

Deflectometry for Specular Surfaces

Efficient 3D-Inspection

ISRA
VISION
3D-Shape 

Assure Quality – Increase Efficiency

3D Technology is the Key to Flawless Specular and Reflective Surfaces

Specular surfaces are seen as particularly challenging for 3D measuring technology. SpecGAGE3D masters these challenges reliably and down to the nanometer range

with precision – regardless of the color. In doing so, SpecGAGE3D delivers optimal results for a wide variety of industries and uses.



Optical elements



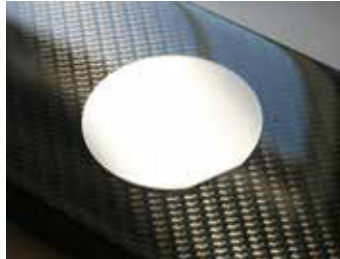
Head-Up Displays



Coating



Cover glass



Saphir wafer



Car interior



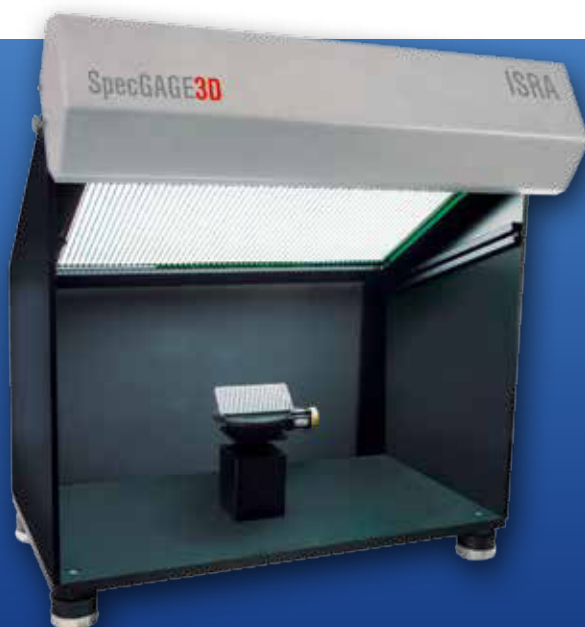
Painted and polished objects



Home and sanitary appliances



Rear-view mirrors



SpecGAGE3D – Specifications*

Field of view	230 x 170 mm ² bis 300 x 200 mm ²
LatRes	0,25 mm
Measurement speed	Data acquisition: down to 2 s (depends on object) Data evaluation: < 3 s
Accuracy	Height: absolute error ± 3μ (over 80 x 80 mm ²) Curvature: ± 10 mD (über 3 x 3 mm ²)
Measuring principle	Phase measuring deflectometry (PMD)
Operating system	Windows 7 pro, 64 bit
Interfaces	DCOM, C++, dll

* Related to the SpecGAGE 3D-m and SpecGAGE 3D-l designs

100% Quality Assurance on Production Lines

Local Precision Down to the Nanometer Range

- Fast, full-surface and high-precision measurement of specular and reflective surfaces
- Shape accuracy in the micrometer range
- Designed as an integrated in-line system or a compact stand-alone solution
- Manual or fully automated quality inspection
- Reliable and robust
- Vibration resistant
- Noncontact 3D measurement



