



ArF Immersion Scanner

NSR-S625E

Proven Solutions Through Evolution



An ArF Immersion Scanner that Achieves the Highest Productivity in the History of Nikon Semiconductor Lithography Systems

This is the NSR-S625E ArF immersion scanner, which inherits the proven *Streamalign* platform.

It delivers a throughput approximately 1.3 times that of its predecessor, the NSR-S622D, and has significantly improved its operational stability.

Incorporating an advanced inline Alignment Station (iAS), the NSR-S625E contributes to enhanced production efficiency for a wide range of semiconductor devices.

NSR-S625E

Performance

Resolution	≤ 38 nm
NA	1.35
Exposure light source	ArF excimer laser (193 nm wavelength)
Reduction ratio	1:4
Maximum exposure field	26 mm × 33 mm
Overlay	SMO ^{*1} : ≤ 1.7 nm, MMO ^{*2} : ≤ 2.5 nm
Throughput	≥ 280 wafers/hour (96 shots)

*1 Single Machine Overlay: machine-to-self overlay accuracy (NSR-S625E#1 to S625E#1)

*2 Mix and Match Overlay: machine-to-machine overlay accuracy (NSR-S625E#1 to S625E#2)

Key Features

• Streamalign Platform Stream Alignment

- Straight Line Auto-Focus enables quick wafer profile mapping and enhanced focus control.
- Enables increased alignment sites with minimal productivity impact using Five-Eye FIA

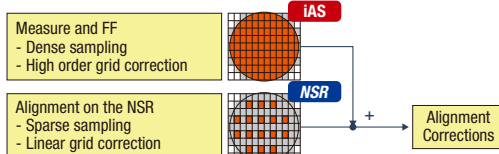
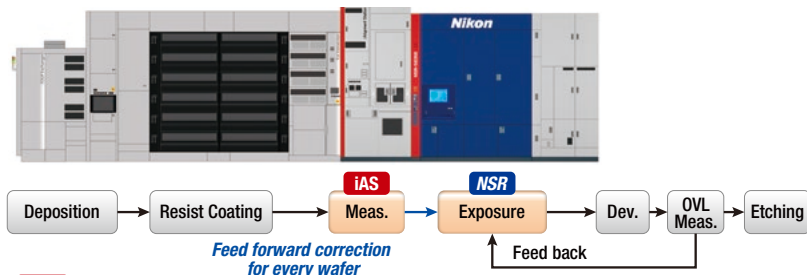
• Advanced inline Alignment Station (iAS)

Bird's Eye Control

- Hybrid encoder/interferometer system delivers optimal stage performance.

Modular² Structure

- Simplifies installation and maintenance by means of the modular design



An alignment station enables fast and ultra-precise wafer measurement and grid error correction without sacrificing the throughput of the lithography system. When connected inline to a lithography system, it is known as iAS, and allows multi-point alignment for every shot, dramatically enhancing the accuracy of the system without impacting its throughput.

CLASS 1 LASER PRODUCT



WARNING

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

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