ELODIZ

Raman TRIPLA

ELODIZ TRIPLA Raman

The ELODIZ TRIPLA Raman device is a compact multi-channel Raman system that offers three independent optical paths to transform your experiment. Weighing just under 10kg TRIPLA aims to deliver a performance comparable to bench-top Raman devices with the addition of an automated system control and synchronised acquisition of data. Multi-dimensional wavelength calibration ensures the entire spectral range is accurately adjusted.

The ability to integrate a combination of three lasers in a single device makes TRIPLA particularly valuable in reaction monitoring and process control, where multiple readouts can be simultaneously obtained via three different probes. The system also offers the option to operate the three channels in autonomous mode, where each channel can read and process individual reactions separately at different time intervals.

The selection of the wavelength configurations in TRIPLA is driven by the needs of the user, who can choose from the following laser combinations: 3x532nm, 2x532nm + 1x785nm, 1x532nm+2x785nm or 3x785nm.

The spectral range, laser power and signal to noise ratio are carefully balanced between all channels allowing stable operation in any routine analysis. Integrated and user-friendly software (ELODIZ SOMPAS) enables intuitive workflow and consistent operation.

Raman spectrometers tend to be calibrated prior to measurements and in practice, the obtained Raman spectra can be greatly affected by the features of analytical systems used and the results often vary between each device. With our TRIPLA, however, data can not only be rapidly transferred between the unit and a PC via Ethernet, but also thanks to our unique standardised calibration protocol we apply in our devices, we can guarantee the consistency of transferred Raman spectra, allowing you to repeat your experiment and reproduce your results with no operator manipulation.

Along with the stand alone laboratory bench device (white) we also offer a rack version (black) which can be mounted in a cabinet for industrial application, as well as or our thermostable water and dust sealed enclosure (IP67), which can be used when additional safety protection is required.

Our portfolio also includes accessorial fibre optic probes which can be adapted to your requirements (e.g. probes for single point analysis, fully sealed reaction monitoring, adjustable working distance, immersion probes).

Information request

TRIPLA Specifications*

Laser Wavelength	532nm and/or 785nm + another laser wavelength**
Spectral Range	Any combination of the below 532nm: 200 .. 4200 cm-1 785nm: 200 .. 3000 cm-1
Spectral Raman Resolution	532nm: 7 cm^{-1} @ 2520 cm^{-1}785 nm: 5 cm^{-1} @ 968 cm^{-1}
Max Laser Power	Class 3B, 532 nm: 80 mW Class 3B, 785 nm: 300 mW
Adjustable laser	532 nm – in 10% steps 785 nm – in 1% steps
Operation	Standard 2m long fibre-optic probe included (other models and lengths available on demand)
Slit	10um
Unit Calibration	Permanent factory calibration under EU CHARISMA protocols for standardisation
Size (WxDxL)	31x31x16 cm (portable version) 43x43x18 cm (rack version)
Weight (Kg)	9
NA Fibre	0.22
Detector Type	Si based CCD detector
Software Control	SOMPAS by ELODIZ, under Windows 10/Windows 11, Linux (Ubuntu 20.04 LTS)
PC Connection	Ethernet; device also includes two built-in USB connectors

*subject to change without notice

**other laser models (632/830) available on demand

Supported Industries

- Art conservation & Archaeology studies
- Bioscience and Medical Diagnosis
- Surface enhancement Raman spectroscopy
- Polymers and Chemical Processes
- Online Reaction monitoring
- Semiconductor & Solar Industry
- Geology, Gemology and Mineralogy
- Pharmaceutical Industry
- Environmental Science
- Police and Forensic Analysis
- Teaching laboratories and Physics
- Quality Control and Quality Assurance
- General Research

Key Applications

- Multiple chemical reaction monitoring (simultaneous multipoint analysis with one single device)
- Process control with 1, 2 or 3 independent channels
- High throughput Quality Control Assurance environments
- Multiple setups and laser configurations in Production chain (versatile and flexible Raman configurations with little to none user interaction)