelength, polarity, peak width, lamp on/off

Table 34 Agilent 1290 Infinity II Variable Wavelength Detector (G7114B) Performance Specifications

Feature	Specification
Flow cells	<i>Standard:</i> 14 μ L volume, 10 mm cell path length and 40 bar (588 psi) pressure maximum <i>Micro:</i> 2 μ L volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum <i>Semi-micro:</i> 5 μ L volume, 6 mm cell path length and 40 bar (588 psi) pressure maximum <i>Preparative:</i> 4 μ L volume, 3 mm cell path length and 120 bar (1760 psi) pressure maximum <i>Preparative:</i> 0.3 mm cell path length and 50 bar (725 psi) pressure maximum <i>Preparative:</i> 0.06 mm cell path length and 50 bar (725 psi) pressure maximum <i>High pressure:</i> 14 μ L volume, 10 mm cell path length and 400 bar (5801 psi) pressure maximum
Spectral tools	Stop-flow wavelength scan
Analog output	Recorder/Integrator 100 mV or 1 V, 1 output
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 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.02.19 or above
Communication	LAN, Controller-area network (CAN), ERL: ready, start, stop and shut-down signals, USB
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 1260 Infinity II Variable Wavelength Detector (G7114A)

Physical Specifications

Table 35 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 17.0 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 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

Performance Specifications

Table 36 Agilent 1260 Infinity II Variable Wavelength Detector (G7114A) Performance Specifications

Feature	Specification
Detection type	Double-beam photometer
Light source	Deuterium lamp
Number of signals	Single and dual wavelength detection
Maximum data rate	120 Hz (single wavelength detection) 2.5 Hz (dual wavelength detection)
Noise	<±0.25·10 ⁻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
Slit width	6.5 nm typical over whole wavelength range
Time programmable	Wavelength, polarity, peak width, lamp on/off

Table 36 Agilent 1260 Infinity II Variable Wavelength Detector (G7114A) Performance Specifications

Feature	Specification
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> <p><i>High pressure:</i> 14 μL volume, 10 mm cell path length and 400 bar (5801 psi) pressure maximum</p>
Spectral tools	Stop-flow wavelength scan
Analog output	Recorder/Integrator 100 mV or 1 V, 1 output
Instrument Control	<p>Lab Advisor B.02.08 or above</p> <p>LC and CE Drivers A.02.14 or above</p> <p>For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers</p>
Local Control	Agilent Instant Pilot (G4208A) B.02.19 or above
Communication	<p>Controller-area network (CAN), USB</p> <p>ERI: ready, start, stop and shut-down signals</p>
GLP	<p>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.</p>
Safety and maintenance	<p>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</p>

Agilent 1260 Infinity II Diode Array Detector WR (G7115A)

Physical Specifications

Table 37 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

Performance Specifications

Table 38 Performance specifications G7115A

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	$< \pm 0.7 \cdot 10^{-5}$ AU at 254 and 750 nm	
Drift	$< 0.9 \cdot 10^{-3}$ AU/h at 254 nm	
Linear absorbance range	> 2 AU (5 %) at 265 nm	
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	

Table 38 Performance specifications G7115A

Type	Specification	Comments
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 38 Performance specifications G7115A

Type	Specification	Comments
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions	
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-setable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter.	

3 UV-Detectors

Agilent 1260 Infinity II Diode Array Detector WR (G7115A)

Table 38 Performance specifications G7115A

Type	Specification	Comments
Housing	All materials recyclable.	
Others	Second generation of Electronic temperature control (ETC) for the complete optical unit	

Agilent 1290 Infinity II DAD (G7117B)

Physical Specifications

Table 39 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 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

Performance Specifications

Table 40 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	$<\pm 0.1$ 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 40 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, $\sigma_V = 1.0 \mu\text{L}$ Max-Light Cartridge Cell (High Sensitivity): 60 mm, $\sigma_V = 4 \mu\text{L}$ Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, $\sigma_V = 0.6 \mu\text{L}$ Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, $\sigma_V = 0.8 \mu\text{L}$ 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
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 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.02.19 or above
Communications	LAN, controller-area network (CAN), ERL: ready, start, stop and shut-down signals, USB
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 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 FS (G7117A)

Physical Specifications

Table 41 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 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

