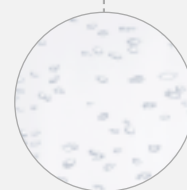




CDP Systems, (CDP) introduce the FOG100, which uses the sum frequency principle of generation (up-conversion) used in the femtosecond optically gated, (FOG) fluorescence kinetic measurement system FOG100 is used to achieve a temporal resolution of better than 100 femtoseconds.

The FOG100 system is the first complete measurement system for femtosecond and picosecond lifetime and kinetic spectroscopy. It has been designed to be compatible with any type of femtosecond oscillator or oscillator - amplifier system operating at  $> 1$  kHz pulse repetition rate. The FOG100 includes an optical unit with 2-ns optical delay line; single or double monochromator; selected photon counting PMT; electronics; Windows based Lumex 3.1 software; installation, test measurements and personnel training.

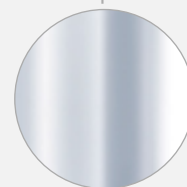
- Detection of laser induced fluorescence with  $< 100$  fs temporal resolution.
- Covers fluorescence phenomena from femtoseconds to 2 ns.
- Fluorescence kinetic measurements in solutions, vapours, thin films and solid samples.
- Recommended laser pulse repetition rate: 1 kHz - 100 MHz.
- Standard configuration designed for femtosecond Ti:sapphire oscillator. Second harmonic generator is included.
- Optional wavelength conversion unit for third harmonic generation.
- Anisotropy kinetic measurements.



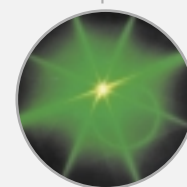
GAS SENSORS



ANALYTICAL INSTRUMENTS



LASERS AND ELECTRO-OPTICS



QUANTUM DIVISION



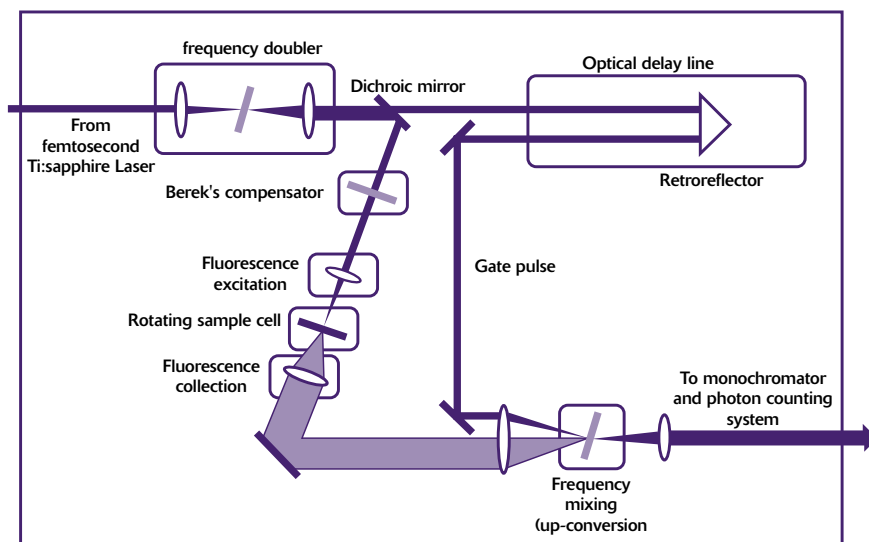


## SPECIFICATIONS

MODEL	FOG100
Temporal Resolution	<150 fs with <100 fs laser pulsewidth
Fluorescence Spectral Range (nm)	370 - 1500*
Repetition Rate (kHz-MHz)	1 - 100
Maximum delay between excitation and gate pulses	70ps with 1.4fs/step optical delay line. 1.7ns 6.25fs/step optical delay line
Dark count (counts/sec)	<5 at room temperature (2 counts/sec typical)
Maximum photon count rate (counts/sec)	$2 \times 10^6$
Monochromator (mm)	380 single monochromator (double monochromator on request).

\*Depends on excitation wavelength

MODEL	DIMENSIONS
Optical Unit (mm)	810 x 500 x 230
Monochromator (mm)	484 x 245 x 198
Electronic Unit (mm)	483 x 350 x 44



Fluorescence Excitation Wavelength nm	Gate Pulse Wavelength nm	Recommended Femtosecond Laser $\pi$ Pulse < 100 fs	Average Laser Power	Fluorescence Wavelength nm	Typical Laser pulse rep. rate
300-490*	720-980	Amplified Ti:sapphire + SHG	>100mW	>370	70-100MHz
490-700	480-700	Amplified Ti:sapphire + OPA	>1mW	>500	1-200kHz
700-980	700-980	Ti:sapphire	>100mW	>710	70-100MHz

\*) frequency doubler is used

