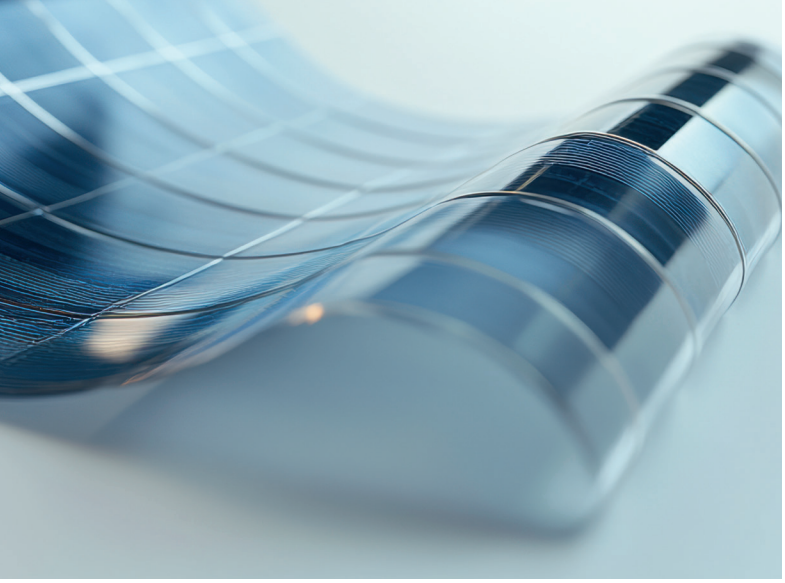
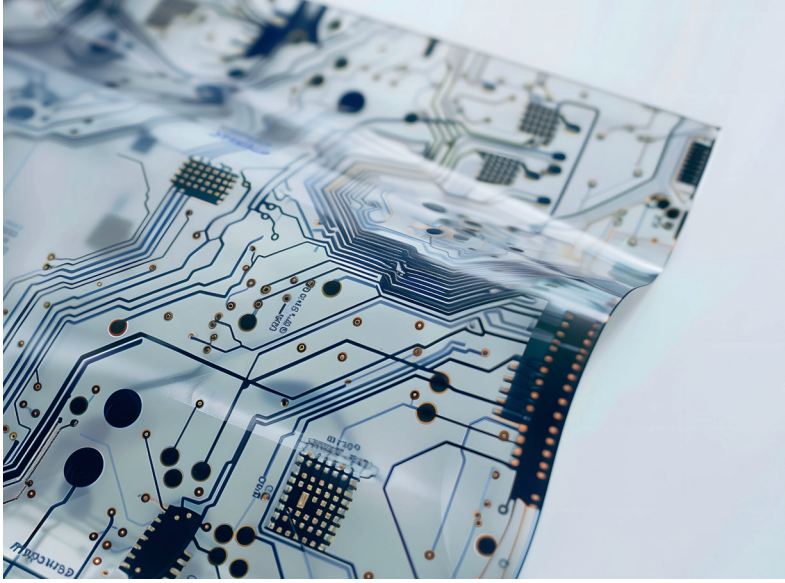
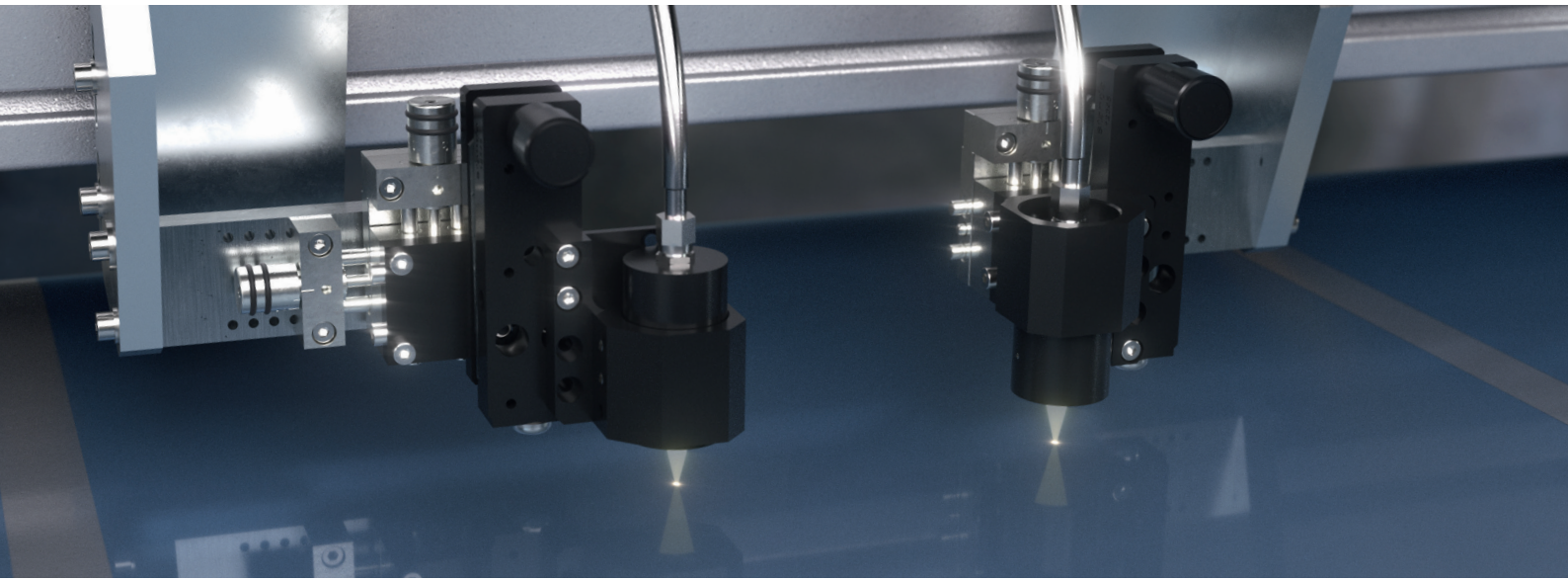






