



# AVANTES

## COMPANY BROCHURE

EMPOWERING SPECTROSCOPY SOLUTIONS



# INDUSTRIES SERVED

Spectroscopy is used in hundreds of applications across dozens of industries, with new uses found every day. You find spectrometers measuring light in the lab, on the manufacturing floor, and out in the field.

Avantes spectrometers, light sources, fiber-optic sampling accessories and in-house designed software provide the technology for spectroscopy in these and many other industries and applications:



## Agriculture & Food

### Applications:

- Fruit sorting
- Leaf measurement
- Plant health
- Grain analysis
- Dairy control
- Fertilizer automation



## (Bio)Medical

### Applications:

- Blood Analysis
- Endoscopy
- Dermal reflection
- Protein detection
- Cancer detection
- Medicine production



## Chemistry

### Applications:

- Raman spectroscopy
- Atmospheric chemistry
- Nanoparticle reactions
- Humidity detection
- Material science



## Environmental

### Applications:

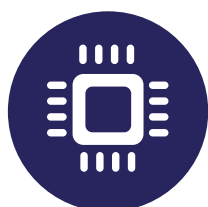
- Contamination Monitoring
- Recycling
- Pollution Monitoring
- Deep ocean analysis
- Wildfire detection



## Lighting

### Applications:

- Quality control
- Radiometry
- Photometry
- LED calibration
- Color identification



## Semiconductor

### Applications:

- Plasma diagnostics
- End-point detection
- Wafer inspection
- Thin-film measuring
- Coating deposition
- Quality control



## Solar Energy

### Applications:

- Production of solar panels
- Test photo-voltaic arrays with solar simulators
- Process control
- Plasma monitoring



## Original Equipment Manufacturer (OEM)

- Project management
- Custom products when needed
- Bench only
- Custom software when needed

## More information

Click [here](#) to read more application examples.

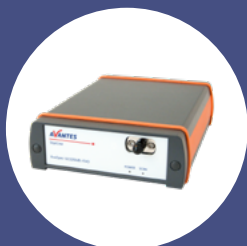
# SPECTROMETERS

Since spectroscopy is used for numerous applications, we have defined our spectrometers in different lines:



## CompactLine

- Compact
- Easy integration
- CMOS detector
- 2048 or 4096 detector
- 200-1100 nm
- NIR-version available
- 900-1750 nm
- USB powered



## StarLine

- High-performance
- General applications
- Stray light rejection
- 2048 or 4096 detector
- 200-1100 nm
- High resolution
- Improved sensitivity
- USB powered



## SensLine

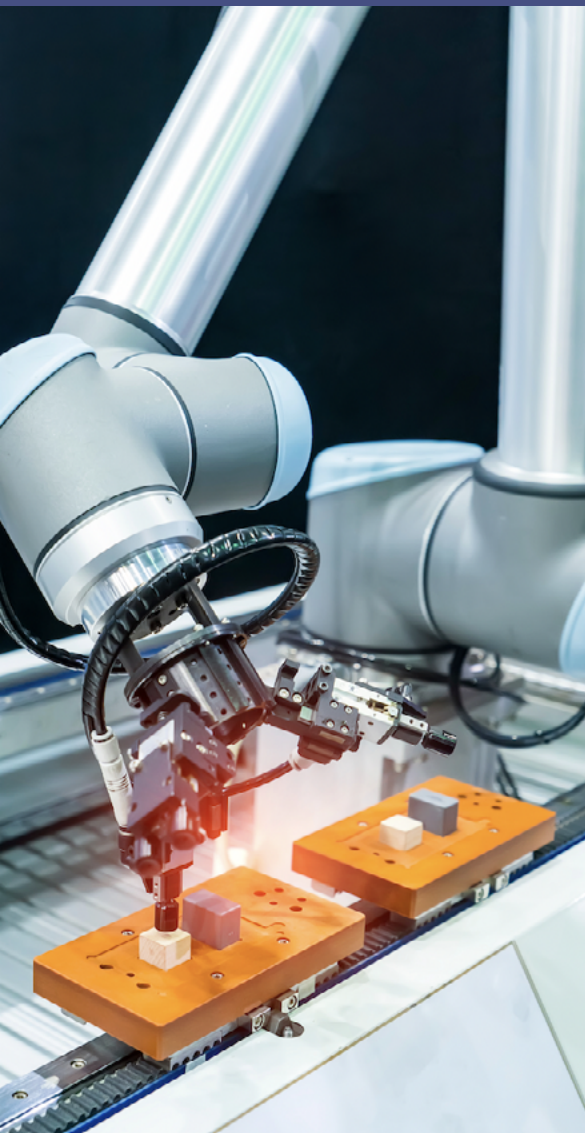
- High-sensitivity
- Demanding applications
- Low noise
- Ultra-high resolution
- 200-1160 nm
- Stray light rejection
- High stability
- Thermo cooled



## NIRLine

- High-performance
- Cooled & uncooled
- Cooling to -25 °C
- For harsh environments
- 900-1750 nm
- Enhanced stability
- Low noise
- Compact option available

Click [here](#) to see all available products.



