# Raman NEEGALA™

ELODIZ NEEGALA™ Raman

The ELODIZ NEEGALA™ Raman device is a portable multi-laser system that offers research-grade performance whilst maintaining ease of use. The system enables harmonisation of data across channels and combines flexibility, functionality and compact design with full control via software. It consists of stable diode lasers and high-performance spectrometers, designed to operate in a variety of modes – all to address the limitations of single-line portable or modular Raman units.

With the traditional single-laser line products the user is restricted to a preselected setup no matter how complex the application or analysis the device is to be used for. This is not the case with our NEEGALA™, which is much more than just a combination of two single-line units. The integration of multiple laser lines in a single device without the need for user manipulation, means that this greatly versatile system is open to a broad number of applications which, until now, were limited to bulky and lab-based research grade Raman instruments. No requirement for internal manipulation to adjust lasers means there is also lesser risk to damage the sample and/or the device.

Teaching laboratories, quality assurance services or quality control support laboratories, where the use of a single laser line might not be sufficient, can benefit greatly from the flexibility in operations that the NEEGALA™ Raman system offers. With the optional use of a single fibre optic probe (NEEGALA™ probe) that allows a combination of 2 bilateral laser lines, with no signal interference, and no manual intervention to use either of the laser lines, the safety of operations has no precedent in the industry.

The broad spectral range of the short wavelength offers a sizeable spectral range for a compact Raman device while the higher wavelength line is used for higher resolution with a carefully balance throughput of the spectrometers. The laser power, spectral range, signal to noise ratio are all carefully balanced between the 2 channels to offer a stable operation of the system.

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.
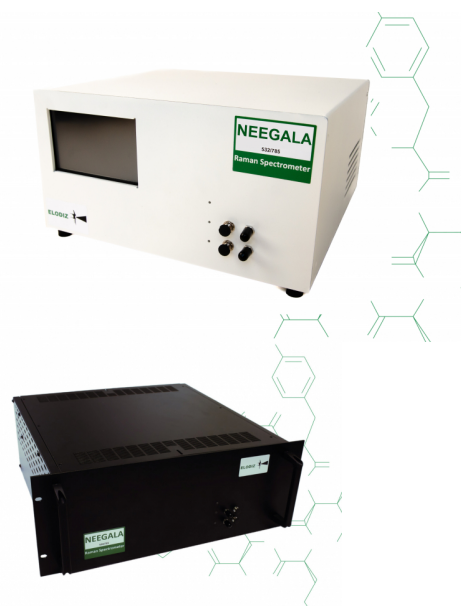
Information request

NEEGALA™ Specifications*

Laser Wavelength	532nm & 785nm
Spectral Range	532 nm: 200 - 4200 cm-1 785 nm: 200 - 3000 cm-1
Spectral Raman Resolution	532 nm: 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	Neegala ™ single fibre probe with 2 channels or 2 individual probes (one per channel); standard 2m long fibre-optic probe (other models and lenghts available on demand)
Slit	10um
Unit Calibration	Permanent factory calibration under EUROPEAN CHARISMA protocols for standardisation
Size (WxDxL) (mm)	31x31x16 cm (portable version) 43x43x18 cm (rack version)
Weight (Kg)	7
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

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

- Direct Raman analysis of samples with selected laser lines
- Reaction monitoring / PAT analysis using immersion safe fiber-optic probe shaft accessory
- Attachment to other accessories for process analysis
- Studying changes or distribution of composition across a sample, and/or with time e.g. stability of pharmaceutical preparations, sample homogeneity in pharmaceuticals and additives and crystallinity in polymers