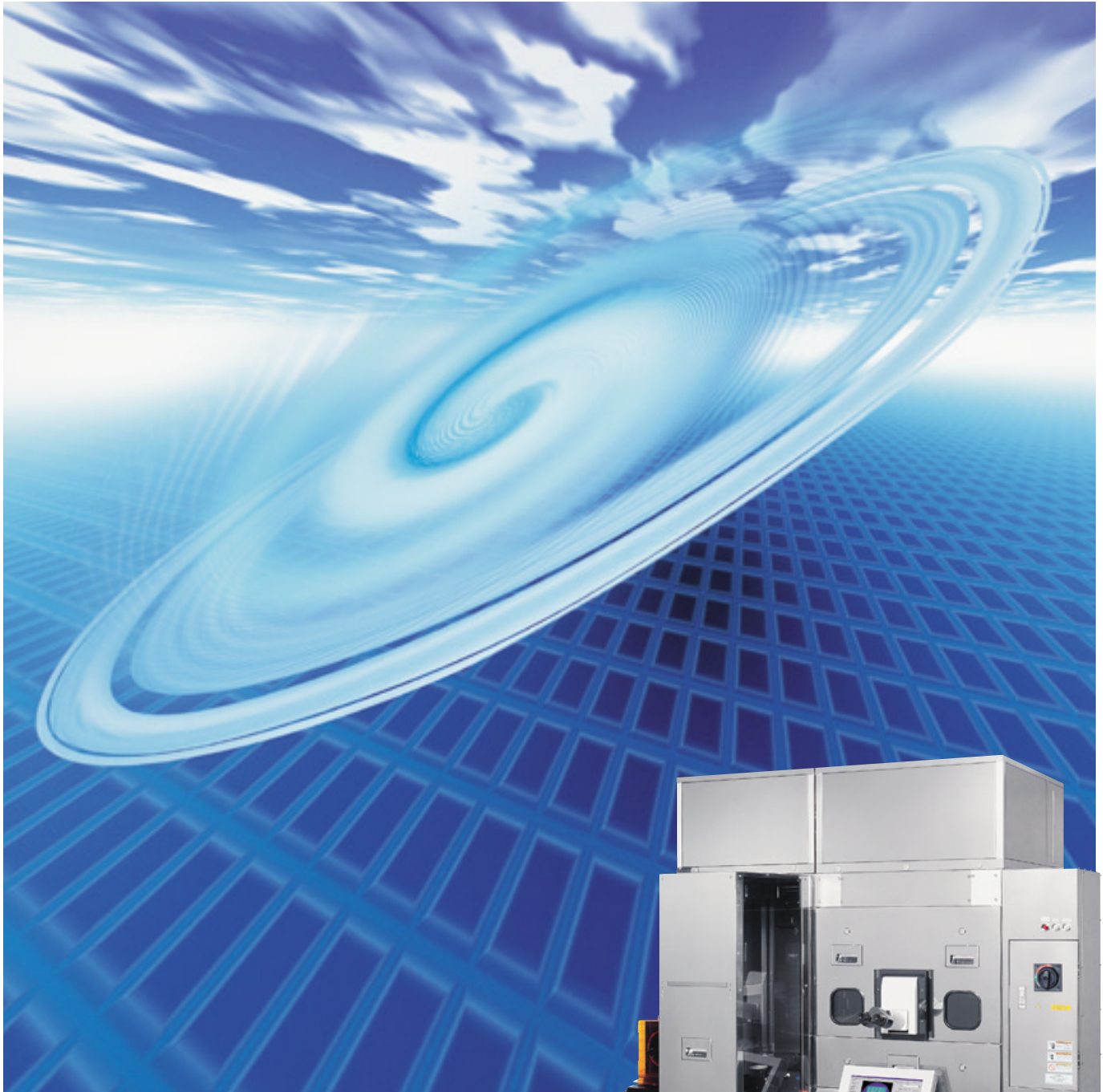


# ***Nikon***

## **Wafer Inspection System OPTISTATION-3100**



**Compact solution for 300mm  
wafer inspection in diverse  
applications**



# Compact solution for 300mm wafer inspection in diverse applications

Engineered to provide cost-effective support for 300mm wafers with a minimal footprint, the OPTISTATION-3100 features a new Micro/Macro system in a compact, flexible design. A new optical system offers brighter images, and observation techniques can be programmed for each objective magnification and each substrate layer to be inspected. This eliminates deviation from the inspection protocol and missed information through incorrect optical technique. Its flexible design enables the load ports to be positioned in accordance with the fab layout requirements. Clearly the best choice for factory automation, the OPTISTATION-3100 is ideal for inspection in a production environment, advanced research and development, and failure analysis applications.

# OPTISTATION-3100

## Main Features

### • New optics

Nikon's renowned CFI60 optics produce crisp, clear images with high contrast and minimal flare. Longer working distances throughout the magnification range ensure safer wafer inspection. The darkfield signal-to-background ratio is three times higher than in the past, ensuring significantly better imaging.

### • Newly designed DUV microscope

The newly designed optional DUV microscope module offers resolution to 0.1µm, supporting present and future design rules.

### • Flexibility in load port positioning

With load port positions available in the front, side and rear, the OPTISTATION-3100 is adaptable to diverse fab layouts and 300mm factory automation requirements.

What's more, it features a smaller footprint and compact design.

### • Contamination free inspection

An integrated environmental chamber and FFU (fan filter unit) prevent contamination by particles, easily ensuring a class 1 inspection environment.

### • Easy operation

Automated, motorized functions controlled by an easily accessible touchscreen ensure comfortable operation while minimizing contamination. Optimum observation settings, including aperture and light intensity, can be preset according to objective lens or wafer type.

