

The Finnigan SpectraSYSTEM FL3000 is a highly sensitive, scanning fluorescence detector for liquid chromatography. Its dual monochromator design delivers exceptional optical performance and operational flexibility for routine and trace analyses.

Finnigan™ SpectraSYSTEM™ FL3000

Scanning Fluorescence Detector
for fluorescence, phosphorescence
and chemiluminescence

- **Unsurpassed sensitivity across the entire spectral range**
- **High-speed scan for both excitation and emission**
- **Wide linear dynamic range**
- **LCD display of scan data**
- **Calibrated, consistent fluorescence response**
- **Accurate and reproducible results**
- **Complete applications flexibility**
- **Optimum sensitivity and selectivity with Thermo Electron columns**

High Performance

An improved optical design provides exceptional performance. High-efficiency holographic diffraction gratings are optimized for high sensitivity at both lower and higher excitation wavelengths.

Customize your selectivity by choosing either of three slit widths. The pulsed xenon lamp provides a high energy level across the entire UV/Vis spectrum and produces no harmful ozone. Fluctuations in lamp intensity are automatically maintained and corrected to reduce noise and drift.

Quantitative accuracy and precision are greatly enhanced by the use of twenty-bit digital electronics, producing a wider dynamic range. The electronics design allows emission monitoring of fluorescence, phosphorescence, and chemiluminescence.

The FL3000 is the ideal detector for the analysis of polyaromatic hydrocarbons (PAHs), derivatized amino acids, carbamates, and glyphosates.

Improved Laboratory Productivity

The FL3000 detector makes your job easier. Time programming of the Ex λ and Em λ lets you easily optimize sensitivity and selectivity. Automatic, real-time scanning of eluting peaks helps you identify optimum wavelengths. No more time-consuming manual stop-flow techniques.

Create up to four user files with ten timelines each for fast, easy wavelength changes. All files can be linked with the built-in queue function.

A unique feature allows the emission data of up to sixty stored spectra to be displayed on the LCD or played back to an external data collection device.

The signal response can be normalized to any compound of interest, or a preset factory response factor can be used. This provides consistent unit-to-unit response.

The lamp and flowcell are prealigned and easily accessible from the front of the instrument. Exchange or service is fast and simple.



PC-based Control Available

Remote programming is possible with Atlas™ 2003 software. Atlas 2003 provides remote instrument control and data collection, making the FL3000 part of a fully integrated PC-controlled HPLC system.

As with most other Finnigan SpectraSYSTEM components, the FL3000 utilizes the SN 4000 system controller for communication with the Atlas PC-based chromatography data system.

SpectraSYSTEM FL3000 Fluorescence Detector Specifications

Optical Design

Dual monochromators using stepper motor concave holographic diffraction gratings

Sensitivity

S/N > 3000, for 4.1 µg/L anthracene in MeOH; 248 nm Ex, 398 nm Em

Wavelength Range

200–650 nm excitation; 200–650 nm emission; 200–800 nm emission with optional, extended range (red-sensitive) PMT

Wavelength Accuracy

± 2 nm @ 248 Ex/398 Em
Spectral Bandwidth
8, 20, or 30 nm; selectable

Lamp

Pulsed xenon; selectable flash rate of 20 or 100 Hz

Flowcell

Hi-purity quartz, Teflon,® Kalrez® and PEEK™; 8 µL illuminated volume; maximum pressure 200 psi (14 bar)

Spectral Scanning

Automatic or manual; 100 steps per second; step size selectable; 2, 4, 8, 16, or 32 nm; up to 60 spectra stored in memory.* Replay or display stored data.

* For scans of 100 nm with a 2-nm interval (50 discrete data points).

Fluorescence Range

0.01–500 fluorescence units full scale

Analog Outputs

Two, Range selectable over entire fluorescence range using 20-bit D/A

Method Files

Four user files protected in non-volatile memory; files can be linked via queue; 10 timelines per file for wavelength changes; automatic zero

Ambient Environment

10–40 °C, 5–95% relative humidity, non-condensing

Communications

Remote Inputs Run, Stop, and Zero Output Ready

Dimensions

37 cm × 15 cm × 47 cm (H × W × D)

Weight

11 kg

Power Requirements

100/120/220/240 VAC, 50/60 Hz
2 Amps max

Product Certification

TUV CE Mark
TUV CUS
FCC (EMI)

Part Number	Description
A5256-010S	8 µL Flow Cell
9551-0144	Xenon Lamp
CHROM-64001	SN 4000 System Controller
ATLAS-64010	Atlas 2003 Chromatography Data System
A5183-010	Thermo Electron C8 Column 15 cm × 4.6 mm
FL3000-140	FL3000 Fluorescence Detector
A5765-010	SpectraSYSTEM Accessory Rack

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