FluoTime 250

Compact Lifetime Fluorometer

FluoTime 250 is a compact table-top though flexible lifetime fluorometer. This setup enables users to carry out routine lab work quickly, reliably and with high precision for life science, materials science and photochemistry applications. In basic configuration, FluoTime 250 consists of a motorized filter wheel for selection of emission wavelengths with the choice of filters depending on customers requirements. The system can be additionally equipped with an optional monochromator for UV-Vis spectral range.

- Steady-state and time-resolved (TCSPC, MCS) operation mode
- Easy-handling, compact setup for fast and precise measurements
- Flexible filter-based emission wavelength selection
- Fully automated system for lifetimes ranges from ps to s
- Intuitive acquisition and analysis EasyTau 2 software

FluoTime 250 offers high spectral and temporal resolution that allow the acquisition and analysis of:

- Fluorescence Spectra
- Fluorescence Lifetime Decay
- Phosphorescence Lifetime Decay
- Fluorescence Anisotropy

Upgrades

- Micro-Photoluminescence via confocal (MicroTime 100, MicroTime 200)
- Optional UV-Vis monochromator in emission
- Various sample holders ranging from standard cuvette to solid samples

Specifications

Optional monochromator	
Type	**Czerny-Turner design**
Focal length	150 mm
Stray light rejection	$1:10^{-5}$
Grating*	1200 g/mm blazed at 500 nm
Spectral resolution	0.3 nm
Wavelength accuracy	0.3 nm
Dispersion	5.4 nm/mm

Excitation sources		
Light source	**Picosecond Pulsed Laser (LDH and LDH-I series, Prima)**	**Pulsed LEDs (PLS Series)**
Wavelengths	375 - 1200 nm	255 - 600 nm
Pulse width	40 ps - 200 ps	400 ps - 1 ns

Detectors*				
PMT	**PMA-C-192**		**NIR-PMT****	
Spectral range	230 - 920 nm		950 - 1400 nm	
Dark counts (at 20 °C)	< 1100 cps		< 10 000 cps	
Transit time spread	< 180 ps		< 300 ps	
PMA Hybrid	**-07**	**-40**	**-42**	**-50**
Spectral range	220 - 850 nm	300 - 720 nm	300 - 870 nm	380 - 890 nm
Dark counts (at 20 °C)	< 90 cps	< 80 cps	< 110 cps	< 250 cps
Transit time spread	< 50 ps	< 120 ps	< 130 ps	< 160 ps

Data acquisition	**TimeHarp 260 PICO**		**TimeHarp 260 NANO**	**PicoHarp 300**
Type	**TCSPC**	**MCS**	**TCSPC**	**TCSPC**
Number of time channels	up to 32 768		up to 32 768	up to 65 536
Bin width	25 ps	2.5 ns	250 ps	4 ps
Dead time	< 25 ns	< 2.5 ns	< 2 ns	< 95 ns

Operating environment				
Computer system	Windows 10			

* Other types are available upon request.
** Values provided by Hamamatsu.