

# Agilent 1260 Infinity Fluorescence Detector

## Features, Technical Details, Specifications and Ordering Details

### **Sensitive and reliable fluorescence detection for HPLC and UHPLC**

The proven optical and electronic design of the Agilent 1260 Fluorescence Detector provides highest sensitivity for the analysis of trace-level components. Time-programmable excitation and emission wavelength switching allows you to optimize the detection sensitivity and selectivity for your specific applications. High-speed detection with up to 74 Hz data rates keeping you pace with the analysis speed of fast LC.

- Lowest limits of detection with a Raman S/N > 3000 (using dark signal noise reference).
- Simplified optical design for optimized baseline stability.
- Up to 100% resolution gain in fast LC using a 75 Hz data acquisition rate.
- Long-life xenon lamp for highest sensitivity. The long-life (> 4000 hours) flash lamp, lamp reference system and efficient light collection ensure constant lamp energy for maximum excitation of fluorophores.
- Easy front access enables fast inspection or exchange of the flow cell.
- Automatic recognition of all flow cell cartridges provides documentation of instrument parameters and helps to comply with GLP.
- Extensive diagnostics, error detection and display with Instant Pilot controller and Agilent Lab Advisor software.

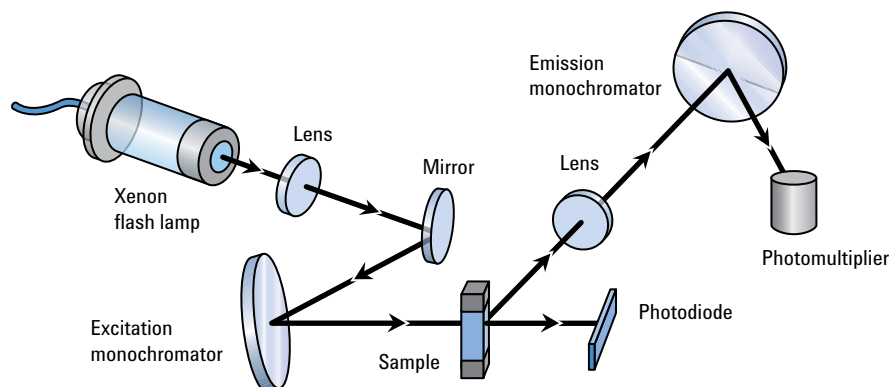


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## Technical Details – Agilent 1260 Infinity Fluorescence Detector

### Simplified optical design for optimized baseline stability

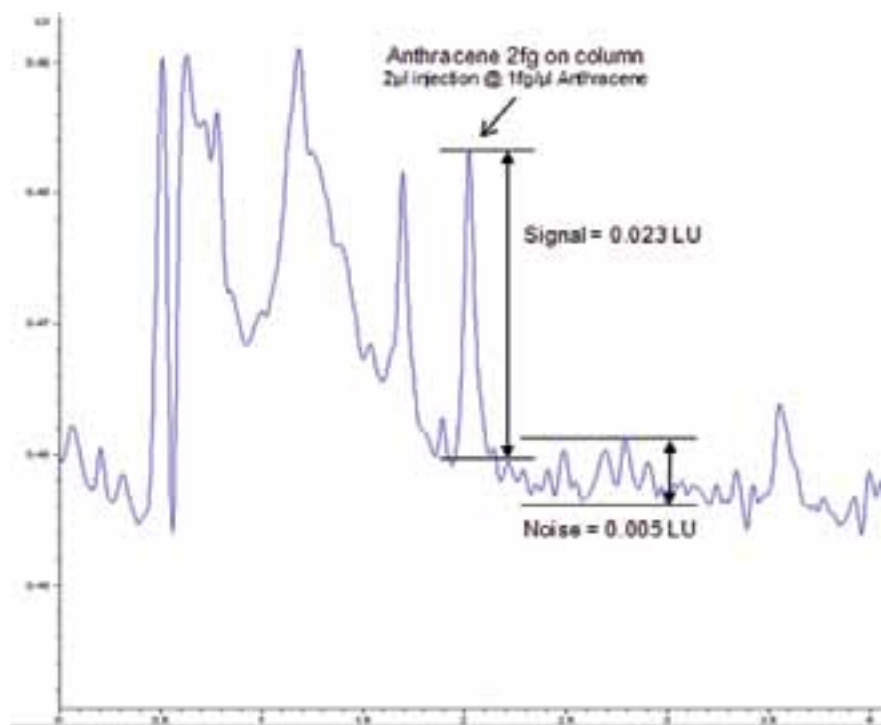
The xenon flash lamp ignites only for microseconds to provide the light energy for the fluorescence. This results in lamp lifetime of several thousand hours and significantly reduces operating costs. Additionally no warm-up time is needed to get a stable baseline.



Optical system of the 1260 Infinity FLD.

### Ultra sensitivity for lowest detection limits

The 1260 Infinity Fluorescence Detector achieves a RAMAN signal to noise ratio value of at least 3000 using the dark signal at 450 nm as noise reference. This superior sensitivity results in a detection limit for anthracene as low as 1.3 fg.



Column: ZORBAX RRHD Eclipse Plus C18  
2.1 x 100 mm, 1.8  $\mu$ m  
Injection vol.: 2  $\mu$ L  
Mobile phase: isocratic, premixed 75% ACN/water  
Flow: 0.4 mL/min  
Detection: FLD Ex 250 nm, Em 400 nm  
Peak width 2  
PMT gain: 14

High sensitivity analysis of anthracene achieving a detection limit of 1.3 fg.