Performance Specifications

Table 42 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	$<\pm 0.1$ 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, $\sigma_V = 1.0$ μ L Max-Light Cartridge Cell (High Sensitivity): 60 mm, $\sigma_V = 4$ μ L Max-Light Cartridge Ultra Low Dispersion (ULD) Cell: 10 mm, $\sigma_V = 0.6$ μ L Max-Light Cartridge High Dynamic Range (HDR) Cell: 3.7 mm, $\sigma_V = 0.8$ μ L Maximum Operating Pressure (MOP) ¹ : 70 bar Maximum Incidental Pressure (MIP) ² : 150 bar

Table 42 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
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 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.02.19 or above
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals USB
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 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 1260 Infinity II Diode Array Detector HS (G7117C)

Physical Specifications

Table 43 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 17.0 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 – 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 44 Agilent 1260 Infinity II Diode Array Detector HS (G7117C) 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	$<\pm 0.1$ 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, $\sigma_V = 1.0$ μ L Max-Light Cartridge Cell (High Sensitivity): 60 mm, $\sigma_V = 4$ μ L Maximum Operating Pressure (MOP) ¹ : 70 bar Maximum Incidental Pressure (MIP) ² : 150 bar
Spectral tools	Data analysis software for spectra evaluation, including spectral libraries and peak purity functions

Table 44 Agilent 1260 Infinity II Diode Array Detector HS (G7117C) Performance Specifications

Feature	Specification
Analog output	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, one output
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
Communications	Controller-area network (CAN), USB Extended Remote Interface: ready, start, stop and shut-down signals
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 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 1260 Infinity II Multiple Wavelength Detector (G7165A)

Physical Specifications

Table 45 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

Performance Specifications

Table 46 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	$< \pm 0.7 \cdot 10^{-5}$ AU at 254 and 750 nm	
Drift	$< 0.9 \cdot 10^{-3}$ AU/h at 254 nm	
Linear absorbance range	> 2 AU (5 %) at 265 nm	
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	

Table 46 Performance specifications G7165A

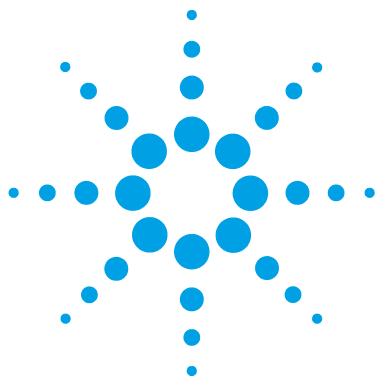
Type	Specification	Comments
Flow cells	<p>Standard: 13 μL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Standard bio-inert: 13 μL volume, 10 mm cell path length and 120 bar (1740 psi) pressure maximum</p> <p>Semi-micro: 5 μL volume, 6 mm cell path length and 120 bar (1740 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 46 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-setable 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	

3 UV-Detectors

Agilent 1260 Infinity II Multiple Wavelength Detector (G7165A)



4 Special Detectors

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Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A)

Physical Specifications

Table 47 Physical Specifications

Type	Specification	Comments
Weight	11 kg (non-cooled), 13.3 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	2 A (max)	
Ambient operating temperature	10–35 °C (50–95 °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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

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 48 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 Range	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

4 Special Detectors

Agilent 1290 Infinity II Evaporative Light Scattering Detector (G7102A)

Table 48 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 LC and CE Drivers Rev. A.02.11
Safety and maintenance	Gas shut-off Valve, Leak Detection, Laser Interlock

Agilent 1260 Infinity II Infinity Fluorescence Detector Spectra (G7121B)

Physical Specifications

Table 49 Physical Specifications

Type	Specification	Comments
Weight	11.9 kg (26.2 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	70 VA, 60 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 50 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector SPECTRA (G7121B)

Type	Specification	Comments
Detection type	Multi-signal fluorescence detector with rapid on-line scanning capabilities and spectral data analysis	
Performance specifications	<p>Single wavelength operation:</p> <ul style="list-style-type: none"> • RAMAN (H₂O) > 500 (noise reference measured at signal) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell • RAMAN (H₂O) > 3000 (noise reference measured at dark value) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell <p>Dual wavelength operation: RAMAN (H₂O) > 300 Ex 350 nm, Em 397 nm and Ex 350 nm, Em 450 nm, standard flow cell.</p>	Reference conditions: Standard cell 8 µL, response time 4 s, HPLC-grade water and restriction capillary.
Light source	Xenon Flash Lamp, normal mode 20 W, economy mode 5 W, lifetime 4000 h	
Pulse frequency	296 Hz for single signal mode 74 Hz for economy mode	
Maximum data rate	148 Hz	
Excitation monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 300 nm	
Emission monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 400 nm	
Reference system	in-line excitation measurement	

