

High-Precision Surface Inspection Tool for Semiconductor Applications

WafQScan

Most Accurate Detection – Substantial Cost Saving

ISRA
VISION

High-Precision Surface Inspection Semiconductor Applications

Reliable wafer inspection in addition to standard AOI

Apart from typical metrology tasks, handling sequences and other processes can have a mechanical impact, causing a wide variety of scratches, debris or even cracks that become the root cause of structural defects in processes. Where AOI is an overkill and too slow, a low-cost, but speedy and reliable inspection can be the approach to go.

High precision surface inspection for bare, processed and diced wafers

Aside from traditional AOI, the underlying technology for this surface inspection tool is based on line-scan cameras and illumination, so with various switched illumination scenarios at adapted wavelengths, one scan provides multiple images for further processing. This multi-view technology enables the WafQScan setup to detect defects on the surface level of bare and processed wafer materials as well as diced wafers on tape with unique results, reliability and speed.

Applications

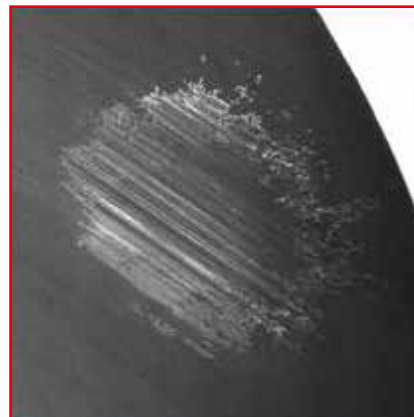
- Bare wafer inspection (incoming quality control)
- FEOL processes after critical manipulation
- Wafer Level Packaging (WLP) with thinning process
- Post dicing inspection for chippings, cracks etc.

Optional

- Edge quality inspection (EdgeScan)



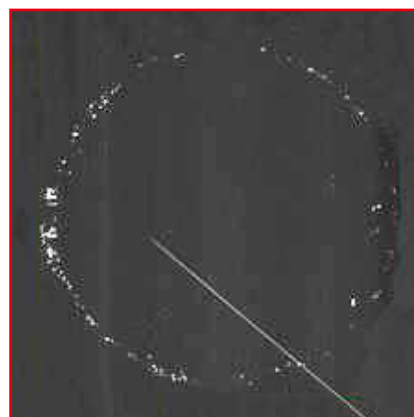
Contamination /
Haze



Etching residuals



Soft-scratch
(not visible with
laser scattering)



Scratch and
impurity from
handling

Surface Inspection for Applications: **WafQScan**

Benefits at a glance

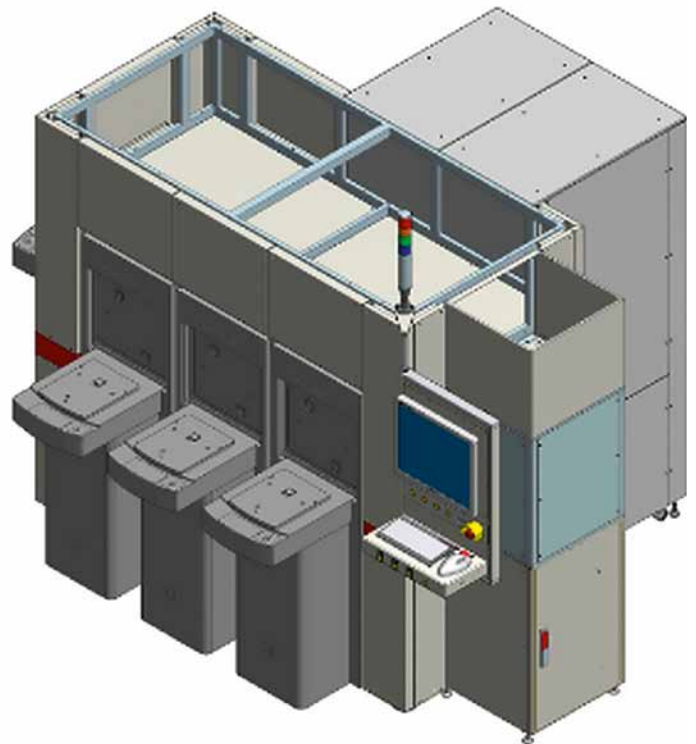
- Applicable to all wafer sizes 2" to 300 mm
- Highest throughput up to 200 Wph (appl. dep.)
- Easy integration into existing EFEM or sorting tools
- Save resources and improve yield with high precision surface inspection
- Reduce production costs with better use of consumables and only process good wafers
- Increase production yield by reducing breakage during processing



Manual inspection tool

Features

- MultiView-technology with adapted wavelength and resolution
- Manual or fully automated configurations
- Inspection module with SEMI hard- and software interface



Possible configuration of a fully automated tool with 2 inspection modules

Innovation for Semicon Inspection

**We Are the Innovators in Optical Inspection.
Best Practice. Best System. Best Service.**

ISRA VISION has been a leading supplier of high-performance quality inspection systems for more than 30 years. Today, our completely automated and highly accurate solutions set the standard for the detection of material defects and total process control in numerous markets.

For the semiconductor industry, ISRA has combined leading-edge technologies to provide high-speed and high-precision quality controls along the production chain – universally applicable and intuitively easy-to-use.

Customers choose ISRA for its ability to develop products consistent to their requirements. Benefits are the identification of high efficiency enhancements including cost saving potentials. To achieve this goal, more than 900 ISRA employees worldwide work to contribute to your success.

Your Global Partner for Surface Inspection.

We offer our extensive experience and a highly qualified team of experts to design and implement solutions for advanced applications.

We ensure that our mission continues beyond our shipping dock – just contact our Customer Support and Service Center.

We guarantee excellence to our customers – from consulting to service, from tailored solutions to worldwide support.

We can help to make your business more competitive.

**Challenge Us.
Inspect to Control – with ISRA VISION**



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