VEpioneer® MICRO

PRODUCT OVERVIEW

COMPREHENDING THE INVISIBLE



Fast. Non-destructive. Comprehensive. VEpioneer® MICRO is the world's first fully integrated one button bench-top Hyperspectral Vision system for microscopic inspection. It captures surface properties, inspects thin films, and identifies deviations from production specifications.

PVA TePla

HYPERSPECTRAL VISION DOWN TO SUB-MICRON

WE DON´T GUESS.
WE SEE.

Most inspection methods are specialized and destructive. The **VEpioneer® MICRO** changes that by enabling comprehensive inspection with Hyperspectral Vision, revealing material properties and sample structures in extraordinary detail at resolutions below 1 µm.

Spatial resolution < 1 µm
Reveal hidden material and structural properties visible with Hyperspectral Vision at sub-micrometer resolution.

One button operation. Full surface insight
Fully automated inspection from measurement to result – no complex setup, no prior expertise required.

Fully non-destructive process
Optical spectroscopy leaves samples completely intact – ideal for production-critical parts.

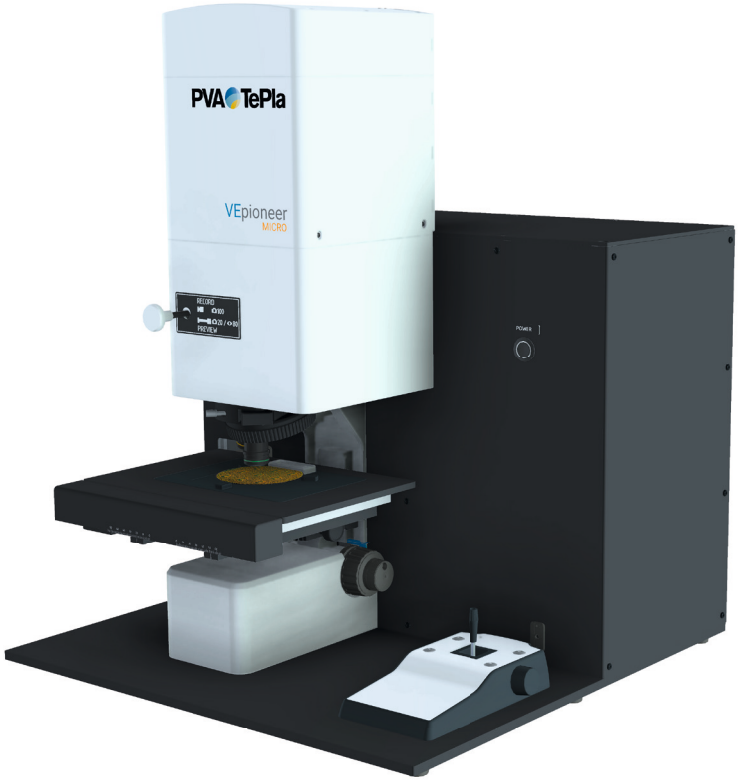
Fast measurement
Scans region of interests (ROI) in less then 10 seconds.

VNIR + SWIR hyperspectral detail
100% sample information in just one run.

Layer thickness from 1 nm to 500 µm
Precisely inspects ultra-thin to thick layers across a wide range of materials and substrates.

Compatible with virtually any material
Metals, glass, polymers, semiconductors, ceramics – the VEpioneer® MICRO handles them all.

Comprehensive analysis
Determines layers, defects, contaminations and surface states.



TECHNICAL PARAMETERS

Every detail matters. The VEpioneer® MICRO is engineered for precision, performance, and versatility.

SPECIFICATIONS	
Measurement Mode	Reflectance
Measurement Time	< 10 s (typical)
Wavelength Range	VNIR 400–1000 nm / SWIR 900–1700 nm
Spectral Resolution	VNIR 1.34 nm / SWIR 3.5 nm
Field of View (FOV)	adapted to wafer size [1]
Spatial Resolution	< 1 µm (depending on microscope lens)
Max. Sample Size	up to 130 x 130 mm, max. height 30 mm
Lighting	VEluminise® – adjustable halogen broadband source
Software	VEsolve® PRO
Connectivity	RJ45 (Ethernet)
Control	manual via joystick or automatic via VEsolve® PRO Software
ENVIRONMENT	
Power Requirements	230 VAC (115 V optional), 50 Hz, 80 W
System Dimensions	600 x 600 x 732 mm (L × W × H)
System Weight	32 kg
Certifications	CE, RoHS, UKCA
Operating Conditions	+ 5 °C to + 40 °C (non-condensing)
SUBSTRATES & LAYERS	
Substrates	Metals, glass, polymers, semiconductors (Si, SiC and others), ceramics, and many more
Layers	Oxides, nitrides, carbides, polymers, and many more
Layer Thickness Range	1 nm – 500 µm (material dependent)
Surface Information	■ Cleanliness ■ Contaminations ■ Defects ■ Surface states ■ Custom target parameters

[1] High-resolution scan-modes available.

VISIT US. ONLINE.



WANT TO FIND OUT MORE?
CONTACT US FOR INFORMATION!

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