Table 50 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector SPECTRA (G7121B)

Type	Specification	Comments
Timetable programing	up to 4 signal wavelengths, response time, PMT Gain, baseline behavior (append, free, zero), spectral parameters	
Spectrum acquisition	Excitation or Emission spectra Scan speed: 28 ms per datapoint (e.g. 0.6 s/spectrum 200 – 400 nm, 10 nm step) Step size: 1 – 20 nm Spectra storage: All	
Wavelength characteristic	Repeatability +/- 0.2 nm Accuracy +/- 3 nm setting	
Flow cells	Standard: 8 µL volume and 20 bar (2 MPa) pressure maximum, fused silica block Optional: <ul style="list-style-type: none"> • Bio-inert: 8 µL volume and 20 bar (2 MPa) pressure maximum, (pH 1–12) • Semi-Micro: 4 µL volume and 20 bar (2 MPa) pressure maximum 	
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 > 100 LU, two outputs	100 LU is the recommended range, see <i>"FLD Scaling Range and Operating Conditions"</i>
Communications	Controller-area network (CAN), USB ERI: ready, start, stop and shut-down signals	

4 Special Detectors

Agilent 1260 Infinity II Infinity Fluorescence Detector Spectra (G7121B)

Table 50 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector SPECTRA (G7121B)

Type	Specification	Comments
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	
GLP features	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, using the Raman band of water.	
Housing	All materials recyclable.	

Agilent 1260 Infinity II Fluorescence Detector (G7121A)

Physical Specifications

Table 51 Physical Specifications

Type	Specification	Comments
Weight	11.9 kg (26.2 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	70 VA, 60 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.
ISM Classification	ISM Group 1 Class B	According to CISPR 11

Performance Specifications

Table 52 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector (G7121A)

Type	Specification	Comments
Detection type	One signal wavelength (excitation and emission)	Programmable single wavelength (excitation and emission) fluorescence detector
Performance specifications	Single wavelength operation: <ul style="list-style-type: none"> • RAMAN (H₂O) > 500 (noise reference measured at signal) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell • RAMAN (H₂O) > 3000 (noise reference measured at dark value) Ex=350 nm, Em=397 nm, dark value 450 nm, standard flow cell 	Reference conditions: Standard cell 8 µL, response time 4 s, HPLC-grade water and restriction capillary.
Light source	Xenon Flash Lamp, normal mode 20 W, economy mode 5 W, lifetime 4000 h	
Pulse frequency	296 Hz for single signal mode 74 Hz for economy mode	
Maximum data rate	74 Hz	
Excitation monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 300 nm	
Emission monochromator	Range: settable 200 nm - 1200 nm and zero-order Bandwidth: 20 nm (fixed) Monochromator: concave holographic grating, F/1.6, blaze: 400 nm	
Reference system	in-line excitation measurement	

Table 52 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector (G7121A)

Type	Specification	Comments
Timetable programing	Single signal wavelength, response time, PMT Gain, baseline behavior (append, free, zero)	
Wavelength characteristic	Repeatability +/- 0.2 nm Accuracy +/- 3 nm setting	
Flow cells	Standard: 8 µL volume and 20 bar (2 MPa) pressure maximum, fused silica block	
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 > 100 LU, two outputs	100 LU is the recommended range, see <i>"FLD Scaling Range and Operating Conditions"</i>
Communications	Controller-area network (CAN), USB Extended Remote Interface: ready, start, stop and shut-down signals	
Safety and maintenance	Extensive support for troubleshooting and maintenance is provided by the Instant Pilot, Agilent Lab Advisor, and the Chromatography Data System. Safety-related features are leak detection, safe leak handling, leak output signal for shutdown of pumping system, and low voltages in major maintenance areas.	