## OEM CUSTOMERS

We take pride in collaborating with our customers to supply the right solution, on time. Whether you need a custom configured optical bench or a specialized fiber-optic probe, we have the experience and dedication to make it happen. While we gladly develop custom-made devices, we also offer several modular and highly configurable OEM options.

Our partnership approach to working with original equipment manufacturers (OEM) is at the core of our success and philosophy as a business. To fully utilize the vast possibilities of our spectrometer systems, sales engineers work closely together with you to fulfill your every need. Our state-of-the-art design center then creates the tailor-made solution as discussed. After extensive testing, a prototype is made. We will start production, only when your needs perfectly align with our design.

Every spectrometer that leaves our premises undergoes a very thorough testing phase before it is shipped. Only the spectrometers those that fall within the accurate bandwidth of desired specifications are the ones we consider good for you.

Click [here](#) to read more.

# PRODUCT PORTFOLIO

Beside spectrometers, we offer a wide range of products to complete your measurement setup.

## Light Sources

Avantes' light source options include deuterium, tungsten halogen, and LED for spectral ranges from 190nm – 2500 nm. The AvaLight line consists of several calibration sources for irradiance and spectral line calibrations. All light sources are fiber optic coupled with SMA connectors.

## Fiber Optics

We offer an extensive line of fiber optic cables, bundles, and probes. Our in-house production facility manufactures fiber optics for deep UV, UV/VIS, and VIS/NIR applications using high-quality silica fibers. Custom configurations for fiberoptic reflection, absorption, and fluorescence probes are always negotiable.

## Software

AvaSoft software is a 32 and 64-bit compatible application-oriented software package that enables complete control over our spectrometers. Application-specific software solutions are available. Our in-house engineers can work with customers to support standard and custom application needs (DDL).

## Accessories

We offer a wide range of fiber optic coupled sampling accessories such as cuvette holders, integrating spheres, filters, filter holders, and flow cells. In addition, Avantes offers a variety of fiber optic accessories, including collimating lenses, cosine correctors, and vacuum feedthroughs.



## SUPPORT & ADVICE

Providing high-quality equipment is only part of what we do. The other equally important factor is the high level of service we deliver all over the globe. Avantes' organization includes various specializations to provide you with the best possible service and advice:

### Feasibility studies

Our sales engineers perform feasibility studies to find the right solution for your application.

### Support team

Our support team never sleeps and provides you with the best service.

### Demo material

Our unique demo program allows you to try our equipment for free to ensure you find the perfect solution.

### MyAvantes

Personal MyAvantes platform where you'll find your needed AvaSoft Software and other material for you to download.

### Online support

Our website is full of helpful documents and tutorial videos for extra help with your products.

# AVAMATION: FUTURE-PROOF MANUFACTURING

There is a worldwide increasing demand for spectrometers. More and more customers purchase in large volumes, which means that the performance of each spectrometer must be exactly the same. Historically our spectrometers are assembled by hand with great precision and expertise, but with **AvaMation**, we semi-automated our manufacturing process. We decided to innovate this process to increase our efficiency and precision so we are ready for a future with an increasing demand of spectrometers.

This new way of manufacturing not only benefits Avantes when it comes to efficiency, but also yields the following benefits for its customers.

## WHAT'S IN IT FOR YOU?



### Scalable manufacturing capabilities

From small, up to very high volume orders, with AvaMation we are very flexible when it comes to customizing orders.



### Superior inter-instrument reproducibility

Through AvaMation we not only take quality assurance to a higher level, but also provide more manufacturing precision and speed.