Aluminum surfaces



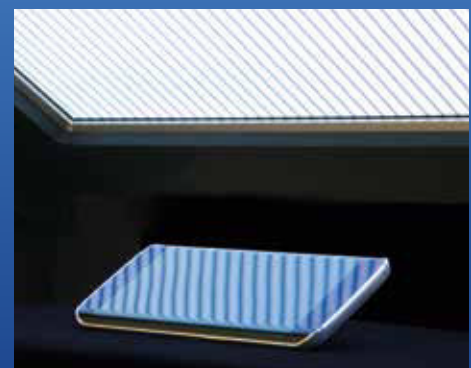
Use in cleanroom



Headlights and reflectors



Easy integration into existing environments

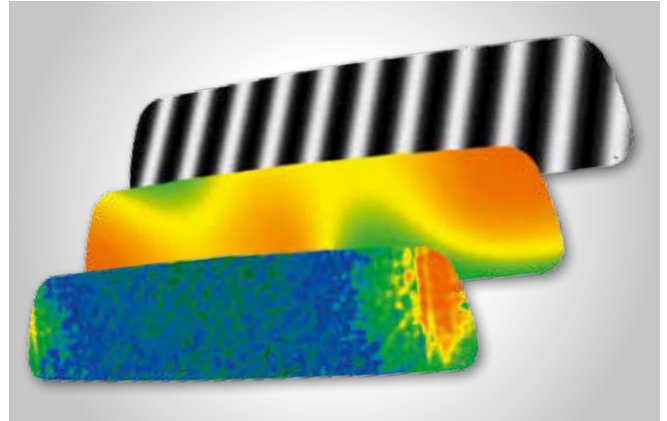


Reliable inspection of specular, reflective and curved surfaces

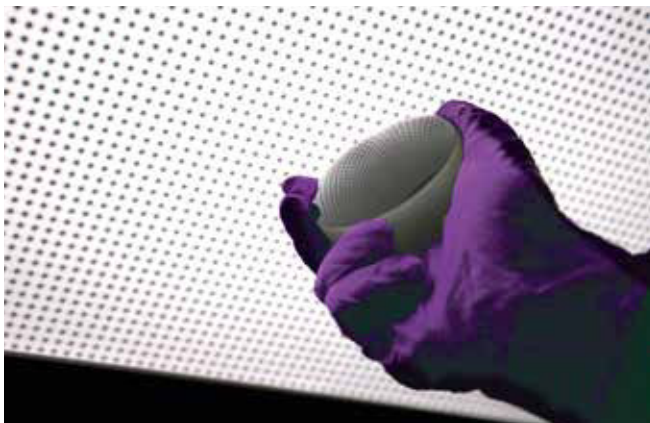
Easy Test Procedure

SpecGAGE3D Tests Even Demanding Objects with the Utmost Reliability

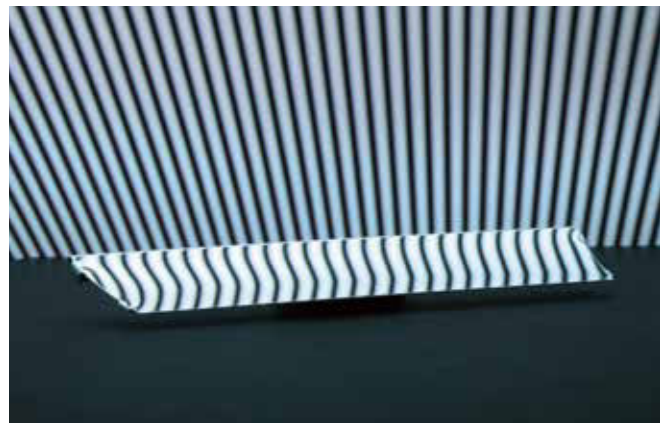
- Easy operation
- Complex test procedures within a few seconds
- Software package for visualization, analysis, data export and target/actual comparison
- Individual software modifications possible
- Fast and precise data generation
- Evaluation of various parameters with just one scan: Incline and height data and contrast images