4 Special Detectors
Agilent 1260 Infinity II Fluorescence Detector (G7121A)

Table 52 Performance Specifications Agilent 1260 Infinity II Fluorescence Detector (G7121A)

Type	Specification	Comments
GLP features	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, using the Raman band of water.	
Housing	All materials recyclable.	

Agilent 1290 Infinity II Refractive Index Detector (Micro) (G7162B)

Physical Specifications

Table 53 Physical Specifications

Type	Specification	Comments
Weight	15 kg (33 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	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 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

Performance Specifications

Table 54 Agilent 1290 Infinity II Refractive Index Detector (G7162B) Performance Specifications

Type	Specification	Comments
Detection type	Refractive Index	
Refractive index range	1.00 – 1.75 RIU, calibrated	
Measurement range	$\pm 600 \cdot 10^{-6}$ RIU	
Optical zeroing		via set screw
Optics temperature control	5 °C above ambient to 55 °C	
Sample cell	Volume: 2.5 μ L Maximum pressure: 5 bar (0.5 MPa) Maximum flow rate: 1 mL/min (100 % water)	
Valves	Automatic purge and automatic solvent recycle	
Volumes	Inlet port to sample cell 2.5 μ L, inlet port to outlet port 265 μ L	
Liquid contact materials	316 stainless steel, PTFE and quartz glass	
pH range	2.3 – 9.5	
Performance specifications	Short term noise: $< \pm 1.75 \cdot 10^{-9}$ RIU Drift: $< 200 \cdot 10^{-9}$ RIU/hr	
Time programmable parameters	polarity, peak width	
Maximum data rate	148 Hz	
Detector zero	automatic zero before analysis	
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 or above	For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers

Table 54 Agilent 1290 Infinity II Refractive Index Detector (G7162B) Performance Specifications

Type	Specification	Comments
Local control	Agilent Instant Pilot (G4208A)	B.02.17 or above
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range selectable, one output	
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals	
Safety and maintenance	Extensive diagnostics, error detection and display, leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.	
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage with user-selectable limits and feedback messages. Electronic records of maintenance and errors. Automated operational qualification/performance verification (OQ/PV).	
Housing	All materials recyclable.	

Agilent 1260 Infinity II Refractive Index Detector (G7162A)

Physical Specifications

Table 55 Physical Specifications

Type	Specification	Comments
Weight	15 kg (33 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	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 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

Performance Specifications

Table 56 Agilent 1260 Infinity II Refractive Index Detector (G7162A) Performance Specifications

Type	Specification	Comments
Detection type	Refractive Index	
Refractive index range	1.00 – 1.75 RIU, calibrated	
Measurement range	$\pm 600 \cdot 10^{-6}$ RIU	
Optical zeroing		via set screw
Optics temperature control	5 °C above ambient to 55 °C	
Sample cell	Volume: 8 μ L Maximum pressure: 5 bar (0.5 MPa) Maximum flow rate: 5 mL/min	
Valves	Automatic purge and automatic solvent recycle	
Volumes	Inlet port to sample cell 62 μ L, inlet port to outlet port 590 μ L	
Liquid contact materials	316 stainless steel, PTFE and quartz glass	
pH range	2.3 – 9.5	
Performance specifications	Short term noise: $< \pm 1.25 \cdot 10^{-9}$ RIU Drift: $< 200 \cdot 10^{-9}$ RIU/hr	
Time programmable parameters	polarity, peak width	
Maximum data rate	74 Hz	
Detector zero	automatic zero before analysis	
Instrument Control	Lab Advisor B.02.07 or above LC and CE Drivers A.02.12 or above	For details about supported software versions refer to the compatibility matrix of your version of the LC and CE Drivers

4 Special Detectors

Agilent 1260 Infinity II Refractive Index Detector (G7162A)

Table 56 Agilent 1260 Infinity II Refractive Index Detector (G7162A) Performance Specifications

Type	Specification	Comments
Local control	Agilent Instant Pilot (G4208A)	B.02.20 or above
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range selectable, one output	
Communications	LAN, controller-area network (CAN), ERI: ready, start, stop and shut-down signals	
Safety and maintenance	Extensive diagnostics, error detection and display, leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas.	
GLP features	Early maintenance feedback (EMF) for continuous tracking of instrument usage with user-selectable limits and feedback messages. Electronic records of maintenance and errors. Automated operational qualification/performance verification (OQ/PV).	
Housing	All materials recyclable.	

