# FluoMic add-on

Microscope add-on for the FluoTime 300 fluorescence spectrometers

- Interface your FluoTime 300 to a microscope via pre-aligned optical fibers
- Enable time-resolved and steady-state measurements
- Gather data from any point of the sample
- Excite samples with the FluoTime 300's pulsed or CW source
- Easy to use: no time consuming alignment needed
- Bring the power and versatility of the FluoTime 300 to your sample

Applications

- Semiconductor wafer testing and analysis
- Investigation of solar cell materials and Perovskites
- Studying minerals and crystals
- Analysis of polymers and composites
- Characterizing LED materials
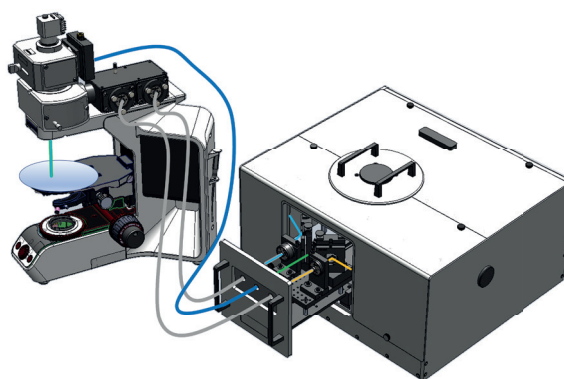
In many cases, characterizing materials such as semiconductors or solar cells requires measuring their photophysical properties at various points with spatial resolution. However, scanning over a large sample area is often not needed, as point measurements at various sites are sufficient.

The FluoMic add-on provides a fast, easy, and reliable way to bring the power of the FluoTime 300 steady-state and time-resolved luminescence spectrometer with a micrometer sized, positionable observation volume. On the spectrometer's side, installation of the FluoMic requires only sliding the mounting unit into the sample chamber.

Thank to its pre-aligned optical fibers, both pulsed and CW light sources of the FluoTime 300 can be used to excite a sample located in an external device. The FluoMic includes a special microscope fiber coupler unit that can be attached to various microscopes (such as, e.g., the Olympus BX43).

Emitted light is collected from a small area (down to 2 μm) and brought back to the detection arm of the FluoTime 300 via a detection fiber. Thus the outstanding flexibility in both spectral (from UV to NIR) and time (from ps to ms) range of the FluoTime 300 can be extended to samples located outside the spectrometer and then measured with spatial resolution. Furthermore, the FluoMic provides access to the broad palette of wizard-guided or customized steady-state and time-resolved applications supported by EasyTau 2.

Specifications

Microscope unit	
Type microscope body (standard)	**BX43** (others on request)
Objectives (standard, as needed)	Air objectives with 20x and 40x magnification
Objectives (optional, as needed)	Various high-end objectives available (Oil/Water immersion, air spaced, IR-enhanced, or long working distance objectives)
Spot size excitation with CW lamp	170 µm (20x magnification)
Spot size excitation with laser	60 µm (20x magnification)
Spot size emission	2 µm (100x magnification) 10 µm (20x magnification)
Wavelength range excitation	370 - 900 nm
Wavelength range emission	370 - 1700 nm (depends on detectors used)

Excitation sources (recommended)			
Light source	**Laser Diode Heads (LDH Series)**	**Picosecond Laser Module (VisUV / VisIR)**	**CW Xenon lamp**
Wavelengths (nm)	375 - 900 nm	532, 560, 590, 766 nm	370 - 900 nm
Pulse width	60 - 200 ps	ca. 80 ps	---
Repetition rate	up to 80 MHz	up to 80 MHz	---
Monochromators	see data sheet FluoTime 300		
Detectors	see data sheet FluoTime 300		
Data acquisition	see data sheet FluoTime 300		

Operating environment	
Power requirements	110 - 230 V, 50/60 Hz

Dimensions (base unit)	
Micrsocope unit (depends on microscope used)	400 × 300 × 600 mm (w × d × h)