

# variable angle

## Variable Angle, Front Surface Sample Compartment

In the study of membranes or solid samples, the major problem is holding the sample at an angle with respect to the excitation and emission channels to optimize both the incident and the fluorescent intensities. Choosing a less than optimal angle leads to large scattering signal into the detector, sometimes overwhelming the fluorescent signal. Or, alternatively, if the scattering is to be detected than fluorescence may be a significant interference at a non-optimal angle. The Variable-Angle accessory is designed to solve this problem.

A 2 mm-thick, or smaller pathlength cuvette holder can be installed. A film or a solid sample can be sandwiched between two glass slides of appropriate dimensions and be inserted in the cuvette holder. By rotating the handle the sample can be position at the desired angle.



### Key Features

Ideal for studying: solid (nanoparticles, dyes or films on a coverslip), highly scattering & absorbant samples

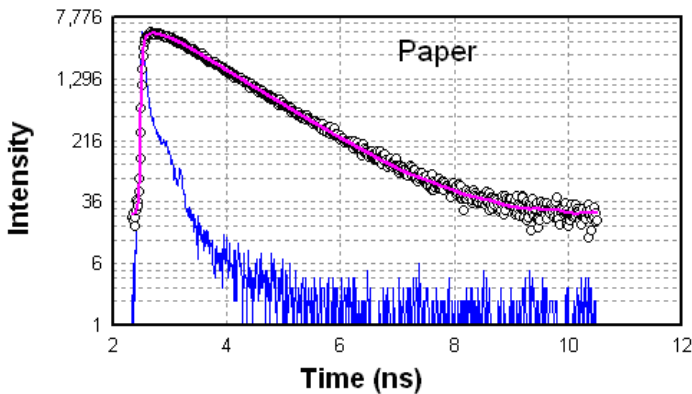
Fine adjustment of the X Y position

Suitable for both steady-state and lifetime applications



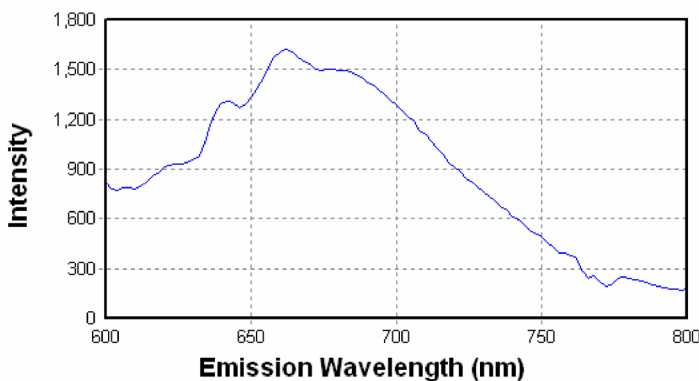
### Application Examples

#### a) Time-resolved Measurements of Solid Samples



Time-domain intensity decay of a paper sample acquired on ChronosBH using a 405-nm pulsed laser diode. The paper sample was placed in a front-surface accessory. A filterwheel is used to change the filter for the sample and the reference. The reference was collected through a 405/10 nm band-pass filter. The emission was collected through a 460/50 nm band-pass filter. The data is best fitted by a single exponential decay time of 0.94 ns ( $x2 = 1.25$ )

#### b) Steady-State Measurements of Solid Samples



Steady-state emission spectrum of a doped single crystal diamond sample. The wavelength zero phonon line was 641 nm. The measurement was acquired using a front-surface accessory. The integration time at each data point was 100 s.

#### Specifications

##### Markers

- 22.5, 30.0, 34.0 and 60.0 degrees

##### Cuvettes

- 2.0 mm or coverslips

#### Other Accessories for Solid Samples

- 30° & 60° aluminum holder
- Cuvette coverslip holders

For more information on the variable angle sample compartment, please email [iss@iss.com](mailto:iss@iss.com) or visit [www.iss.com](http://www.iss.com).



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