

VARIUS™ SPECTROMETER

STARLINE



VERSATILITY MEETS PRECISION

ROBUST AND ELECTROMAGNETIC COMPATIBLE HOUSING

SMART STATUS LED-INDICATOR

REMOVABLE COVER TO EXCHANGE SLIT*

PATENT-PENDING TECHNOLOGY INSIDE

**Optional*

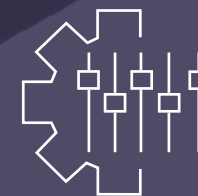


WHY CHOOSE VARIUS™?



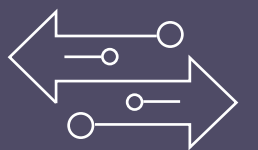
Patent-pending technology and improved optical bench design makes the Varius outperform its predecessors. The VARIUS™ guarantees accuracy and reliability across various applications. Seamlessly integrate with our AvaSoft software and crosslink solutions for enhanced versatility.

Experience the **user-friendly interface** of the VARIUS™, a plug-and-play solution that allows for easy deployment without the need for additional integration. The VARIUS™ is ideal for laboratory settings or research applications where quick and hassle-free measurements are required.



Optimize performance by replacing the slit with different sizes. Experience the new, magnetic connector cover system, which allows easy access for slit replacement and performance customization. Adapt effortlessly to various measurement scenarios for optimal results.

Choose the **product variation** that best suits your application. The VARIUS™ spectrometer is available in both standard and industrial (OEM) variations. The spectrometer comes with a 2048 or 4096-pixel detector and features an electromagnetic shielded housing.



WE OFFER THE DEVICE

With its versatile and flexible design, the VARIUS™ spectrometer allows for the analysis of a wide range of samples and measurements, giving you the freedom to swiftly gain insights into your research or application.

The VARIUS™ spectrometer is available in both standard and industrial (OEM) variations. It comes with a choice of a 2048 or 4096 pixel detector, and features USB3 and Gigabit Ethernet high-speed data transfer. The OEM variation comes with a sturdy steel housing with electromagnetic shielding, specifically designed for seamless integration into your device or system.

VARIUS™

Compact, plug-and-play device for lab and research applications. Ready to use without integration or customization. Change slit size configuration to optimize spectrometer functionality for specific measurements.



VARIUS™ OEM

Robust and electromagnetic compatible (EMC) housing, customizable spectrometer designed for seamless integration into industrial systems enabling reliable measurements and data integration.



More information

Scan the QR-code to read more information about the VARIUS™ spectrometer



YOU MAKE IT SPECIAL

A spectrometer is 'just' a device without you using it. Thanks to the VARIUS™ versatility, customizable performance and option for integration, it ensures wide usability in various applications and environments. Including, but not limited to:



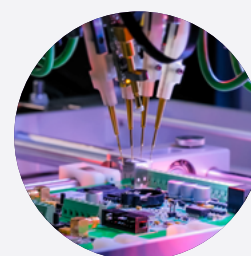
Research & Laboratory

The VARIUS™ spectrometer is the ideal choice for laboratory settings or research applications thanks to its plug-and-play system. It provides researchers with the freedom to quickly gain insights, enabling efficient and accurate data collection for their experiments and studies.



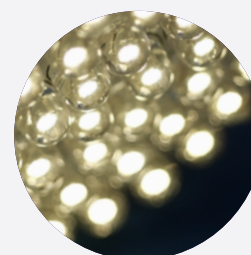
Agriculture & Food

The VARIUS™ can be applied in smart farming for in-situ leaf measurements, chlorophyll measurements, and light characterization in greenhouses. It enables accurate assessment of leaf health, precise monitoring of chlorophyll levels, and optimization of light conditions for optimal crop management.



Semiconductor

With its versatility, the VARIUS™ is well-suited for semiconductor applications such as thin film coating, coating deposition, and end-point detection. By analyzing the thickness of applied films or detecting the end-point during a plasma etching process, the spectrometer proves invaluable.



Lighting

In the lighting industry, spectroscopy is mainly utilized for real-time monitoring and quality control before, during, and after manufacturing of light bulbs, LEDs, and OLEDs. The VARIUS™ is an ideal instrument for light characterization, radiometry, and photometry.

SPECIFICATIONS

The VARIUS™ offers high-end performance with high versatility and precision, in a patent-pending optical bench design. Both variations are compatible with Avantes light sources, accessories, and AvaSoft software.

	VARIUS™ 2K	VARIUS™ 4K
Optical Bench	Symmetrical Czerny-Turner design, 75 mm focal length; VRS bench	
Wavelength range	190 - 1100 nm	
Stray light	0.1 - 1% (typical value 300 l/mm, blaze 300 nm < 0.3%)	
Detector	HAM S11639, CMOS linear array, 2048 pixels (14x200 µm)	HAM S13496, CMOS linear array, 4096 pixels (7x200 µm)
Signal/Noise	375:1	365:1
Dynamic Range	4500	
Dark noise	15 cnts	
AD converter	16-bit, 6 MHz	
Integration time	9 µs – 30 s	
Interface	USB 3.0 high speed (5Gbps), Gigabit Ethernet (1 Gbps)	
Sample speed on-board averaging	0.38 ms/scan	0.70 ms/scan
Data transfer speed	0.38 ms/scan (USB3.0), 1.0 ms (ETH)	0.70 ms/scan (USB3.0), 1.31 ms (ETH)
Digital I/O	HD-26 connector, 2 Analog in, 2 Analog out, 13 Digital bidirectional, trigger, sync., strobe, laser	
Dimensions, weight	183 x 130 x 45,2 mm, 1068 grams	
Power supply	Default USB3 power, 500 mA or 12 VDC, 300 mA	
Temperature range	5-55 °C	



FULL PRODUCT OVERVIEW & SPECIFICATIONS
Scan the QR-code for full product specifications, grating options, ordering options, and more. Discover the versatility of the VARIUS™ and find your ideal variation.

