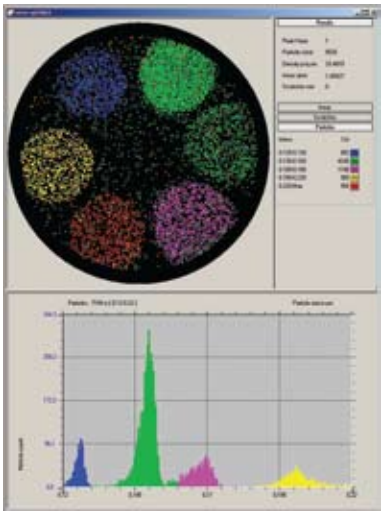
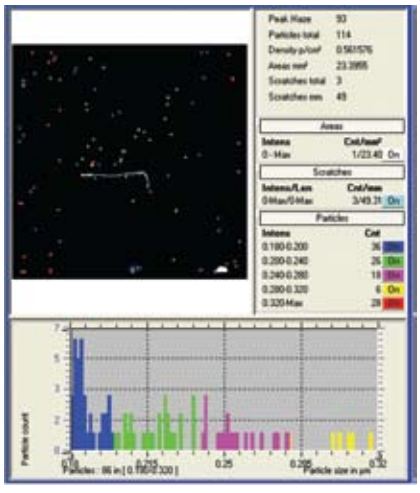
NANOPHOTONICS

WAFER INSPECTION

Reflex TT Table Top



Particle map and histogram of Si calibration wafer with different size latex spheres



Particle map of a mask blank, sensitivity 90 nm

REFLEX TT – TableTop Manually Loaded Wafer and Mask Blank Inspection Equipment

The **REFLEX TT** (table top) is a manually loaded laser dark field inspection tool. It is designed for detecting particles, scratches, area defects and micro-roughness (haze) on unpatterned wafers. A set of substrate holders is available to cover wafers of various diameters from 2" up to 300 mm. The Reflex TT 450 offers the possibility to inspect 450 mm wafers. The Reflex TT MB is a version designed for mask blank inspection applications.

Simple operation and user friendly software make the REFLEX TT a valuable tool for a wide range of applications. The flexible tool is an ideal inspection system in a R&D and lab environment supporting process development and tool qualification.

Features

- Vacuum chuck 2"–6" and 6"–300 mm Wafers
- Edge gripper for 4"–8" transparent wafers
- Edge gripper for 6025 mask blanks
- 450 mm wafer version
- 635 nm laser for 150 nm sensitivity
- 405 nm laser for 90 nm sensitivity

Applications

- Silicon
- Mask Blanks
- Compound Semiconductors
- Transparent and metal films on Si
- Glass
- OLED

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REFLEX TT Features

Mechanical Specifications

Available substrate fixations:	Vacuum chuck system for 2"– 6" wafers Vacuum chuck system for 6"– 450 mm wafers Edge grip system for 3"– 8" transparent wafers Edge grip system for 2,5"x 2,5"– 8"x 8" mask blanks
Dimensions W x D x H:	860 x 800 x 630 mm, additional signal tower height 325 mm

Technology and Metrology Specifications

Scanning times (6" Wafers):	< 40 sec. (sensitivity 150 nm LSE) < 63 sec. (sensitivity 90 nm LSE)
Edge exclusion:	2 mm for vacuum chuck systems 4 mm for egde grip systems
Repeatability:	3 % (1 σ > 1000 particles)
Clean room class:	Internal: < 10 (ISO 4); Environmental: < 10.000 (ISO 7)
System safety certification:	CE
Laser classification:	Class I

Facility Requirements

Vacuum supply:	-650 mbar + 50 mbar (30 l/min @ -600 mbar)
Electrical supply:	110 – 240 V single phase AC, 50/60 Hz
Power consumption:	< 300 W

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