

HYPERSPECTRAL VISION TECHNOLOGY

Comprehending the Invisible

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



FEATURES AT A GLANCE

**Fast inspection**

Measurement time < 10 seconds

**Non-destructive measurement**

Unique combination of optical spectroscopy and imaging

**Comprehensive analysis**

One run: 100 % sample information

INSIGHTS FROM INSPECTION

VEpioneer® MACRO boosts your product and sample knowledge by orders of magnitude with spatially resolved recognition of:

**Layer thickness**

1 nm - 500 µm, depending on layer material

**Quality criteria**

Defects, contaminations, processing status, roughness of surfaces and interfaces

**Sample properties**

Chemical, electrical, optical

INSPECTED MATERIALS

VEpioneer® MACRO is designed for simple and fast area measurement of surfaces and thin layers on various substrates:



Substrates

Metals, glass, polymers and foils, semiconductors (Si, SiC), ceramics, and many more



Layers

Oxides, nitrides, carbides, polymers and many more

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
Spatial resolution	VNIR 300 µm SWIR 470 µm high-resolution scan-modes available
Field of view (FOV)	300 mm 200 mm optional further customisation available
Lighting	VEluminise® – adjustable halogen broadband source, LED broadband or UV-LED excitation
Sample size	up to 360 x 360 mm, max. height 10 mm further customisation available
System dimensions	1002 x 530 x 331 (L x W x H)
System weight	58 kg
Certification	CE, RoHS, UKCA
Operating conditions	+5 ... +40 °C (non-condensing)
Connectivity	RJ45 (ethernet)
Control	VEsolve® PRO Software
Power requirements	230 V _{AC} (115 V optional), 50–60 Hz, 170 W



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