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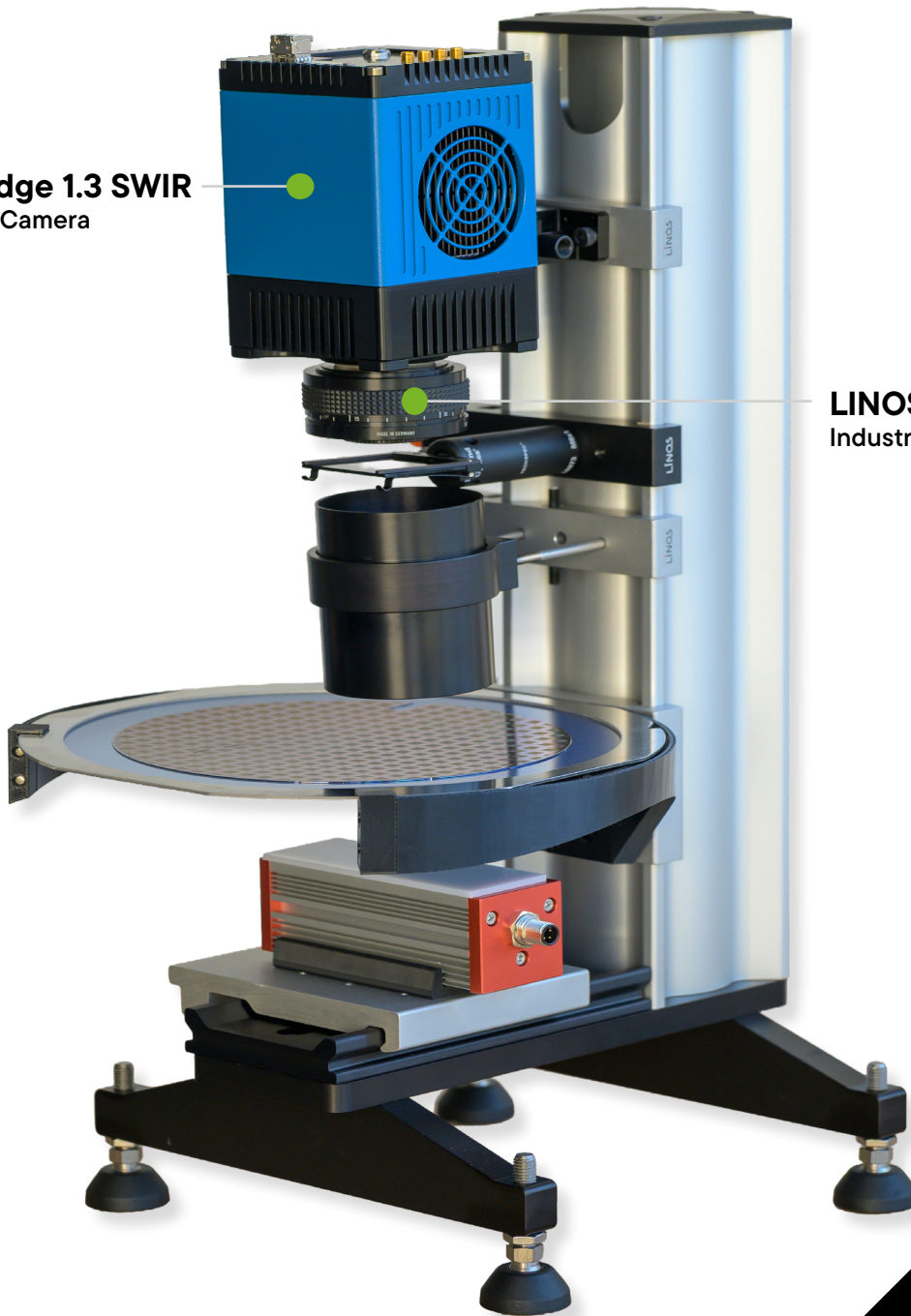
LINOS[®]

When Silicon Becomes Transparent

SWIR Semiconductor Inspection through Silicon

pco.edge 1.3 SWIR
InGaAs Camera

LINOS[®] Rodagon 2.0/25 SWIR
Industrial Lens




excelitas[®]

Semiconductor Inspection Solution

About the Demonstration

This demonstration showcases a next-generation short-wave infrared (SWIR) imaging system for non-destructive backside inspection of semiconductor wafers. Combining a high-sensitivity SWIR camera with a high-performance SWIR lens, the setup leverages the transparency of silicon at SWIR wavelengths to visualize structures and defects through the substrate, enabling quality control, defect detection, process monitoring, and failure analysis.

pco.edge 1.3 SWIR CLHS Camera

This high-performance SWIR camera delivers outstanding image quality for demanding industrial and scientific applications. Combining exceptional sensitivity with low-noise operation, it enables reliable detection of faint signals and subtle details across the visible, NIR, and SWIR spectral ranges.

KEY FEATURES

- Spectral sensitivity from 300 nm to 1700 nm
- 1280 × 1024 pixel resolution
- Low readout noise down to 25 e⁻ rms
- Up to 148 fps at full resolution



LINOS Rodagon 2.0/25 SWIR Industrial Lens

This high-performance SWIR lens is designed for demanding inspection and measurement applications. Its optimized optical design delivers uniform image quality across the entire sensor field, enabling reliable detection of fine structures and defects for accurate and repeatable inspection results.

KEY FEATURES

- No focus shift across the full NIR/SWIR range
- High transmission from 840 nm to 1900 nm
- Fast f/2.0 aperture for low-light imaging
- Optimized for image circles up to 18 mm



Applications

Advanced packaging inspection • Defect detection • Failure analysis • Materials characterization • Non-destructive testing • Process monitoring • Quality control • Research and development • Semiconductor wafer inspection • Through-silicon imaging



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