

TimeMaster™

PicoMaster 2 TCSPC Spectrofluorometer

The TimeMaster™ fluorescence lifetime spectrofluorometer series from Photon Technology International offers high performance and the flexibility of PTI's modular "Open Architecture" design.



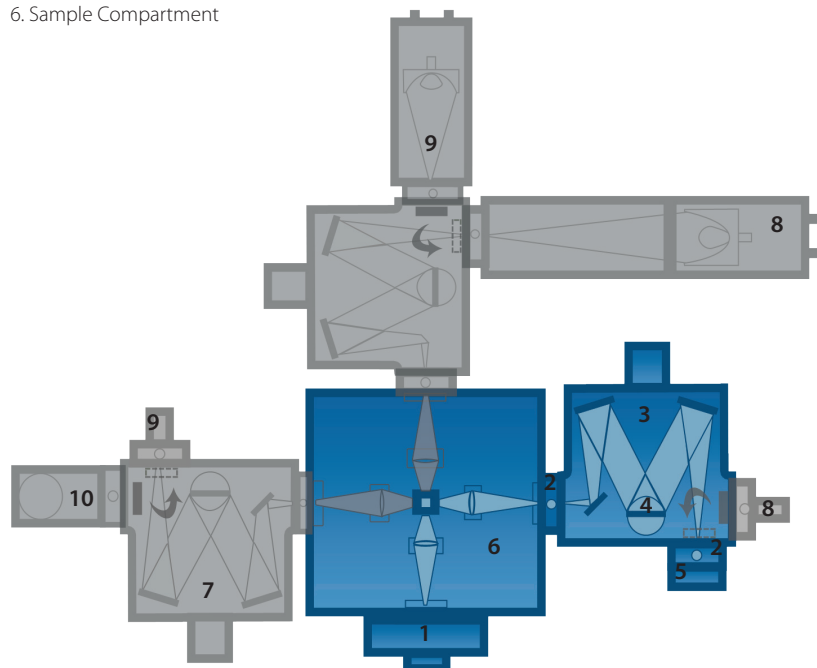
The PicoMaster 2 is an L-format cuvette-based lifetime spectrofluorometer capable of making fast and simple fluorescence lifetime measurements down to 10 picoseconds (light source and detector dependent). The PicoMaster 2 spectrofluorometer is designed for the user who needs the most versatile and modular L-format system for the time-resolved fluorescence spectroscopy, especially to measure short lifetimes under 100 ps or perform lifetime measurements in NIR.

STANDARD SYSTEM

1. Ps Laser Diode (fs/ps mode-locked lasers available on request)
2. Adjustable Slits
3. Emission Monochromator
4. Emission Grating
5. TCSPC Lifetime Detector (fast PMT, NIR PMT or MCP)
6. Sample Compartment

OPTIONAL UPGRADES

7. Dual Emission (T-format)
8. Steady State Upgrade
9. Phosphorescence Upgrade
10. NIR Upgrade



Applications

- Intrinsic protein fluorescence
- FRET
- Quantum dots
- DNA binding
- Fluorescence lifetimes
- Protein-protein interactions
- Protein-drug interactions
- Anisotropy decays
- Molecular photophysics
- Photosynthesis
- Semiconductors, glasses and ceramics
- And many more!

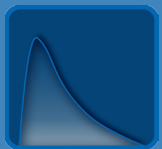
Accessories

- Peltier sample heater/cooler with rapid temperature control
- Solid sample holder
- Powdered sample holder
- Cold finger dewar
- Muscle strip accessory
- Microcuvette
- Polarizers
- Four-position sample holder
- Titrator

Upgrade Options

- Dual Emission (T-format)
- Steady State Upgrade
- Phosphorescence Upgrade
- NIR Upgrade
- Light Source Upgrade: fs/ps mode-locked lasers
- Detector Upgrade: NIR PMTs, MCP





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Specifications

Detection Technique	Time-Correlated Single Photon Counting (TCSPC)
Light Sources	picosecond Laser Diodes: 375, 405, 445, 473, 488, 635, 650, 660, 670 nm (up to 1550 nm available)
Rep Rate (ps LDs)	Variable, up to 100 MHz
ps LD Pulse Width	Down to 50 ps
PMT Response	180 ps (UV-VIS), 300 ps (NIR)
MCP Response	25 ps
Temporal Resolution	813 fs
Shortest Lifetime	< 10 ps
Emission Spectral Range	180-820 nm (fast PMT) and up to 1700 nm with NIR PMT



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