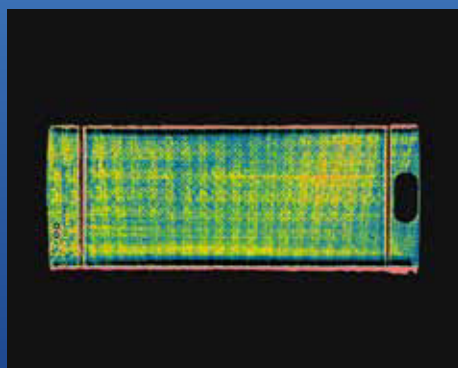
Rear-view mirrors



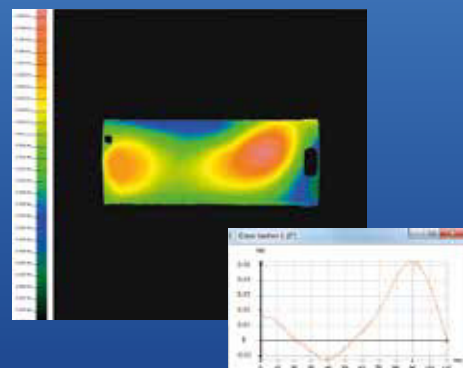
Optical elements



Head-up Displays



Fast data generation

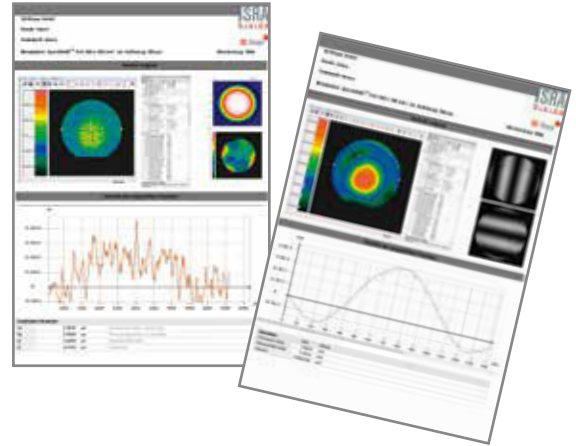


Visualization, analysis and data export

Optimize Production Processes

Early Defect Detection Improves the Sales Potential

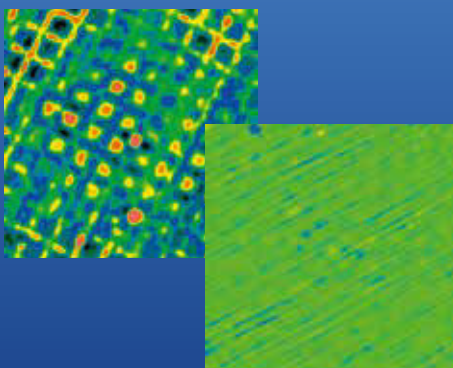
- Efficient, cost-effective and automated solution for reliable quality assurance of mirroring surfaces
- Optimized production processes and reduced costs thanks to early defect detection and prevention
- Long-lasting investment security
- Low operating costs
- Improved customer satisfaction thanks to minimized complaints



Clear reportings



Improved customer satisfaction

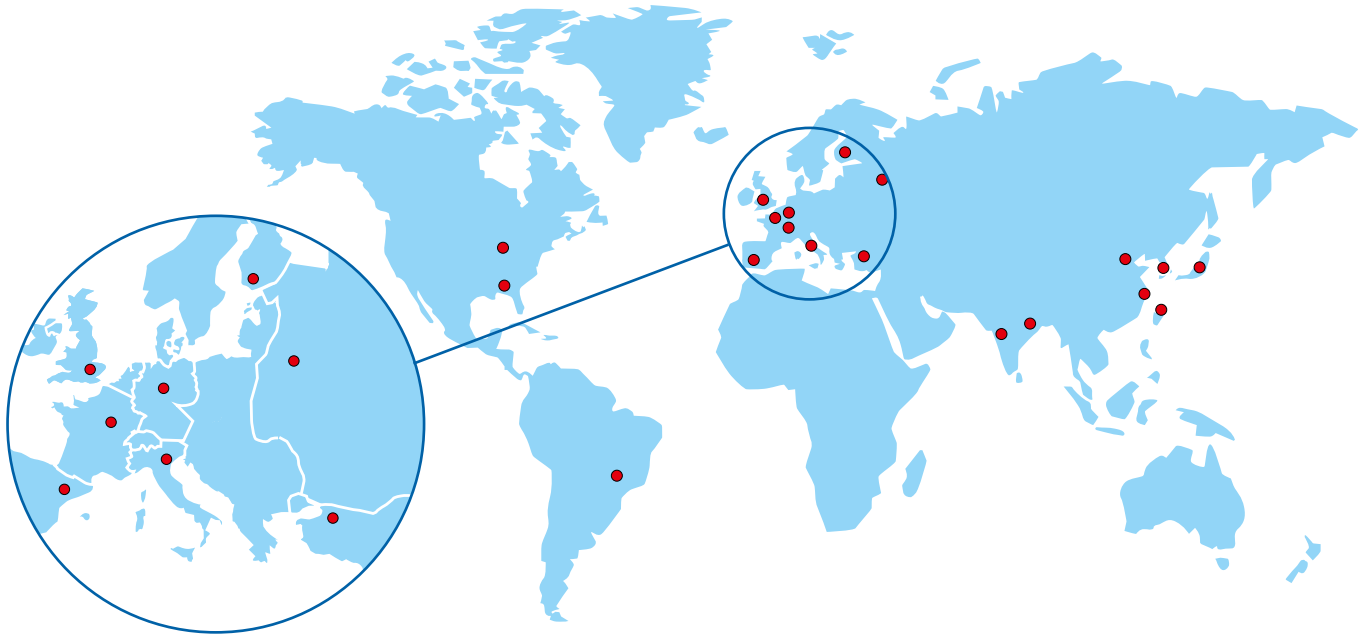


Early detection of defects and deviations



Higher sales potential

Innovations for Automated Optical 3D-Quality Control



Welcome to the World of 3D Inspection!

The ISRA VISION AG / 3D-Shape GmbH is one of the world's leading companies when it comes to challenging measuring tasks in 3D. 3D-Shape technology is applied wherever sophisticated and highly precise measurements are an important prerequisite for best production processes and reliable quality assurance: in the electronics and automotive industry, medical technology, toolmaking and form manufacturing as well as optical systems and many more industrial sectors.

Leading Technology – Always Close To The Customer

State-of-the-art hard- and software as well as high-quality components form the basis for highest precision and pace of the 3D-Shape systems. The direct connection to customers everywhere in the world guarantees a timely, customized solution and its implementation in new or existing production environments. As a part of ISRA VISION AG, 3D Shape offers comprehensive customer support via the global service and distribution network of the leading expert in the field of surface inspection.

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