Agilent 1260 Infinity II Evaporative Light Scattering Detector (G4260B)

Physical Specifications

Table 57 Physical Specifications

Type	Specification	Comments
Weight	11 kg	
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)	
Ambient operating temperature	10–35 °C (50–95 °F)	
Ambient non-operating temperature	-40 – 70 °C (-40 – 158 °F)	
Humidity	< 95 % r.h. at 40 °C (104 °F) < 80 % 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

Performance Specifications

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 58 Performance Specification of the ELS Detector

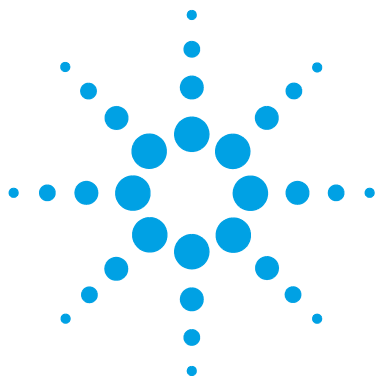
Type	Specification
Light Source	
G4260B	LED 480 nm (Class 1 LED product)
G4261B	LASER 405 nm, 10 mW (Class 3B)
Detector	PMT with digital signal processing
Nebuliser	OFF, 25 – 90 °C
Evaporator	
Non-cooled	OFF, 25 – 120 °C
Cooled	OFF, 10 – 80 °C
Gas Flow Range	0.9 – 3.25 SLM (controlled gas shut-off)
Short Term Noise	For G4260B <0.2 mV, for G4261B <0.1 mV under specified conditions.
Drift	For both modules <1 mV/h under specified conditions.
Operating Pressure	60 – 100 psi (4 – 6.7 bar)
Eluent Flow range	0.2 – 5.0 mL/min
Digital Output	10, 40 or 80 Hz (24 bit)
Analogue Output	0 – 1.25 V FSD

Table 58 Performance Specification of the ELS Detector

Type	Specification
Communication	Ethernet Serial (RS232) Remote Start Input Pump Stop: 1 Contact closure
PC control (software)	ELSD driver for Rev B ChemStation (RC.NET driver) ELSD driver for OpenLAB ChemStation edition ELSD driver for OpenLAB EZChrom edition ELSD Dimension Software
Remote operation	Remote Start Input
Safety features	Gas shut off Valve, Leak Detection, Laser Interlock

4 Special Detectors

Agilent 1260 Infinity II Evaporative Light Scattering Detector (G4260B)



5 Column Compartments

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Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)

Physical Specifications

Table 59 Physical Specifications

Type	Specification	Comments
Weight	12.5 kg (27.6 lbs)	
Dimensions (height × width × depth)	160 x 435 x 436 mm (6.3 x 17.1 x 17.2 inches), Width 472 mm with column ID option	
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 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

Performance Specifications

Table 60 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	±0.03 °C
Temperature accuracy	±0.5 °C (with calibration)
Temperature precision	0.05 °C
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 <30 min from 25 °C to 100 °C
Solvent heat exchangers	Individually quick-installable for every column. Available at 1 µL delay volume, 0.075 mm i.d. capillary (ultra-low dispersion), 1.6 µL delay volume, 0.12 mm i.d. capillary (standard) and 3 µL delay volume, 0.12 mm i.d. capillary (high-flow) volume.

5 Column Compartments

Agilent 1290 Infinity II Multicolumn Thermostat (G7116B)

Table 60 Agilent 1290 Infinity II Multicolumn Thermostat (G7116B) Performance Specifications

Feature	Specification
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
Instrument Control	Lab Advisor B.02.06 or above LC and CE Drivers A.02.11 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.02.19 or above
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 Requires LC and CE drivers A.02.12 or above

NOTE

All specifications are valid for distilled water at ambient temperature (25 °C), set point at 40 °C and a stable flow range from 0.2 – 5 mL/min. Equilibration Time: 10 min.