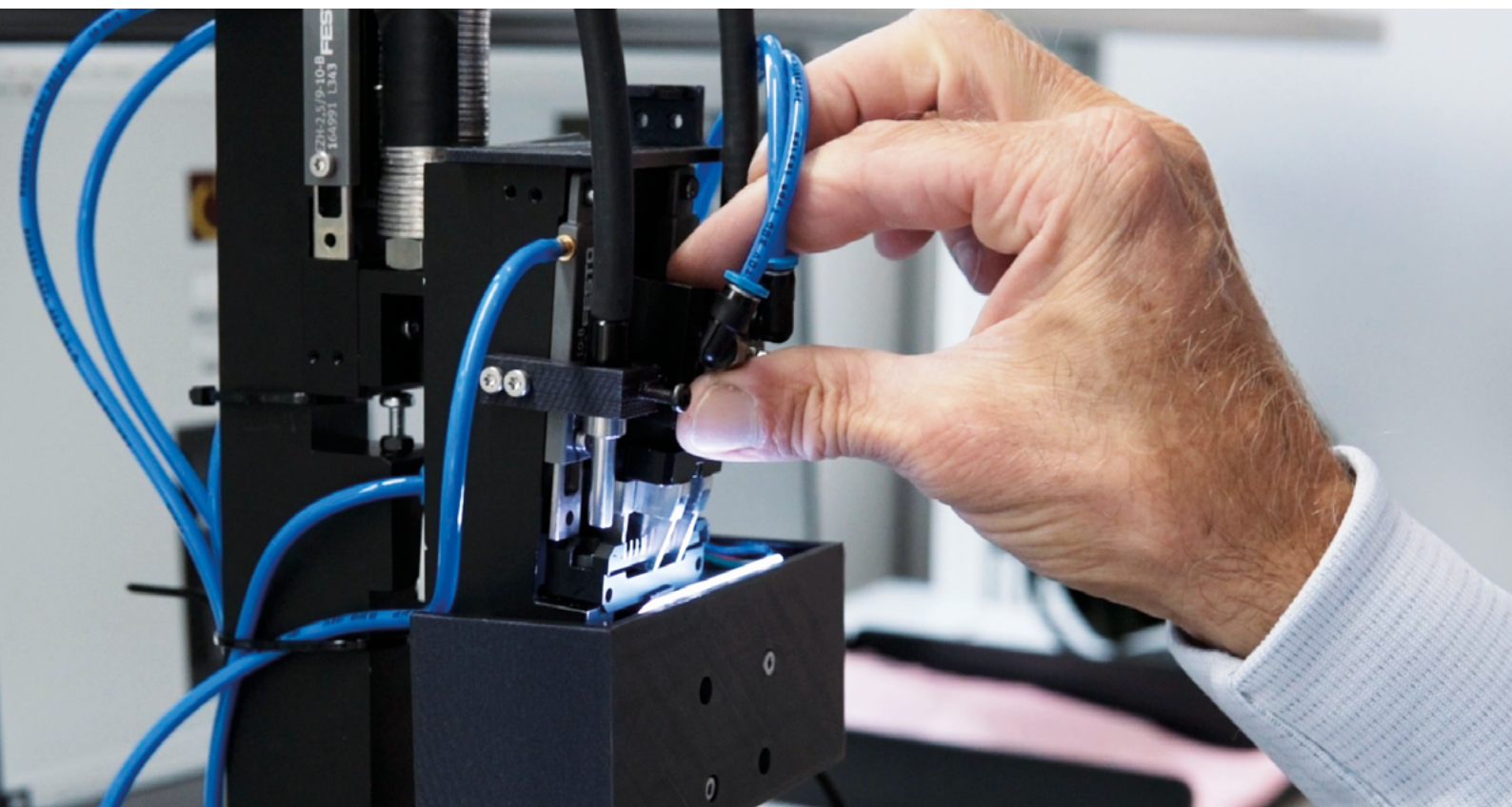


### Enabling data analysis

By collecting data from the manufacturing process, we can continue to innovate and make product improvements in the future.

## More information

Do you want to know more about AvaMation?  
Click [here](#) to read all about it.



# ABOUT AVANTES

We are Avantes, a leading manufacturer of fiber-optic spectroscopy instruments and systems. We operate in various industries; from (bio)medical and agriculture to semiconductor and consumer electronics. Our instruments are found in world-class research laboratories, are embedded in devices, or play a crucial part in quality control during production. With an installed base of over 53.000 systems throughout the world and nearly 30 years of experience, we are an equipped partner to help you find the most ideal measurement setup.

## Empowering spectroscopy solutions

Our miniature spectrometer systems are designed to enable research and industrial measurements and analysis involving the metrology of light. Our instruments facilitate measurements in ultra-violet, visible and near-infrared wavelengths (200-2500 nm).

## Our vision

Avantes' vision is to enrich the lives of humankind in the world we live in. We do this by providing state-of-the-art, innovative measuring equipment that helps society live longer and healthier and will have a positive impact on the planet for generations to come.

