



Wafer Loaders for IC Inspection Microscopes NWL200 Series

# NWL200 Series

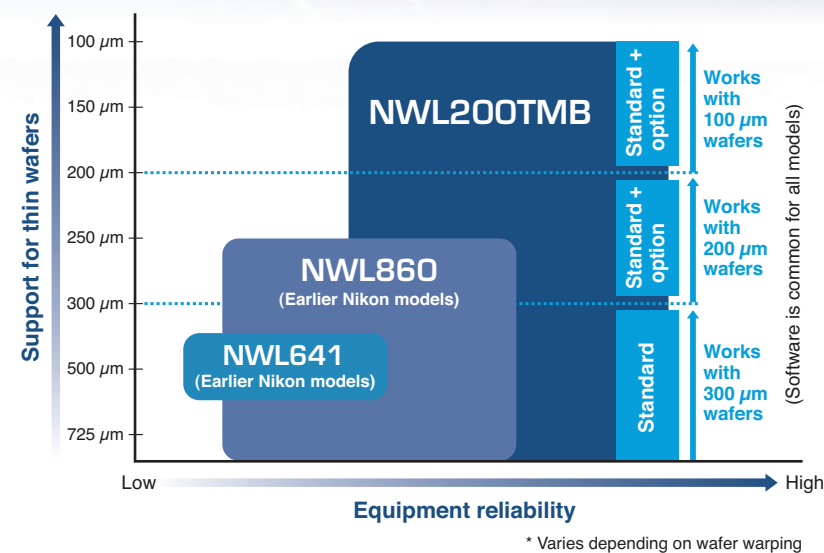
Wafer Loaders for IC Inspection Microscopes



# Nikon's proprietary technology ensures reliable loading of ultra-thin 100 μm wafers

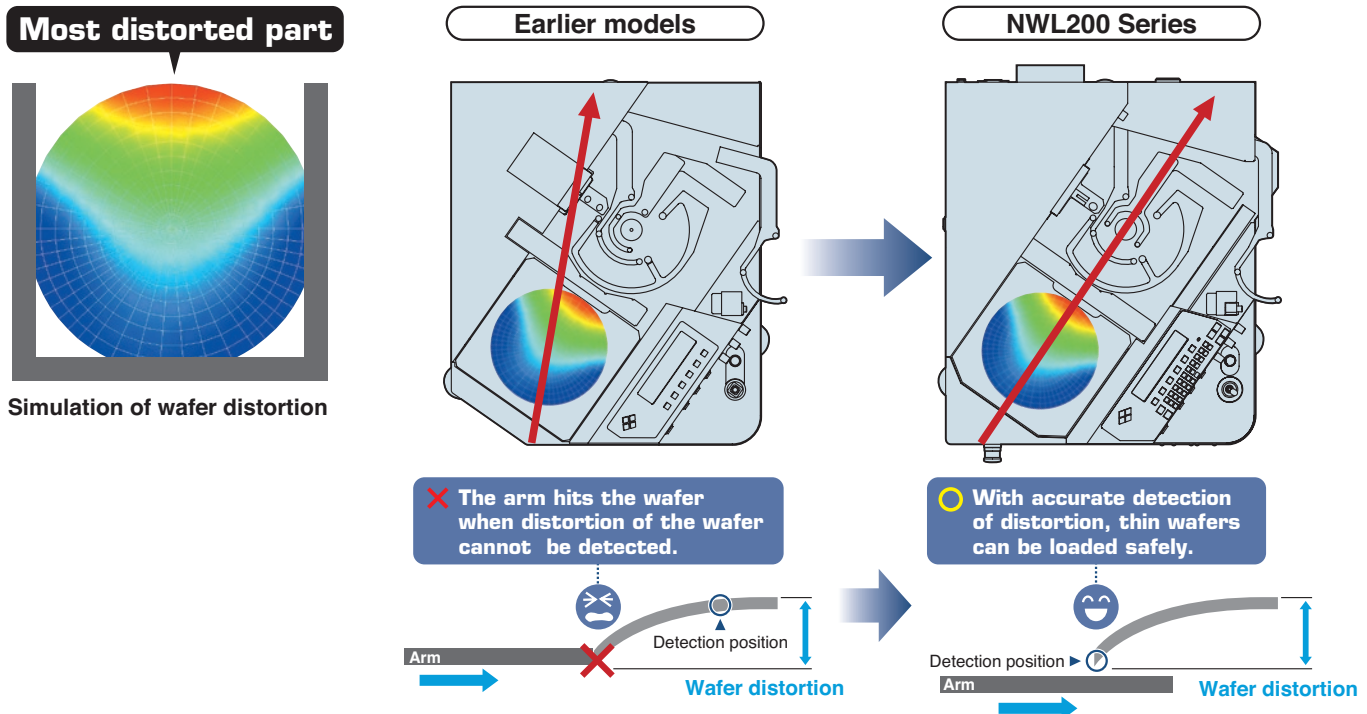
## Highly reliable loading suitable for next-generation semiconductors

Nikon's outstanding proprietary technology makes the NWL200 Series the first lineup of wafer loaders for inspection microscopes capable of loading 100 μm thin wafers. The SEMI S2/S8 approved NWL200 Series can load ultra-thin wafers with a thickness of as little as 100 μm. This high level of safety and reliability meets all of the requirements for inspection of the latest wafers.



