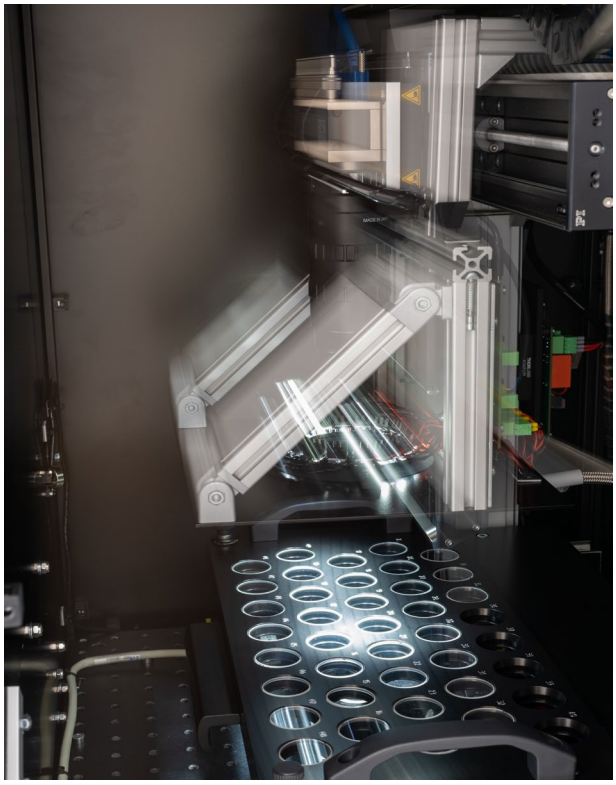
DIOPTIC
thinking your optics

ARGOS matrix

Automated batch inspection



YOUR BENEFITS

- Automated inspection of hundreds of elements without user interaction
- Based on established ARGOS technology, perfectly adapted to the specific inspection task
- Combines multiple illumination configurations for improved defect detection

ESTABLISHED ARGOS TECHNOLOGY...

- Intuitive and easy-to-use ARGOS software for data processing, field-tested over years of professional use
- Detection of defects down to 1 µm in size with a well-tested calibration procedure
- Detailed and customizable inspection reports and analysis tools
- Integrated focus stacking technology for in-focus imaging of curved elements

...PERFECTLY ADAPTED!

- Testing with optimum resolution and speed by adapting the measuring head with modular system
- Particularly efficient for testing micro-optics: Compact system can test hundreds of elements with highest resolution
- Testing with a matrix camera and switchable dark-field illumination for reflection-free images with optimal defect visibility
- Combination of several illumination techniques: dark field, transmitted light, bright field, for even better defect detection and discrimination
- Evaluation according to ISO 10110-7 or custom specifications

TECHNOLOGY

- Special dark field illumination for curved test objects: Different lighting configurations are used sequentially. Direct reflections are suppressed in image processing.
- The combination of dark field, transmitted light or bright field illumination helps to detect defects in chrome masks or other coatings.
- An ionizing air nozzle removes dust and particles prior to testing.

Top left Images with different illumination directions (shown as red, green, blue) are combined for a fused image without reflections.

Bottom left Combination of dark field (white) and transmitted light (red)

Right Dark field module and air nozzle for removing dust

SPECIFICATIONS

Parameters	ARGOS matrix S / M / L	Comments
Field of view	10 mm x 7.5 mm (S) 20 mm x 15 mm (M) 33 mm x 25 mm (L)	Larger sizes on request
Smallest specification according to ISO 10110-7*	5/1x0.016, L1x0.01, E0.04 (S) / 5/1x0.04, L1x0.025, E0.1 (M) / 5/1x0.063, L1x0.04, E0.2 (L)	Evaluation as required by the standard down to 16% of the specified dig size and 25% of specified scratch size
Smallest visible defects*	< 1 µm / < 2 µm / < 4 µm	Defects will be assigned the minimum grade number 0.0025/0.004/0.0063 due to the limited resolution.
Precision of the size measurement*	< 1.5 µm / < 3 µm / < 5 µm	Mean standard deviation at 30 measurement cycles with the same calibration sample
Surface material	Glass, metal, semiconductors, plastics, crystals	Polished surfaces with optical quality; others on request
Test duration flat substrate	ca. 1-2 s	The evaluation time depends on the specification and quality of the surface.
Example for lens test duration	ca. 15-20 s (for Ø 15 mm, R = 9 mm)	With ARGOS matrix M, depending on surface specification/quality
Size of sample tray	205 x 205 mm	With module „XY scan“ Other solutions on request
Maximum part size	205 x 205 mm	With module „Multi-view stitching“

* The achievement of the specification can only be guaranteed with the original ARGOS reference sample, on which known defects with defined width and depth are present.

GET IN TOUCH, WE WILL BE HAPPY TO ADVISE YOU!

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