WIS8000
1st Optical Inspection System

Highlights

WIS8000 is designed with 2 standard load ports to accommodate FOUP, FOSB for 300mm wafer size and open cassette for 200mm wafer size. This system able to be upgraded up to 3 load ports. WIS8000 comes with robotic arm to ensure fast and precision during the wafer handling and wafer gripper module to hold the wafer during the macro inspection. The macro inspection platform comes with tilting capability for wafer front & backside inspection. System also equipped with micro inspection platform, includes high-power microscope that can store up 5 objective lens and programmable XY stage with auto/manual indexing capability.

Key Features

- 2x Hirata FOUP Load Ports that can accommodate FOUP, FOSB and 8" Open Cassette
- Hirata 3-Axis Single Arm ATM Robot with Vacuum Type End Effector
- Hirata Wafer Pre-aligner for 8" and 12" Wafer
- Macro Inspection with Wafer Top &
- Backside Inspection Capability
- Micro Inspection with High-Power
- Microscope and Programmable Motorized Stage

QES MECHATRONIC SDN BHD

Features and Advantages

1 Hirata Wafer Pre-Aligner for 8" & 12" Wafers
AC servo with high resolution absolute encoder enables high speed & accurate positioning

2 Vacuum Grip End Effector
Special design to reduce wafer stress

3 Hirata Wafer Robot
3-axis robot with Arm Length of 180mm each

Hirata FOUP Port

FOUP Ports
- 2x Hirata FOUP Ports, one Input load port and one Output load port allocated for SEMI Standard 12"
- FOUP Cassette, 12" FOSB Cassette, Use of OC Adapter kit for 8" Open Cassette.
- Integrated Wafer Mapping Sensor for both 8" and 12" cassette mapping (with wafer cross-slot and double-slot detection capability).
- Integrated sensor for wafer protrusion detection.
- Sensor assembly to detect presence of FOUP, FOSB and Open Cassettes.
- Light panel showing loading and unloading status.
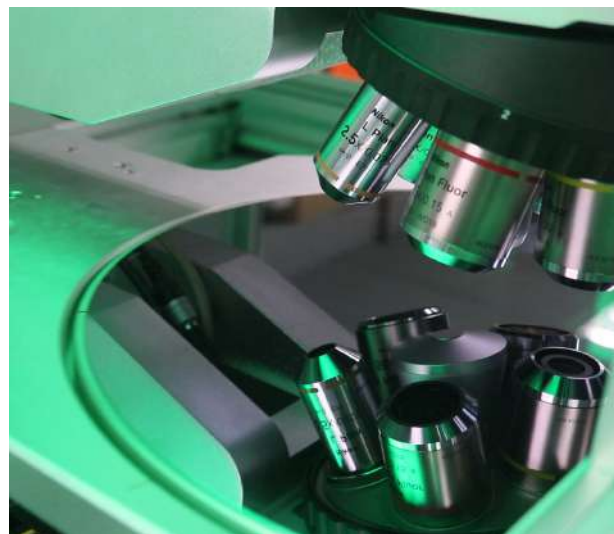
8" Open Cassette

12" FOUP

12" FOSB

Macro Inspection Module
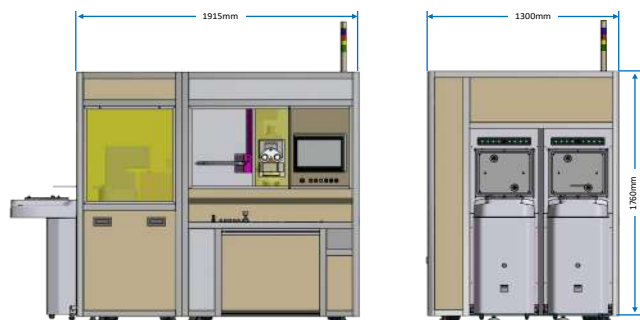

Macro Inspection Function
- Wafer Gripper to hold the wafer with tilting capability for wafer Front and Backside inspection using naked eye
- 3 lightings available such as green, orange diffuse light and fiber optic light guide

Micro Inspection Module

Micro Inspection Function
- Motorized Stage X,Y,Z & Theta
- High Power Nikon Microscope with 5 Objectives (2.5x, 5x, 10x, 20x & 50x)
- 10x Wide-Field Eye-piece

WIS8000

Technical Specification

Wafer	
Size/ Thickness	8" Wafer Size / 200 µm to 800 µm
	12" Wafer Size / 200 µm to 800 µm

Loading Port	
Input/ Output Port	2 x Configurable to FOUP, FOSB and Open Cassette
Wafer Carrier	SEMI Standard 8" Open Cassette
	SEMI Standard 12" FOUP
	SEMI Standard 12" FOSB
Wafer Loading/Unloading	R-Theta Robotic Arm with Vacuum Pickup
Load Port Sensors	Integrated with Wafer Mapping Features
	Presence or Absence & Orientation Detection
	Wafer Protrusion Detection

Inspection Platform	
Macro Inspection	Top & Back Wafer Inspection
	Consist of Gripper Arm to hold Wafers during the Tilting Mechanism
	Lighting Panel & Green Diffused Light and Focus Halogen
Micro Inspection with High-Power Microscope, 5 Objective Lens	Nikon High Power Metallurgical Microscope
	Trinocular Wide-Field Observation Tube
	10x Wide-Field Eyepiece.
	Objective Lenses at 2.5x, 5x, 10x, 20x & 50x
	1/3" CCD Colour Camera
	Motorized XYZ Stage

Operation System	
Software	Microsoft Window 10 Operating System
	Wafer Inspection System WIS8000

Wafer ID Reader	
Code Types	Barcode: BC412, IBM412
	2D Matrix : Data Matrix™ ECC200, SEMI T7, M1.15
	Alphanumeric: SEMI OCR: M12, M13, M1.15

Standard Accessories	
Display	18.5" LCD Monitor
Status Indicator	3-Tier Tower Light with Adjustable Buzzer Volume
Auto Conversion	Programmable Different Wafer Size (For 8" & 12")

Operating	
Power Supply	200VAC-240VAC @ 13A 50/60 Hz, Single Phase
Compressed Air	4-6 Bar
Vacuum	-80kPA

Dimension	
Foot Print	1915mm (L) x 1300mm (W) x 1760mm (H)
Weight	750 Kg

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