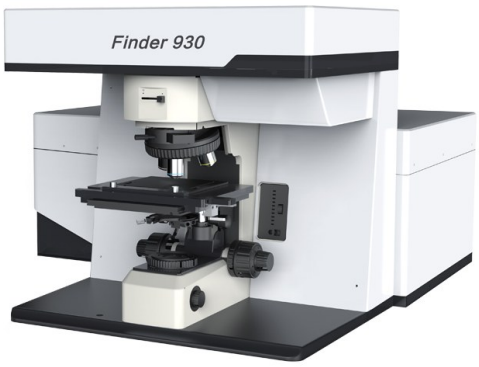
Finder 930 Automated Confocal Raman Microscope, 0.5 µm Lateral Resolution

Model Finder 930 · waveqvanta.com/products/finder-930-automated-confocal-raman-microscope

Fully automated laser confocal Raman microscope for Raman and fluorescence mapping in research laboratories.



Finder 930 is a fully automated laser confocal Raman spectroscopy system built around an upright microscope, an image-corrected 320 mm spectrograph and up to three built-in lasers. Laser selection, laser power, confocal pinhole size and optical path correction are motor-controlled from the software. The system software covers Raman mapping, fluorescence mapping, fluorescence lifetime imaging and hyperspectral data processing.

Key features

- Up to three lasers installed internally plus one external laser, selected in software; a spare laser interface is reserved
- Lasers combined with dichroic mirrors, so changing wavelength needs no motorized stage in the beam path
- Motorized control of laser power, confocal pinhole size and automatic optical path correction
- Image-corrected 320 mm, F/4.2 spectrograph with 1×10^{-5} stray light
- Spatial resolution 0.5 µm lateral and 1.79 µm axial (532 nm laser, 100×/0.9 NA objective)
- Built-in lasers and aviation-grade aluminium optical mounts limit beam drift caused by temperature and humidity
- Software for Raman and fluorescence mapping, fluorescence lifetime imaging, baseline removal, smoothing and single- or multi-peak fitting

Specifications

System Type	Laser confocal Raman microscope, fully motorized
Excitation	Up to 3 internal lasers + 1 external laser, software switched; spare laser port
Laser Combining	Dichroic mirrors (no motorized switching stage)
Motorized Functions	Laser switching, laser power, confocal pinhole size, optical path correction
Microscope	Upright microscope
Microscope Illumination	Epi-illumination bright and dark field standard; other modes as upgrades
Sample Stage	Motorized, 75 × 50 mm travel, 1 µm positioning accuracy
Spectrograph	Image-corrected, 320 mm focal length, F/4.2
Spectrograph Stray Light	1×10^{-5}
Lateral Resolution	0.5 µm (532 nm, 100×/0.9 NA objective)
Axial Resolution	1.79 µm (532 nm, 100×/0.9 NA objective)
Imaging Modes	Raman mapping, fluorescence mapping, fluorescence lifetime imaging
Data Processing	Baseline removal, smoothing, integral/average/maximum imaging, peak fitting
Example Mapping Steps	0.2 µm (MoS_2, 100× dark-field objective); 0.5 µm (rock inclusions, 50× LWD)

Typical applications

- Material identification and composition analysis
- Stress measurement on semiconductor wafers

- Crystal orientation and defect analysis (e.g. CVD diamond, GaN)
- Layer-number analysis of graphene and 2D materials such as MoS_2
- Geology, including mineral and rock-inclusion mapping
- Biology, chemistry, medicine and food research