

HALCYONE Pico TCSPC Fluorescence Spectrometer

Broad Spectral Range
UV-VIS-NIR

Built-in
Excitation Source

Computer-Controlled



HALCYONE Pico is an all-in-one Fluorescence Spectrometer with Time-Correlated Single Photon Counting. It allows for measuring fluorescence decays with picosecond time resolution. This is a complete setup, including a built-in excitation light source, a monochromator, detectors and all necessary optics and electronics.

Detectors

In Time-Correlated Single Photon Counting the emitted photons are registered directly, therefore the spectral range is determined by the detector. The choice of a detector depends on the required wavelength and time resolution. We offer the following TCSPC detector options:

Detector	IRF (FWHM)	Spectral Range
Photomultiplier (HA-PMT)	250 ps	230 – 700 nm
Hybrid Photomultiplier (HA-PMT-50)	50 ps	220 – 650 nm
Avalanche Photodiode (HA-MPD)	50-200 ps (wavelength dependent)	400 – 900 nm
Photomultiplier (TE cooled) (HA-PMT-NIR)	400 ps	950 – 1700 nm

Imaging Monochromator

The monochromator's design (300 mm, F#6) matches the optics in the rest of the setup and maximizes the overall spectrometer performance.

The monochromator features a 4-grating turret with kinematic mounts for optimal wavelength coverage, optical throughput, and spectral resolution. The UV-enhanced Al coatings on the monochromator mirrors ensure high efficiency of fluorescence collection.



Built-in excitation

As a complete solution, HALCYONE Pico has an integrated computer-controlled tunable excitation source. Additional (external) excitation sources can also be used.

- Spectral range: 360-860 nm
- Pulse duration: <150 ps
- Repetition rate: 1-10 MHz
- Bandwidth tunability: 3-100 nm
- Average output power: 6 μ W/nm
- Computer-controlled

Temporal Pulse Profile Examples

