



ArF Immersion Scanner

NSR-S620D

ENABLING THE NEXT GENERATION



ArF immersion scanner with new *Streamalign* platform enables rapid production ramps required for 32 nm, and provides extendibility to 22 nm applications.

The NSR-S620D incorporates three newly developed technologies — Bird's Eye Control, Stream Alignment, and the Modular² Structure — to make it the optimal immersion scanner for double patterning. The NSR-S620D design builds upon the unique Tandem Stage and local fill technologies employed in the Nikon NSR-S610C, the world's first ArF immersion scanner for 45 nm node volume production.

NSR-S620D

Performance

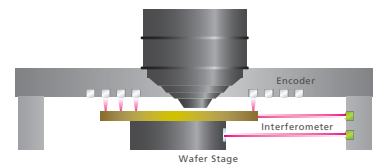
Resolution	≅ 38 nm
NA	1.35
Exposure light source	ArF excimer laser (193 nm wavelength)
Reduction ratio	1:4
Maximum exposure field	26 mm × 33 mm
Overlay	≅ 3 nm
Throughput	≅ 180 wafers/hour (300 mm wafer, 125 shots)

Main Characteristics of the *Streamalign* Platform

• Bird's Eye Control

Enabling superior yield

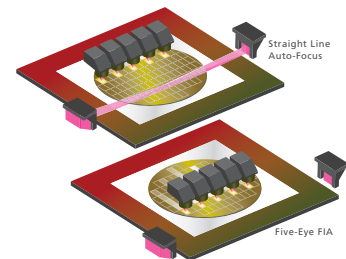
- Hybrid encoder/interferometer system delivers optimal stage performance.
- Dramatically improves accuracy and stability.
- Provides superior focus control.
- Targeting 2 nm overlay capabilities.



• Stream Alignment

Enabling optimal affordability

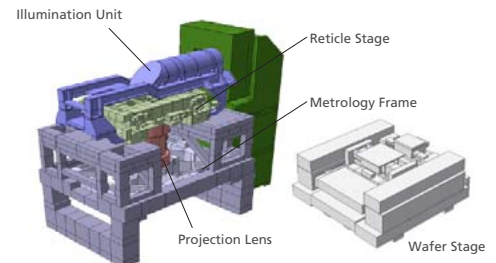
- Straight Line Auto-Focus generates a dense map of the wafer surface to enhance focus control (using wider AF beam span).
- Enables increased alignment sites with minimal productivity impact using Five-Eye FIA.
- Greatly reduces wafer overhead time.
- Targeting throughput up to 200 wph.



• Modular² Structure

Enabling rapid production ramps

- Simplifies maintenance by the modular design.
- Provides optimal uptime with modular design and individual components replacement.
- Extendible platform enables multigenerational use.



CLASS 1 LASER PRODUCT



WARNING

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

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ISO 9001
BUREAU VERITAS
Certification



This product was developed and manufactured in the factory certified under ISO 9001.