

Laser
Induced
Fluorescence
Detector

LIF Detector Zetalif™ Evolution

The flexible detector

A sensitive solution for CE, HPLC and fast-LC systems



Sensitivity:

10 times to 100 times greater than conventional fluorescence and up to 100,000 times more sensitive than UV detection.

Versatility:

14 different lasers are available to meet your specific. The laser is readily interchangeable.

Selectivity:

Only labeled molecules and compounds with native fluorescence will be detected. Low noise and interference.

Modularity:

Adaptable to CE and HPLC systems including Fast-LC, Capillary LC and nanoLC.

Zetalif™ Evolution Detector Specifications:

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Two models are available :

- LIF-UV-01 Designed lasers emitting at wavelengths from 266 to 488 nm
- LIF-VI-01 Possibility to couple lasers emitting at wavelengths from 410 to 780 nm

Capillary : OD: 365 µm to 460 µm
ID : Refer to table 1

Capillary ID µm	Estimated* cell Volume nL
25	0.1
50	0.4
75	0.9
100	1.6
150	3.5
320	16.1

Cell Detection Volume :

It is a small part of the capillary
Refer to table 1

Signal Outputs:

Analog (processed) 0-1V (DC), 0-100 mV (DC)
Analog (direct) 0-1V (DC)

*Based on 200 µm length of window
Table 1: Capillary ID and Volume cell

Data Acquisition Systems:

ZETALIF is compatible with any data acquisition system featuring an analog input (0-1 V).
If no analog input is available, an A/D converter is necessary.

Power requirements for the Detector:

100/120 VAC, 50/60 Hz, 0.63 A;
220/240 VAC, 50/60 Hz, 0.315 A

Interface with HPLC system:

Zetalif Evolution is compatible with all LC systems but optimal sensitivity is achieved at flow rates < 0.5 mL/min. Lower sensitivity may be observed at higher flow rates.

Interface with CE system:

Agilent CE: External Detector Adapter kit, MS cassette, and an A/D converter (HP.35900E) needed. Capillary length total 55cm/effective 37cm.

The system works with the HP Chemstation software.

Beckman P/ACE MDQ: External Detector Adapter kit, MS cassette and an A/D converter (SS420-X) needed. Capillary length: total 53cm/effective 35cm. The system works with the 32 karat software.

PrinCE : For single lift models, capillary length: total 70cm/effective 50cm. (80/35 for double lift models). The system works with the DAX software.

Other systems: please contact Picometrics.

Dimensions and weight:

34.0 (H) x 17.0 (W) x 34.0 (D)cm/12,5 kg

Available Lasers:

Wavelength	Type	Power	Wavelength	Type	Power
266 nm	Pulsed DPSS (10kHz)	≥ 2 mW	514 nm	Argon ion	40 mW
325 nm	Helium / Cadmium	≥ 10 mW	532 nm	DPSS CW	15 mW
355 nm	Pulsed DPSS	≥ 2 mW	594 nm	Helium / Neon	≥ 2 mW
410 nm	Laser module	≥ 20 mW	633 nm	Helium / Neon	> 10 mW
442 nm	Helium / Cadmium	≥ 30 mW	635 nm	Laser Diode CW	20 mW
473 nm	Diode CW	≥ 30 mW	650 nm	Laser Diode CW	15 mW
488 nm	Argon ion	25 mW	780 nm	Laser Diode CW	40 mW

Filter block: Filters in the filter block depend on the laser and contain the appropriate excitation and emission filters (a).

(a) Contact Picometrics for more information

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