

FS5

Spectrofluorometer



The FS5 v2 is a high-performance, fully integrated spectrofluorometer designed for demanding research and analytical applications.

This compact benchtop system offers flexible source and detector configurations, adapting seamlessly to your needs.

Standard features include a photon-counting PMT detector for visible fluorescence and an absorption detector. Easily upgradeable, it supports NIR measurements up to 2050 nm, time-resolved fluorescence, phosphorescence, quantum yields, and anisotropy.

Key Features



12,000:1

Water Raman SNR, high sensitivity allows for detection of very weak fluorescence signals



Multiple detector ports

Two emission ports and NIR upgradeability makes the FS5 unique in its class



Rapid data acquisition

For steady state & lifetime



Plug & Play

Sample modules for easy setup and flexibility



Two in One

Fluorescence and absorption measurements as standard



SPECIFICATIONS

STANDARD CONFIGURATION	Optics	All-reflective
	Detection Technique	Single Photon Counting
	Light Source	150 W Xenon arc lamp
	Monochromators	Czerny-Turner design with dual grating turret
	Spectral Coverage - Excitation	<230 nm - 1000 nm
	Spectral Coverage - Emission	200 nm - >870 nm
	Filter wheels	Fully automated and included as standard
	Bandpass - Excitation/Emission	0 - 30 nm, continuously adjustable
	Wavelength Accuracy	± 0.5 nm
	Scan Speed - Excitation/Emission	100 nm/s
Integration Time	from 1 ms	
DETECTORS	Emission Detector	Cooled Single Photon Counting, PMT-900, 200 nm - 870 nm
	Reference Detector	UV enhanced silicon photodiode, 200 nm - 1000 nm
	Absorbance Detector	UV enhanced silicon photodiode, 200 nm - 1000 nm
SENSITIVITY	Signal-to-Noise Ratio	>12000:1 *
	Water Raman measurement (SQRT method). λ_{ex} = 350 nm, bandpass = 5 nm, step size = 1 nm, integration time = 1 s, λ_{peak} = 397 nm, noise measured at 450 nm	
DIMENSIONS	W x D x H	104 cm x 59 cm x 32 cm
	Weight	65 kg

Upgrade Specifications

EXCITATION WAVELENGTH EXTENSION	Model	UV+			
	Excitation Coverage	<200 nm – 1000 nm			
EMISSION WAVELENGTH EXTENSION	Upgrade	PMT-EXT	PMT-UC	NIRA1650	NIRA2050
	Type	PMT Replacement	Additional Detector	Additional Detector	Additional Detector
	Emission Coverage	200 nm ->980 nm	200 nm - 1010 nm	870 nm ->1650 nm	870 nm ->2050 nm
	Lifetime possible	From ~90 ps	From ~120 ps	Spectral only	Spectral only
	Upgrade	NIRT1400-TE	NIRT1700-TE	NIRL1400-LN	NIRL1650-LN
	Type	Additional detector	Additional detector	Additional detector	Additional detector
	Emission Coverage	950 nm - 1400 nm	950 nm - 1650 nm	500 nm - 1400 nm	500 nm - 1650 nm
	Lifetime possible	From ~70 ps	From ~70 ps	From ~120 ps	From ~120 ps
POLARISATION / ANISOTROPY	Upgrade	POL			
	Spectral Coverage	220 nm - 900 nm excitation 240 nm - >2000 nm emission			
PHOSPHORESCENCE LIFETIME	Upgrade	MCS		MCSL	
	Lifetime Range (Source dependent)	<5 μ s - >10 s		50 ns - >10 s	
FLUORESCENCE LIFETIME	Upgrade	TCSPC		TCSPC++	
	Lifetime Range (Source dependent)	90 ps - >10 μ s		<25 ps - 10 μ s	