Agilent 1260 Infinity II Multicolumn Thermostat (G7116A)

Physical Specifications

Table 61 Physical Specifications

Type	Specification	Comments
Weight	12.5 kg (27.6 lbs)	
Dimensions (height × width × depth)	160 x 435 x 436 mm (6.3 x 17.1 x 17.2 inches), Width with column identification kit: 460 mm	
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 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

Performance Specifications

Table 62 Agilent 1260 Infinity II Multicolumn Thermostat (G7116A) Performance Specifications

Feature	Specification ¹
Operating principle	Thermostatted column compartment with dual, independent Peltier-element. Solvent pre-heating and still-air operation for reduction of chromatographic band-broadening under UHPLC-conditions.
Temperature range	10 °C below ambient (minimum 4 °C) to 85 °C settable in steps of 0.1 K
Temperature stability	±0.1 °C
Temperature accuracy	±0.5 °C (with calibration for 40 °C)
Temperature precision	0.05 °C
Independent Temperature zones	2 in single device
Column capacity	4 columns of up to 300 mm length plus InfinityLab Quick-Connect fittings or pre-column Number of precolumn Quick-Connect Heat Exchangers is scalable – each column can be equipped with individual heat exchanger for best performance 4-column selector valve is available to access each column without replumbing
Heat-up/cool-down time	5 min from ambient to 40 °C 10 min from 40 °C to 20 °C <25 min from 25 °C to 85 °C
Solvent heat exchangers	For pre-column solvent heating, G7116A is equipped with a Quick-Connect Heat Exchanger Large ID (0.17 mm capillary, 3 µL internal volume) as default. Other dimensions of Quick-Connect Heat Exchangers are optionally available as well as heat exchangers made out of bio-inert materials (metal-free).

Table 62 Agilent 1260 Infinity II Multicolumn Thermostat (G7116A) Performance Specifications

Feature	Specification ¹
Valve options	1 x integrated valve drive as option to host user-exchangeable Quick-Change valve heads (up to 600 bar) of different formats: 2-position/6-port, 2-position/10-port, 4-column selection. Also available in bio-inert materials. Valve heads are automatically identified by their tag.
Column identification	Optionally, column identification kit to track history of up to four columns. Mounted left hand-side of module.
Communications	Controller-area network (CAN). G7116A is a hosted module (LC stack needs to contain a LAN communication and control card)
Software compatibility	Requires OpenLAB CDS A.01.03 - A.02.02 (with LC & CE Drivers A.02.14 or higher) <ul style="list-style-type: none"> • OpenLAB CDS ChemStation ed. C.01.03 -C.01.07 SR2 or higher • OpenLAB CDS EZChrom ed. A.04.05 - A.04.07 SR2 or higher MassHunter (LC Drivers A.02.14) or higher <ul style="list-style-type: none"> • MassHunter B.07.01 or higher for (Q)-TOF • MassHunter B.08.02 or higher for QQQ
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
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.
GLP	Valve heads carrying tags with serial number, pressure rating, number of switches and valve type. Concept of column identification.

¹ All specifications are valid for distilled water at ambient temperature (25 °C), set point at 40 °C and a stable flow range from 0.2 – 5 mL/min. Equilibration Time: 10 min.

Agilent InfinityLab LC Series Integrated Column Compartment (G7130A)

NOTE

The Agilent InfinityLab LC Series Integrated Column Compartment (G7130A) is not available as a separate module, but as an option for use with the Agilent InfinityLab LC Series Vialsamplers (G7129A/B).

Physical Specifications

Table 63 Physical Specifications (G7130A)

Type	Specification	Comment
Weight	1.8 kg	
Dimensions (height x width x depth)	86.5 x 396 x 106.5 mm	maximum outside
Supply Voltage	24 V DC	
Power consumption	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) ¹	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

¹ If a sample cooler is included the upper value for humidity can be reduced. Please check your lab conditions to stay beyond dew point values for non-condensing operation.

Performance Specifications

Table 64 Performance Specifications Agilent InfinityLab LC Series Integrated Column Compartment (G7130A)

Type	Specification	Comments
Temperature range	5 °C above ambient to 80 °C	
Column capacity	2 columns up to 30 cm and 4.6 mm ID	
Temperature stability	±0.10 °C sensor	
Temperature accuracy	±0.5 K	At sensor
Warm up time	20 – 40 °C in 5 min	

In This Book

The compendium contains specifications of
Agilent InfinityLab LC Series modules:

- Pumps
- Injectors
- UV-Detectors
- Special Detectors
- Column Compartments

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