

FlexLambda

Compact Wavelength Selection Unit

- Software-controlled wavelength selector for visible and NIR spectral range
- High transmission rate for highest sensitivity
- No effect on polarization and pulse width of the emission signals
- Fully integrated into SymPhoTime 64 software
- Compatible with PicoQuant widefield and confocal microscopes

Applications

- Semiconductor wafer testing and analysis
- Investigating solar cell materials and perovskites
- Studying minerals and crystals
- Analyzing polymers and composites
- Characterizing LED materials and displays
- Wavelength dependent single emitter studies
e.g., antibunching



In many cases, characterizing materials such as semiconductors or solar cells requires measuring their photophysical properties with spectral information and temporal as well as spatial resolution. Depending on the sample, scanning over a sample area at a photoluminescence wavelength of interest is often required, next to point measurements at various sites. Usually sets of various bandpass filters are needed to cover several spectral ranges for different materials and PL signal. FlexLambda provides a fast, easy, and reliable way to measure steady-state (from Vis to NIR) and wavelength-dependent time-resolved (from picoseconds to seconds) luminescence in combination with spatial resolution at a PicoQuant widefield and confocal microscope.

Thanks to its flexible design different types of detectors and numbers of detectors can be used for luminescence detection at the microscope. Hereby FlexLambda is fully integrated in SymPhoTime 64 for device control to measure steady-state PL spectra as well as wavelength selected decays and even TRES spectra.

Specifications

Optical specification			
Spectral range	400 - 1000 nm		
Transmission	> 80 % over the whole spectral range		
Spectral resolution (FWHM)	< 5.0 nm		
Bandwidth min.	1.0 nm		
Bandwidth max.	80 nm		
Step width min.	0.1 nm		
Entrance port	FC/APC fiber coupler		
Type	FluoMic	MicroTime 100	MicroTime 200
Compatible detectors			
Type	PMA Hybrid		SPADs (Excelitas)
Number of detectors	1 (direct mounting) - 4 (detection unit)		
Operation conditions			
PC requirements	Quad-core CPU > 3 GHz, RAM min. 4 GB		
Operating System	Windows™ 10/11		
Power requirements	220/240 or 110/120 VAC, 50/60 Hz		
Connection	USB 2.0		
Software	SymPhoTime 64		
Mounting	at a detection unit or via mounting points onto an breadboard or optical table		
Dimensions and weight			
Dimensions (w × d × h)	245 x 15 x 85 mm		
Weight	3.5 kg		



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