



NWL200 Series

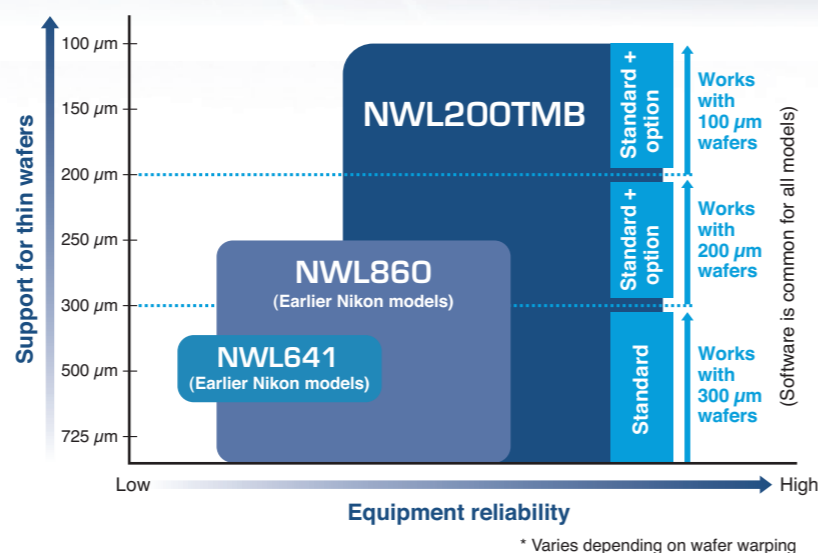
Wafer Loaders for IC Inspection Microscopes



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

Highly reliable loading suitable for next-generation semiconductors

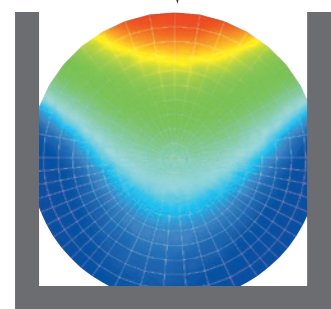
Nikon's outstanding proprietary technology makes the NWL200 Series the first lineup of wafer loaders for inspection microscopes capable of loading 100 μm thin wafers. The SEMI S2/S8 approved NWL200 Series can load ultra-thin wafers with a thickness of as little as 100 μm. This high level of safety and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