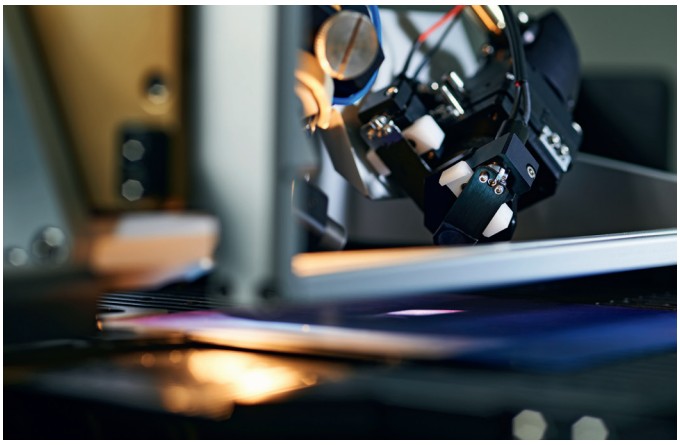
Quality assurance for

Printed/organic electronics production

Real-time spectral analysis for ensuring the coating quality of conductive, organic or dielectric materials on flexible substrates.

NXT
Measuring Technology

Control the uniformity of thickness, optical constants n&k and surface roughness for single layers and stacks



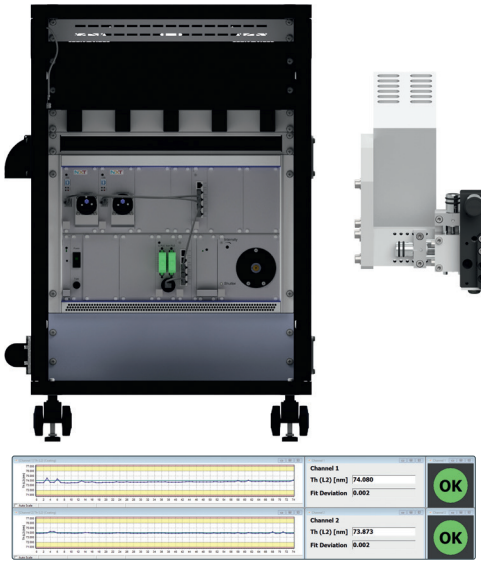
Highlights of the NXT measuring systems

- Enhances **process stability, quality,** and **production yield**
- **High measurement stability** with respect to height and tilt variation of the sample
- **Surface roughness compensation**
- Works for **all layer types** (dielectric, organic, inorganics, metallic & transparent conductive)
- **High sensitivity** to small **thickness variations**
- Fast **non-destructive** measurements
- **Unique oscillatory model for offline systems:** Optical modeling for evaluation of the spectral n&k of the coating materials

INLINE

TCM INLINE R-VIS

Modular customizable system for your production line



Example of a spectrometer cabinet, measuring heads and trend charts of the inline thickness measurement.

