



# NWL200 Series

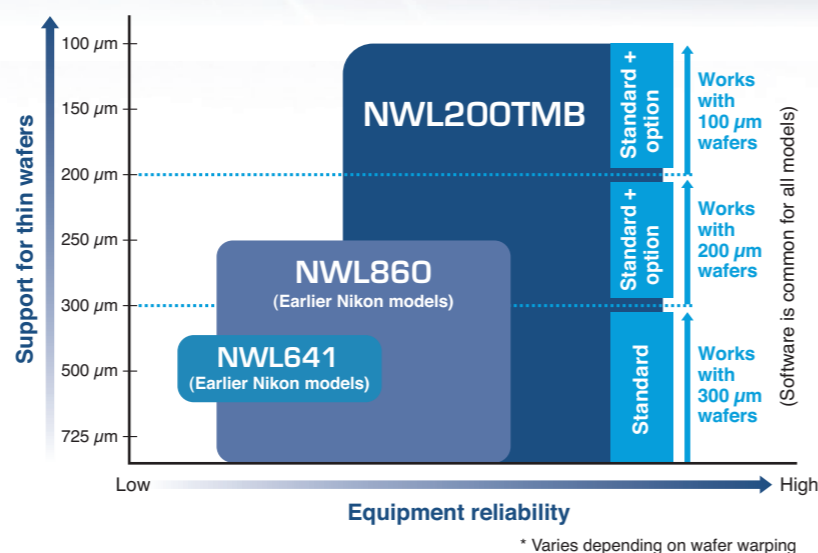
Wafer Loaders for IC Inspection Microscopes



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

## Highly reliable loading suitable for next-generation semiconductors

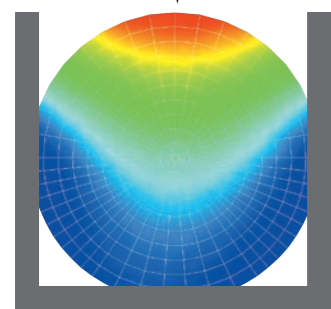
Nikon's outstanding proprietary technology makes the NWL200 Series the first lineup of wafer loaders for inspection microscopes capable of loading 100 μm thin wafers. The SEMI S2/S8 approved NWL200 Series can load ultra-thin wafers with a thickness of as little as 100 μm. This high level of safety and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