## How we operate

We have a long history of consulting with clients across diverse industries and applications. We are an experienced partner, equipped to guide customers seeking a solution tailored to their application and research needs. Our sales engineers work closely with customers to better understand their applications and recommend the ideal solutions.

## Our offices

Our headquarters is based in Apeldoorn, the Netherlands. From here, we design, develop and manufacturer all of our products. Besides that we have a direct office in Colorado, United States, and two in China, where our colleagues offer support in sales and development of our products.

## Exclusive Distributor Network

In addition to our direct offices, we work with exclusive distributors in over 35 countries who are well-trained in the configuration and usage of our spectroscopy solutions. With this worldwide network, we can guarantee our help whenever you need it.



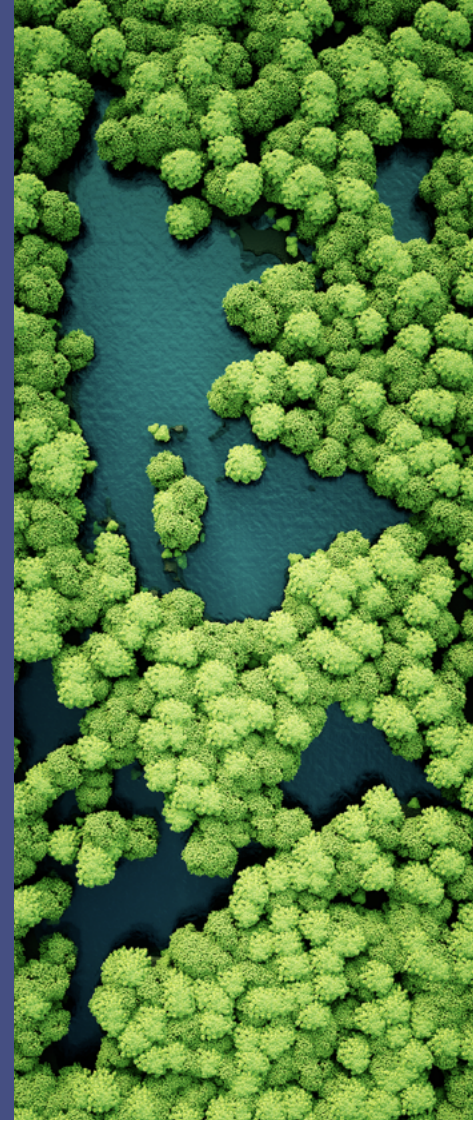
EMPOWERING **SPECTROSCOPY** SOLUTIONS

# SUSTAINABILITY & AVANTES

Avantes' vision is to enrich the lives of humankind in the world we live in to help society live healthier and have a positive impact on the planet. This, of course, also includes our work environment, the company's footprint, and the lives of our employees. Avantes and the Nynomic Group are committed to sustainability and focus on the United Nations Sustainable Development Goals.

## We act based on the following fundamental principles:

- Our employees' health (both mentally and psychically) and safety are top priorities.
- We strive to position our company as an attractive employer by reducing inequalities, providing quality education, and an inspiring work environment.
- We use resources and energy efficiently and strive for continuous improvements to minimize negative environmental impacts.
- We use our innovative strength and passion for technological advancement by developing meaningful solutions that help us and our customers protect the environment.



## NYNOMIC GROUP

Avantes is part of the Nynomic Group. The Nynomic group develops and produces contactless optical high-tech measurement systems for various applications. Starting with the optical component [spectrometer unit, optical bench] over measurement units up to turnkey solutions, the companies within the group offer a complete range for different levels of integration and value creation. Those technologies and competencies within the group are used in all levels of integration to provide state-of-the-art customer solutions with optimal value creation.

Application examples start from content material analysis in the agricultural sector, process monitoring in the semiconductor industry, systems for the cleaning of endoscopes, measurement systems for incoming goods inspection, and process optimization in the wood processing industry up to infrared camera systems for early fire detection. Furthermore, this broad technology base can solve a wide range of measuring challenges in various branches and applications.

The main focus for the group is the OEM business. We supply well-known customers, partly with a long history of collaboration, with individually customized solutions developed and produced in-house.

### More information

Click [here](#) to read more about Avantes!

## CONTACT

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# WE'RE HAPPY TO HELP

Curious how spectroscopy can help you reveal answers by measuring all kind of materials, in-line, at your production facility, in a lab or even in the field? Please visit our website or contact one of our technical experts, we're happy to help you.

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