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. Avantes’ spectrometers are produced with AvaMation, a semi-automated manufacturing process.

This new manufacturing method not only improves precision and efficiency for our manufacturing process, but also yields the following benefits for you as a customer:



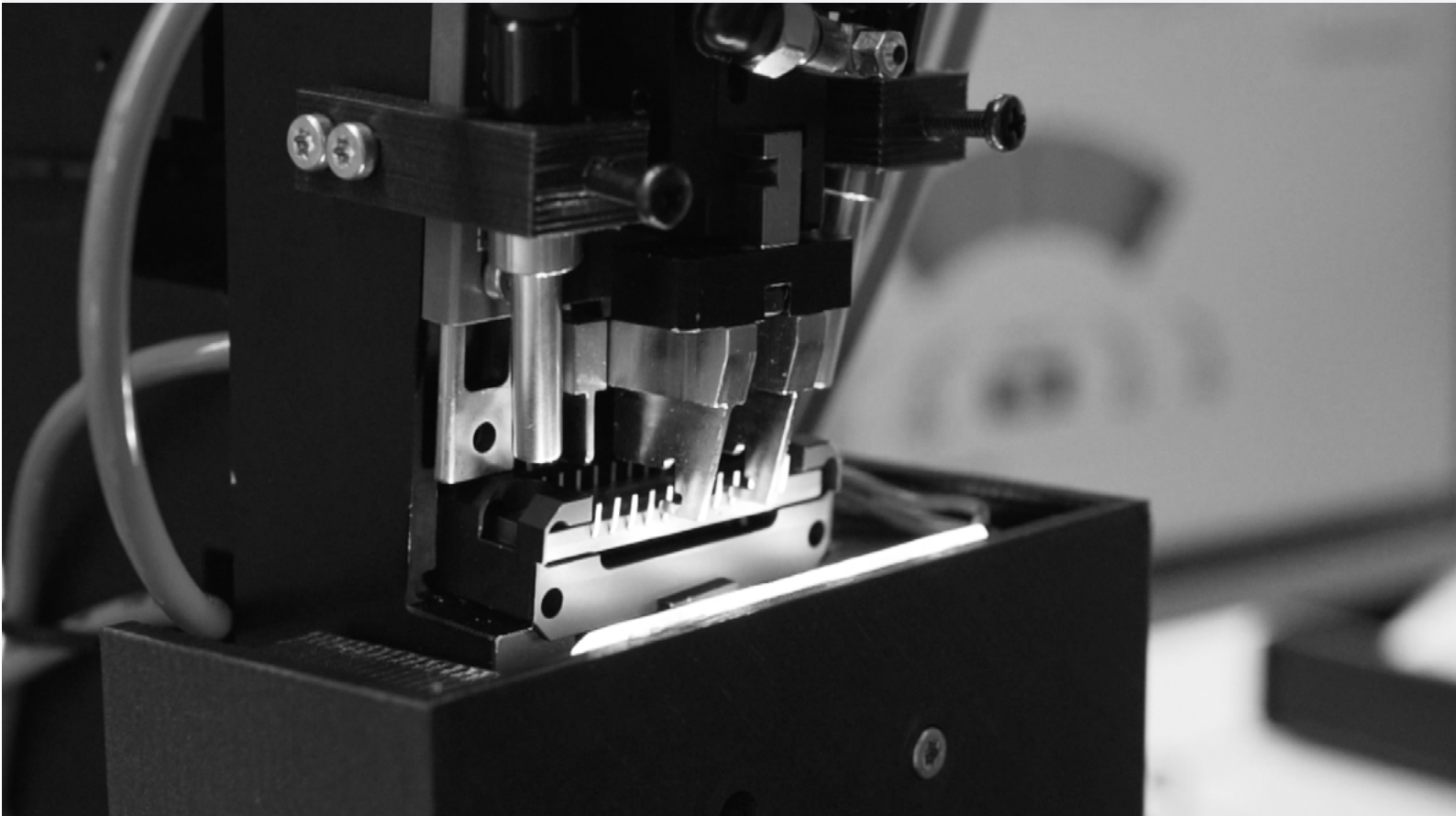
Scalable manufacturing capabilities
From small up to very high volume orders, with AvaMation, we are flexible when it comes to customizing orders.



Superior inter-instrument reproducibility
Through AvaMation, we take quality assurance to a higher level and 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.



WE ARE HAPPY TO HELP

Curious how our spectroscopy solutions can empower your application in-line, at your production facility, in the lab, or even in the field? Please visit our website or contact one of our technical engineers. We are happy to help you!



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Avantes Newsletter

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