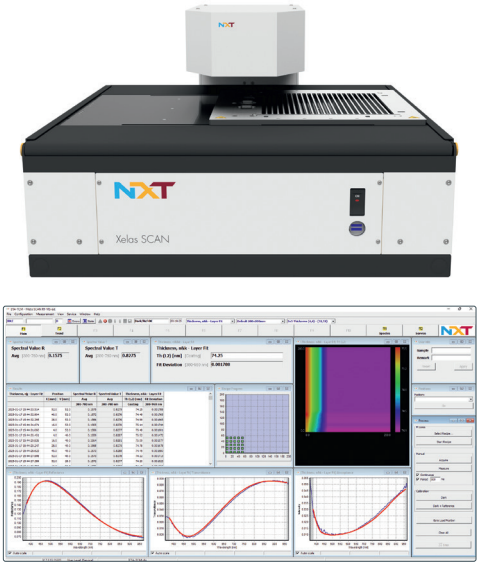
The TCM INLINE R-VIS is a spectral reflectance measurement system for high-precision thin film control. It is optimized for control of web-coating processes in roll-to-roll (R2R) production lines.
The robust optical reflectance measuring heads are built into the production line. They tolerate sample height and tilt fluctuations and enable multi-channel measurements on different positions on the sample and across the production line.

The integrated software allows for real-time trend analysis and customizable deviation limits for PLC control and data output of the measurements.

OFFLINE

Xelas SCAN RT-VIS

Manually or motorized operated table top system



Example of a table top measuring device for automatic motorized scanning operation with results visualized in the software.

The Xelas SCAN RT-VIS is a spectral reflectance and transmittance measurement system for high-precision thin film control. It allows for single and multi-layer thickness measurements, along with optical modelling for n&k evaluation of coating materials. Its motorized measuring table supports x-y mapping and single-point measurements.

Contactless measurement, and proprietary data analysis software makes it ideal for process development and optimization. For each product or sample type, all the sample related measurement parameters can be defined, saved and loaded within configuration sets.

	TCM INLINE R-VIS	Xelas SCAN RT-VIS
		
Measurement parameters		
Layer thicknesses of single layers and stacks	●	●
Spectral refractive & absorption index (n&k)	—	●
Spectral reflectance (R) measurement	●	●
Spectral transmittance (T) measurement	—	●
Color – R	●	●
Color – T	—	●
Measurement specifications		
Thickness range: Thin layer (Fit method) Thickness range: Thick layer (FFT)	0.1 – 3 µm 0.6 – 25 µm	5 – 3000 nm 0.5 – 25 µm
Wavelength range	380 – 1070 nm	
Measuring speed (spectra acquisition)	< 50 ms	< 200 ms
Hardware specifications		
Measuring angle	0°	
Measuring spot size	~ 1 mm	~ 1.5 mm
Required sample positioning accuracy	Within ± 3 mm height and within ± 2° tilt	Within ± 4 mm height and within ± 0.5° tilt
Measuring distance	14 mm (other distance on request)	68 mm (other distance on request)
Speed of scanning table	—	1 s/point for scan, 10 x 10 points on 200 x 200 mm
Evaluation speed	< 30 ms	0.1 – 5 s depending on layer stack

Other applications

Industries
- OLED
- Organic Solar Cells
- Battery
- Packaging
- …

Layer types
- Organic Layers
- Dielectric
- Conductive
- Imprint
- …

Coating methods
- Vacuum Coating
- Slot Die Coating
- Inkjet Printing
- …

Get in touch for more information on our wide range of application fields.

Detect deviations where they occur.

For over three decades, NXT's innovative and industry-proven solutions have been supporting industrial companies all over the world to meet exacting quality standards and increase production efficiency at the same time.

Our products combine easy usability with low maintenance. Their modular design allows customization to specific requirements, enabling our customers to make informed decisions to achieve production excellence.

Made in Germany

Do you need a customized system? Get in touch with us.

Thanks to our knowledgable R&D experts we offer standardized products as well as customized solutions.

Get in touch – together we will develop a solutions that solves your specific production challenges.

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