### • Built for factory automation

The OPTISTATION-3100 features a SEMI and SELETE compliant design to enable easy adaptation to diverse 300mm factory automation requirements.

### • 3-mode Macro inspection with high-performance illuminators

Allows surface Macro, center backside Macro, and perimeter backside Macro inspections. Furthermore, the wide illuminator WIL-100 and the line illuminator LIL-100 have been newly developed to detect various process defects.


## Specifications

<b>Wafer size</b>	ø300mm
<b>Microscope (micro) inspection</b>	
Total magnification	25x to 1,500x
Inspection modes	Brightfield, darkfield, DUV (option)
Autofocus	LED illumination slit projection
Objectives	CFI60 objectives
<b>Macro inspection</b>	Surface Macro, center backside Macro, perimeter backside Macro
<b>Load port</b>	1 FOUP (or 1 FOSB: option) Position selectable from front, side or rear
<b>Wafer transfer</b>	Robotic handling; vacuum chuck; noncontact pre-alignment mechanism
<b>Operation</b>	Touch panel GUI, mouse, keyboard
<b>Options</b>	
DUV microscope	Switchable to B/D
Online operation	Via SECS-I or HSMS
Communication with host computer	300mm SEMI standards (Compliant with E5, E7, E30, E37, E39, E40, E87, E90, E94)
Others	FOSB compliance ULPA boronless FFU (fan filter unit) Video capture function 2nd user interface (UIF) OHV (SEMI E84 compliance) Review inspection ADC OCR
<b>Safety</b>	S2-0200 compliance, CE marking compliance
<b>Ergonomic</b>	S8-1000 compliance
<b>Dimensions (W x D x H) (Rear load port)</b>	1,785 x 1,650 x 2,300mm (70.1 x 65.0 x 90.6 in.)
<b>Weight</b>	
Main body	Approx. 760kg (1,676 lbs.)
FFU unit	Approx. 160kg (353 lbs.)

The export of this product is controlled by the Japanese Foreign Exchange and Foreign Trade Law and international export control regime. It should not be exported without authorization from the appropriate governmental authorities.

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. July 2003

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 <b>WARNING</b>	TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT.
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