

Performance Specifications Agilent 1100 Series DAD

Reference conditions for data of [Table 92](#):

- cell path length 10 mm, response time 2 s,
- flow 1 ml/min LC-grade Methanol,
- slit width 4 nm.

Linearity measured with caffeine at 265 nm.

Table 92 Performance Specifications Agilent 1100 Series Diode Array Detector

Type	Specification	Comments
Detection type	1024-element photodiode array	
Light source	Deuterium and tungsten lamps	
Wavelength range	190 – 950 nm	
Short term noise (ASTM)* Single and Multi-Wavelength	Typically $\pm 3 \times 10^{-5}$ AU at 254 nm at flow rates <100 μ l/min	For the 500 nl flow cell the noise is 2-3 times higher than with standard flow cell
Drift	2×10^{-3} AU/hr at 254 nm	
Linear absorbance range	> 2 AU (upper limit)	
Wavelength accuracy	± 1 nm	Self-calibration with deuterium lines, verification with holmium oxide filter
Wavelength bunching	1 – 400 nm	Programmable in steps of 1 nm
Slit width	1, 2, 4, 8, 16 nm	Programmable slit
Diode width	< 1 nm	
Flow cell	500 nanoliter: 0.5 μ l volume, 10 mm cell path length and 50 bar (725 psi) pressure maximum	

Table 92 Performance Specifications Agilent 1100 Series Diode Array Detector

Type	Specification	Comments
Maximum pressure	50 bar	
Control and data evaluation	Agilent ChemStation for LC	
Analog outputs	Recorder/integrator: 100 mV or 1 V, output range 0.001 – 2 AU, two outputs	
Communications	Controller-area network (CAN), GPIB, RS-232C, APG Remote: ready, start, stop and shut-down signals, LAN optional	
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	Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filter.	
Housing	All materials recyclable.	

* ASTM: "Standard Practice for Variable Wavelength Photometric Detectors Used in Liquid Chromatography".

For specification on the 500 nl flow cell refer to [Table 85](#) on page 153.