## Improved wafer-sensing functions

Since thin wafers can undergo significant distortion in the carrier, the arm may damage them if the position sensors are not accurate. In the past, it was difficult for sensors to read distortion of the wafers accurately, but with optimized arrangement of the wafer sensor beams, the NWL200 Series can accurately detect the shape of thin wafers in the cassette. Further, when a wafer is placed on a microscope stage, the notch and orientation can be adjusted by 90°.



## High throughput

The non-contact centering mechanism makes it possible to perform alignment quickly and accurately. The multi-arm system also allows loading and unloading of wafers with complete precision, increasing the overall efficiency of transfer and wafer exchange. This dramatically decreases cycle times, achieving high levels of throughput.

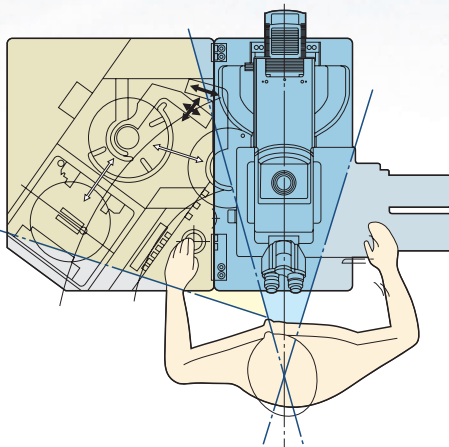


## High reliability

Should an error occur, an error message is displayed on the LCD panel. Even when the power is turned off, the vacuum chuck of the macro inspection mechanism stays on. If a problem occurs, wafers on the loader can be returned to the carrier without the use of tweezers.

## Elegant ergonomic design

To assure operation in a natural posture, ergonomic efficiency is designed into every aspect of the system. Operation keys and knobs are located within easy reach of the operator, so that operation requires minimum movement of the hand or eye. The wafer carriers are located at the front and 35° to the left of the operator, making it easy to load carriers and to check the wafers inside the carriers visually.



## Mix and match options for a range of applications

- **External communication functions**  
With external communication functions, the NWL200 can be connected to a host computer and built into a network. The system can transfer data from inspection results online over an RS-232C link, and be operated remotely.
- **Comprehensive capabilities**  
Combined with the Digital Sight Series microscope digital camera and the NIS-Elements imaging software, the system offers comprehensive multidimensional image capture, measurement and analysis capabilities.

## System Parts





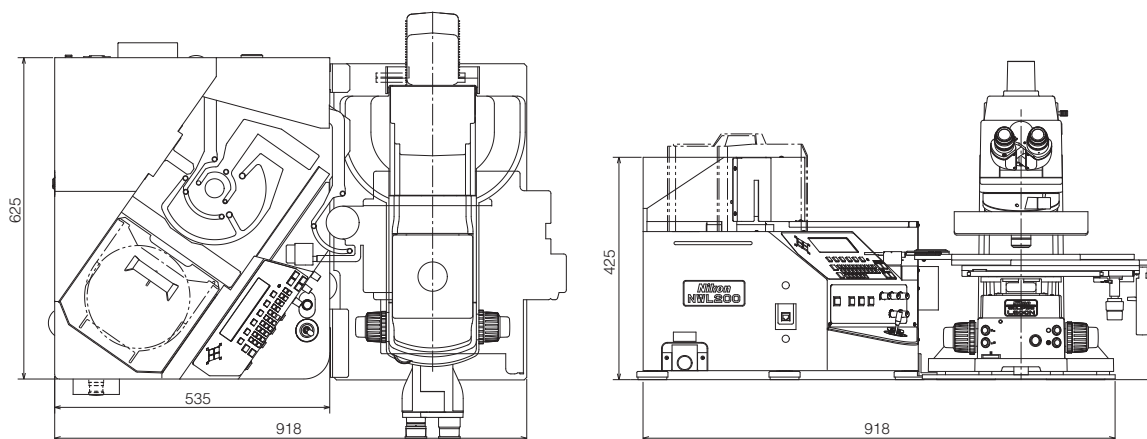
## Specifications

Compatible wafer size	Diameter	ø200 mm / ø150 mm <sup>*1</sup>
	Minimum Thickness (Standard)	300 µm
	Minimum Thickness (Option)	100 µm
Compatible carrier	SEMI 25 (26) wafer carrier <sup>*2</sup>	
Centering	Non-contact, photoelectric sensors	
Notch/orientation flat detection	Non-contact, photoelectric sensors	
Operation/display section	Wafer slot buttons / interactive LCD interface	
External dimensions (WxDxH)	535 x 626 x 350 mm	
Weight	50 kg	
Safety standards	Electrical safety: CE mark compatible SEMI: S2-0706, S8-0307, F47 compatible Laser safety: FDA Class 1	
Utilities	Power supply: AC 100-240 V, 50/60 Hz, 1.5 A-0.7 A Vacuum: -80 kPa Connection tube diameter: ø6 mm	

<sup>\*1</sup>: For ø125 mm wafers and non-silicon wafers, please contact Nikon. <sup>\*2</sup>: For other carriers, please contact Nikon.

<sup>\*</sup>Optional special wafer loader is also available. Please contact Nikon for detail.

## Dimensional diagram



Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. September 2021

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N.B. Export of the products\* in this catalog is controlled under the Japanese Foreign Exchange and Foreign Trade Law. Appropriate export procedures shall be required in case of export from Japan.

\*Products: Hardware and its technical information (including software)

**Class 1  
Laser Product**



**WARNING**

TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING THE EQUIPMENT.



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