Technical Datasheet

alphaCART – Mobile Raman System

alphaCART is WITec's mobile, confocal Raman system for all applications that require bringing the lab to the sample. alphaCART's Raman probe can be flexibly positioned in front of bulky, immovable or precious objects that can't be transported to a microscope or that don't fit under one.

The system's high confocality and signal sensitivity also allow measurements through protective glass and windows, which enables studies of gases or chemical processes inside reaction chambers and other enclosures. Researchers working in the arts and archaeology, geo- or materials science will especially benefit from this versatile and powerful analytical tool.upplied with 6 injector stoppers

Specifications

- Laser, probe and spectrometer coupled by optical fibers for high signal throughput and optimal beam shape
- Rolling flight case containing and protecting all components (ca. 100x60x60 cm) (optional)
- High spatial resolution and confocality (diffraction-limited)
- High spectral resolution over full spectral range (from ca. 90 to 3500 cm-1, depending on excitation wavelength)
- Highly sensitive, on-axis, lens-based, excitation wavelength-optimized spectrometer featuring thermoelectrically cooled, scientific-grade spectroscopic CCD camera
- White-light illumination and color video camera for sample survey (optional)
- Selection of microscope objectives available
- Available laser wavelengths: 532 nm, 633 nm or 785 nm (others upon request)
- Wide range of laser power outputs available (30 to >200 mW)
- Polarization-sensitive measurements (optional)
- Compatibility with alpha300 microscope series upgrades and accessories
- Data acquisition and post-processing with latest WITec Software Suite (including time-series, advanced background subtraction algorithms and more)
- Laptop with Microsoft Windows™ 11 operating system included