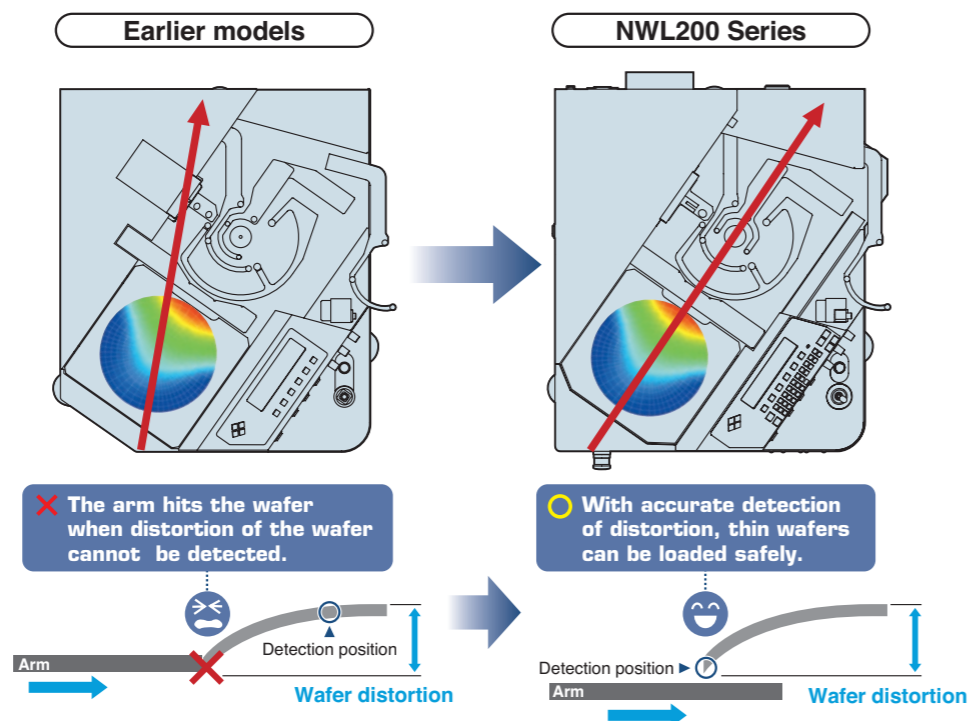
## Improved wafer-sensing functions

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°.

### Most distorted part

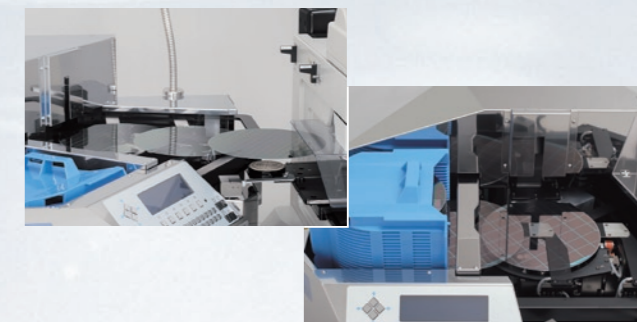


Simulation of wafer distortion



## 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.

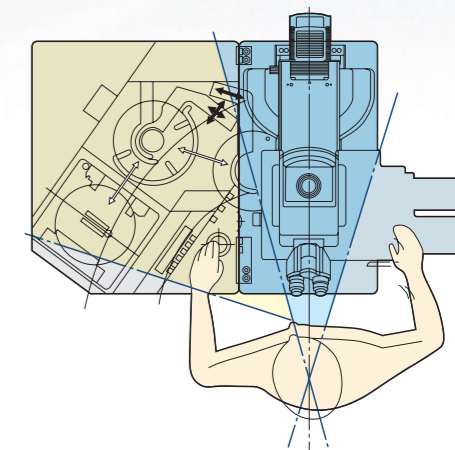


## High reliability

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

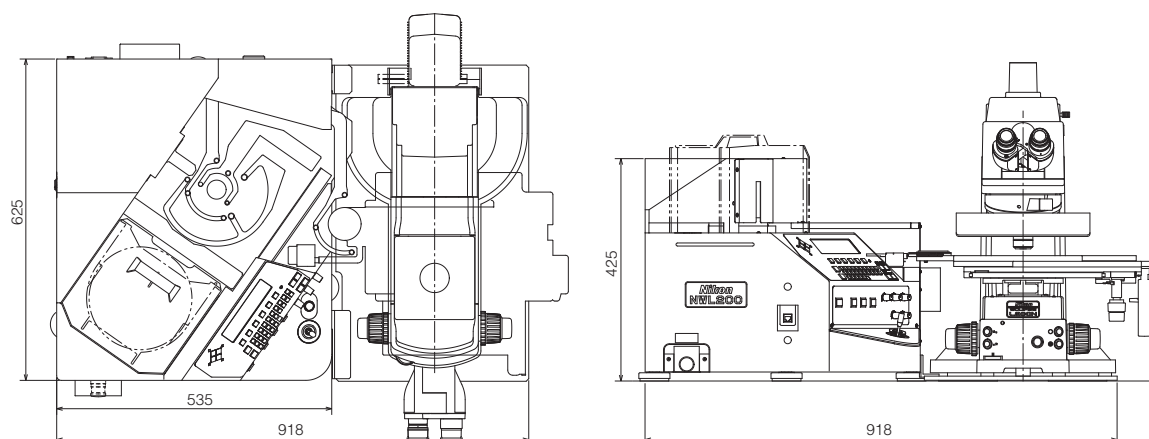


## Specifications

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

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

## Dimensional diagram



Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. March 2020 ©2008-2020 NIKON CORPORATION  
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\*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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