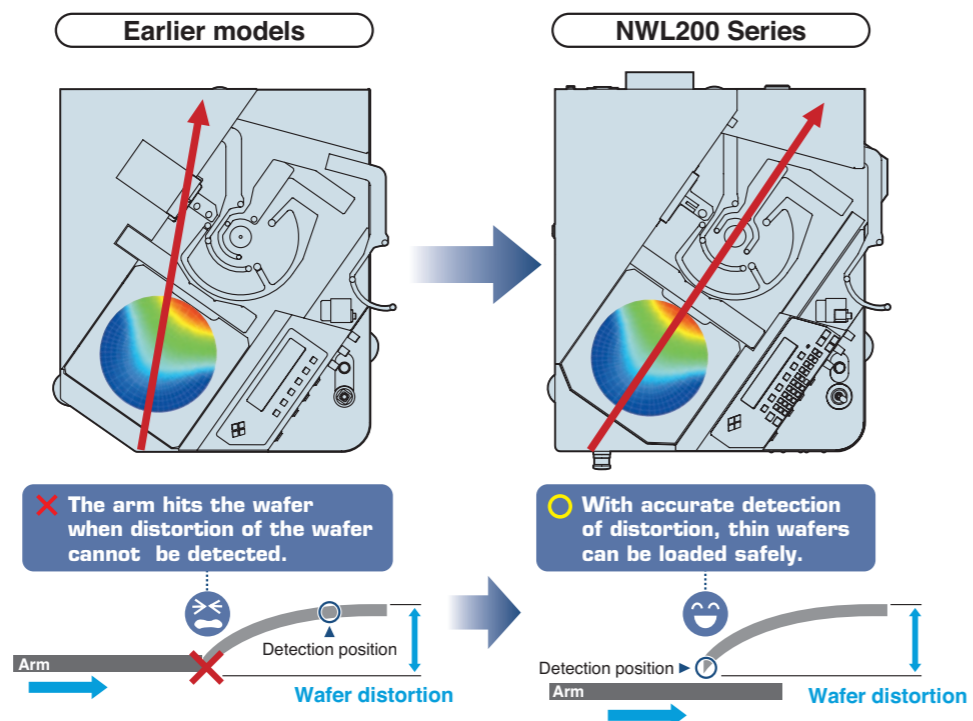
Improved wafer-sensing functions

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

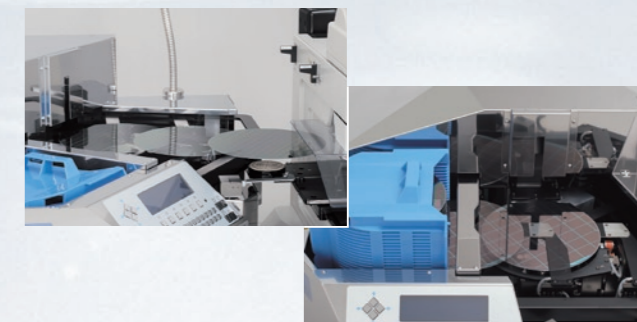


Simulation of wafer distortion



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.

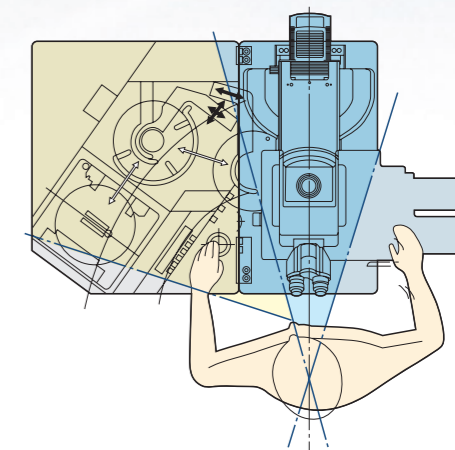


High reliability

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

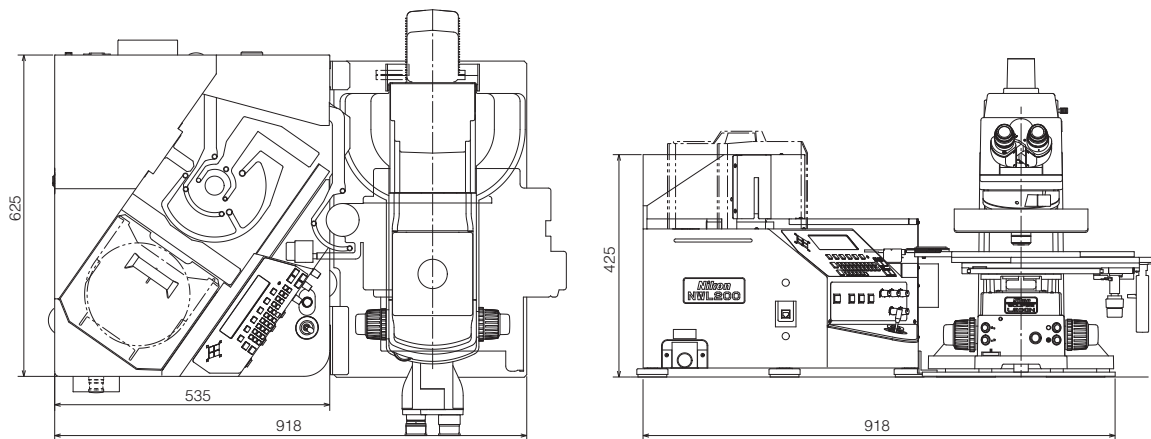


Specifications

Compatible wafer size	Diameter	ø200 mm / ø150 mm *1
	Thickness (standard)	300 µm
	Thickness (thin wafer option)	300-100 µm
Compatible carrier		SEMI 25 (26) wafer carrier *2
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

*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.