### Check or exchange your flow cell – fast

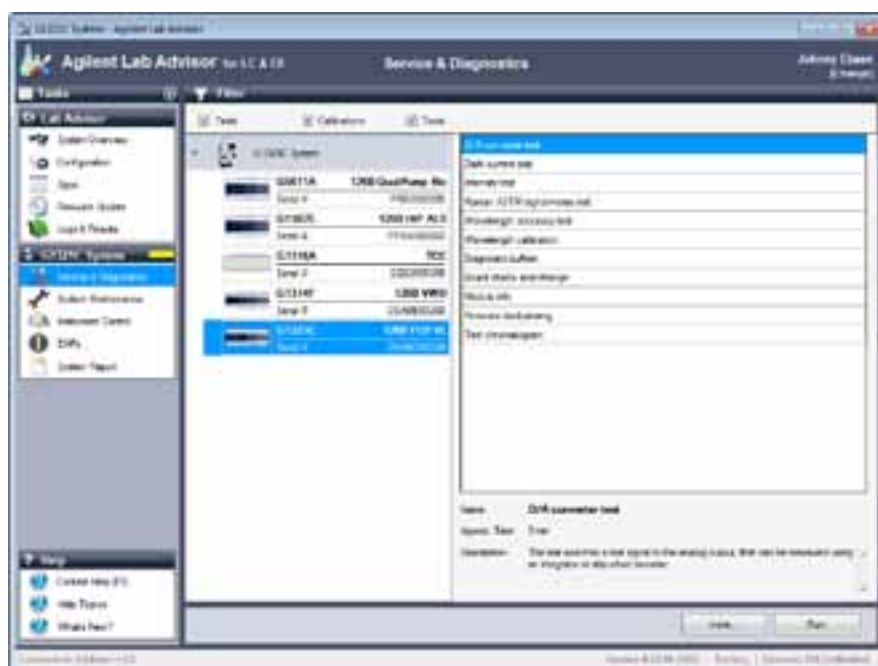
Easy front access enables fast inspection or exchange of the flow cell. Automatic recognition of all flow cell cartridges provides documentation of instrument parameters and helps to comply with GLP.



Easy front access of flow cell

### Cut operating costs with minimized downtime

Agilent Lab Advisor provides full diagnostic and maintenance capabilities including an extended list of tests and calibration procedures independent of the software you use to control your instrument.



## Specifications – Agilent 1260 Infinity Fluorescence Detector

Specifications: Agilent 1260 Infinity Fluorescence Detector (G1321C)	
<b>Detection type:</b>	Programmable single wavelength (excitation and emission) fluorescence detector
<b>Performance</b>	Raman (H <sub>2</sub> O) > 3000 (noise reference measured at dark value) Ex 350 nm, Em 397 nm, dark value 450 nm, standard flow cell
<b>Light source</b>	Xenon flash lamp, normal mode (20 W), economy mode (5 W), lifetime 4000 hours
<b>Pulse frequency</b>	296 Hz for signal mode, 74 Hz for economy mode
<b>Excitation monochromator</b>	Concave holographic grating, F/1.6, blaze 300 nm, Range 200 – 1200 nm and zero-order, bandwidth 20 nm
<b>Emission monochromator</b>	Concave holographic grating, F/1.6, blaze 400 nm, Range: settable 200 – 1200 nm and zero-order, bandwidth 20 nm
<b>Reference system</b>	Inline excitation measurement
<b>Time programming</b>	Response time, PMT gain, baseline behavior (append, free, zero)
<b>Step size</b>	1-20 nm
<b>Spectra storage</b>	Limited only by disk space
<b>Wavelength repeatability</b>	± 0.2 nm
<b>Wavelength accuracy</b>	±3 nm
<b>Data rate</b>	74 Hz
<b>Flow cells</b>	Standard: 8 µL volume, 20 bar (2 MPa) pressure maximum, quartz. Optional: Semi-micro flow cell, 4 µL, 20 bar pressure maximum Bio-inert flow cell, 8 µL, 20 bar pressure maximum
<b>Control and data evaluation</b>	Agilent OpenLAB Chromatography Data System (CDS) ChemStation Edition and EZChrom Edition or Agilent Instant Pilot data evaluation
<b>Environment</b>	0 - 40 °C constant temperature at <95% humidity (non-condensing)
<b>Analog outputs</b>	Recorder/integrator: 100 mV or 1 V, Output range selectable from 0.2 to 400 LU, 2 outputs
<b>Communications</b>	LAN, Controller-area-network (CAN), RS232, APG remote Remote: ready, start, stop and shut-down-signals
<b>Safety and maintenance</b>	Extensive diagnostics, error detection and display (through ChemStation and Instant Pilot), leak detection, safe leak handling, leak output signal for shutdown of pumping system. Low voltages in major maintenance areas
<b>GLP</b>	Early maintenance feedback (EMF) for continuous tracking of instrument usage, display of feedback messages in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy using Raman band (H <sub>2</sub> O) lines.

## Ordering Details – Agilent 1260 Infinity Fluorescence Detector

Description	Product/Part number
<b>Agilent 1260 Infinity Fluorescence Detector</b> For programmable single wavelength (excitation and emission) detection up to 74 Hz data rate. No flow cell included	G1321C
<b>Semi-micro flow cell 4 µL</b>	#016
<b>Standard Flow Cell, 8 µL</b>	#018
<b>Bio-Inert flow cell, 8 µL</b>	#028
<b>Delete LAN card</b>	#690

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Published in the USA, June 1, 2014  
5991-2436EN



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