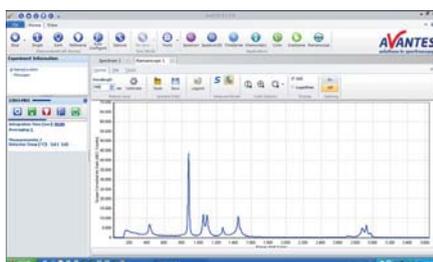


Avantes Raman Bundles

AvaRaman: Raw materials



Raman Spectroscopy allows obtaining individual spectral 'fingerprints' of materials. Commonly used in chemistry, pharmaceutical and medical fields, to provide information by which molecules can be identified.

Avantes already offers Raman systems consisting of a spectrometer and a laser combined in one unit. To offer our customers optimal performance for a reasonable price, Avantes joint forces with 2 partners to offer you a Raman Bundle consisting of a great spectrometer (3 different models), a unique Laser-Probe combination (785nm) supplying enhanced signals and an outstanding Software package to analyze the Raman spectra.

These Bundles have in common:

For excitation:

AvaLaser785 (incl.: 785 nm laser safety goggles). It has an ultra-high throughput integrated Raman probe. This novel device includes an integrated wavelength stabilized laser source with Raman filter packs, beam shaping optics and high efficiency Raman spectra collection optics.

Features

- 785 nm Wavelength stabilized excitation source.
- High throughput optical design with 100cm^{-1} Cut-on.
- External control box for power adjustment (manually / software controlled).

For Analysis:

AvaSoft-Raman: Basic standalone software to obtain spectra.

Panorama-Light: Panorama Light is a modular, high-end software platform for spectroscopic data evaluation. The application meets all requirements for a comprehensive spectroscopy working environment, offering:

- Measurement with an instrument
 - 2D & 3D data visualization
 - Searching in libraries
 - Archiving in spectral libraries, including additional information
 - Printing with professional print templates
 - Conversion of many known data formats
 - Sharing data with office applications
- Panorama Light is designed to perfectly assist you and to keep you focused on your daily work.

For Detection:

We offer state of the art spectrometers based on the Avantes Star- and SensLine spectrometers, tailored for optimal performance in the Raman range of interest.

Type of measurements:

Raman techniques are used for many different materials. The Avantes bundles are really good for the use of powders and liquids. When strong signals are available (aromatic compounds, alcohol based liquids) in general Ava-Raman-A is useful to perform the measurement. When weak Raman signals occur (Integration time longer than 5 seconds) the thermo-electric-cooled (TEC) spectrometer is recommended. This is added in the Ava-Raman-B. For very weak signals (possibly together with fluorescence background) the Ava-Raman-D is recommended. Thanks to Higher quantum efficiency in NIR and better signal / noise performance.

Application fields

- Mineralogy & Gemology
- Raw materials identification
- Pharmaceuticals & Medical diagnostics
- Semiconductors

Raman spectroscopy:

- Analysis of liquids, powders, tablets, gels
- Measurements through transparent and semi-transparent packages

Ordering Information

AvaRaman-A

Based on an uncooled spectrometer this is the entry bundle for reasonable strong signals

- Range : 150 cm^{-1} - 3600 cm^{-1}
- Resolution: 6 cm^{-1}
- Spectrometer based on an AvaSpec-ULS2048L-USB2 set for (788-1100nm),slit-25, DCL-UV/VIS200, FC-PC connector)
- Also including: AvaLaser785 (incl. probe),
AvaRaman software: Panorama Light
Optional: Replaceable slit (add -RS)

AvaRaman-B

Based on the cooled version of the spectrometer offered in the bundle Ava-Raman-A . Cooling enables you to work with longer integration times, yet keeping the thermal noise limited.

- Range : 150 cm^{-1} - 3600 cm^{-1}
- Resolution: 6 cm^{-1}
- Spectrometer based on an AvaSpec-ULS2048LTEC-USB2 set for (788-1100nm),slit-25, DCL-UV/VIS200, FC-PC connector)
- Also including:
AvaLaser785 (incl. probe)
AvaRaman software: Panorama Light
Optional: Replaceable slit (add -RS)

AvaRaman-D

For the most challenging applications. This bundle uses the AvaSpec-Hero for detection. The High end cooled back-thinned detector, low-noise electronics and optical bench with high Numerical Aperture, results in excellent Signal to Noise and Dynamic Range.

- Range : 100 cm^{-1} - 3000 cm^{-1}
- Resolution: 10 cm^{-1}
- Spectrometer based on an AvaSpec-HSC1024x58TEC-EVO set for (788-1020nm),slit-25, FC-PC connector, replaceable.
- Also including:
AvaLaser785 (incl. probe)
AvaRaman software: Panorama Light



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www.phototechnica.co.jp
フォトテクニカ株式会社

〒336-0017 埼玉県さいたま市南区南浦和 1-2-17
TEL:048-871-0067 FAX:048-871-0068
e-mail:voc@phototechnica.co.jp