NIKON CORPORATION

Shinagawa Intercity Tower C, 2-15-3, Konan, Minato-ku, Tokyo 108-6290, Japan
phone: +81-3-6433-3701 fax: +81-3-6433-3784
<https://www.nikon.com/products/industrial-metrology/>

ISO 14001 Certified
for NIKON CORPORATION

ISO 9001 Certified
for NIKON CORPORATION
Industrial Metrology Business Unit

NIKON METROLOGY EUROPE NV

Geldenaaksebaan 329, 3001 Leuven, Belgium
phone: +32-16-74-01-00 fax: +32-16-74-01-03
E-mail: Sales.Europe.NM@nikon.com
<http://www.nikonmetrology.com/en-gb>

NIKON METROLOGY UK LTD.

UNITED KINGDOM phone: +44-1332-811-349 fax: +44-1332-639-881
E-mail: Sales.UK.NM@nikon.com

NIKON METROLOGY SARL

FRANCE phone: +33-1-60-86-09-76 fax: +33-1-60-86-57-35
E-mail: Sales.France.NM@nikon.com

NIKON METROLOGY GMBH

GERMANY phone: +49-6023-91733-0 fax: +49-6023-91733-229
E-mail: Sales.Germany.NM@nikon.com

NIKON INSTRUMENTS S.p.A.

ITALY phone: +39-055-300-96-01 fax: +39-055-30-09-93

NIKON METROLOGY, INC.

12701 Grand River Avenue, Brighton, MI 48116 U.S.A.
phone: +1-810-220-4360 fax: +1-810-220-4300
E-mail: Sales.NM-US@nikon.com
<http://www.nikonmetrology.com/en-us>

NIKON CANADA INC.

CANADA phone: +1-905-602-9676 fax: +1-905-602-9953

NIKON MEXICO- Metrology Showroom

MEXICO phone: +52 (442) 688 5067

E-mail: Sales.NM-MX@nikon.com

NIKON INSTRUMENTS (SHANGHAI) CO., LTD.

CHINA (Shanghai branch) phone: +86-21-6841-2050 fax: +86-21-6841-2060
(Beijing branch) phone: +86-10-5831-2028 fax: +86-10-5831-2026
(Guangzhou branch) phone: +86-20-3882-0551 fax: +86-20-3882-0580

NIKON INSTRUMENTS KOREA CO., LTD.

KOREA phone: +82-2-2186-8400 fax: +82-2-555-4415

NIKON SINGAPORE PTE LTD.

SINGAPORE phone: +65-6559-3651 fax: +65-6559-3668
E-mail: NSG.Industrial-sales@nikon.com

NIKON MALAYSIA SDN BHD

MALAYSIA phone: +60-3-7809-3688 fax: +60-3-7809-3633

PT. NIKON INDONESIA

INDONESIA phone: +62-267-864-3949 fax: +62-267-864-3950

E-mail: PTN.Instruments@nikon.com

NIKON SALES (THAILAND) CO., LTD.

THAILAND phone: +66-2633-5100 fax: 66-2633-5191

NIKON INDIA PRIVATE LIMITED

INDIA phone: +91-124-4688500 fax: +91-124-4688527

Официальный дистрибьютор Nikon
в России и странах СНГ

TOMAS TOKYO BOEKI GROUP

Россия, 127055, г. Москва, ул. Новолесная, д. 2
тел: +7 (495) 223-40-00 факс: +7 (495) 223-40-01
<http://www.tokyo-boeki.ru> email: systems@tokyo-boeki.ru