VEreveal® SERIES

PRODUCT OVERVIEW

COMPREHENDING THE INVISIBLE



Fast. Non-destructive. Comprehensive. Available as VEreveal® MACRO for macro inspection, VEreveal® MICRO for micro inspection, or VEreveal® FUSION for both combined, the system features our unique Hyperspectral Vision technology, tailored to your needs with the AI-equipped software VEsolve® PRO.

PVA TePla

HYPERSPECTRAL VISION FULLY AUTOMATED

WE DON´T GUESS.
WE SEE.

Most inspection methods are specialized and destructive. The **VEreveal®** changes that – bringing fully automated, SEMI-certified 100 % hyperspectral inspection straight onto the fab floor for more production control.

Built for the fab floor
SEMI S2/S8/S14 certified, ISO class 3, designed for automated wafer handling.

Replaces multiple methods
Bypass time-consuming separate FT-IR, GD-OES, TEM/SEM, LIBS, contact angle, or AFM measurements.

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
Specialized for high-throughput wafer inspection.

Comprehensive analysis
100 % sample information in just one run.

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

Near real-time inspection
for acquisition and evaluation.



TECHNICAL PARAMETERS

Every detail matters. The VEreveal® is engineered for precision, speed, and versatility.

SPECIFICATIONS	
Cleanroom capability	ISO class 3
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)	**MACRO** adapted to wafer size [2] | **MICRO** region of interest
Spatial Resolution	**MACRO** VNIR 300 µm | SWIR 470 µm | **MICRO** < 1 µm [1] | **FUSION** all combined
Sample Size	max. 300 mm wafer
Lighting	VEluminise® – adjustable halogen broadband source
Software	VEsolve® PRO
Connectivity	RJ45 (Ethernet)
ENVIRONMENT	
Power Requirements	230 V AC, 50 Hz, 450 W
System Dimensions	**MACRO** / **MICRO** 1240 x 1546 x 1900 mm | **FUSION** 2480 x 1546 x 1900 mm (L x W x H)
System Weight	**MACRO** / **MICRO** 700 kg | **FUSION** 1400 KG
Certifications	CE, SEMI S2, S8, S14
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] Depending on microscope lens. | [2] Further scan modes with high-resolution available.

VISIT US.
ONLINE.



WANT TO FIND OUT MORE?
CONTACT US FOR INFORMATION!

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Disclaimer
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