KrF Scanner

NSR-S220D

Proven Solutions Through Evolution
Employs Stream lign Platform for Improved Accuracy and Productivity

The NSR-S220D KrF scanner realizes throughput of more than 230 WPH and high accuracy of below 6 nm MMO.

The extendible Stream lign platform contributes to stable volume manufacturing of multigenerational cutting-edge devices and to reducing the cost of ownership.

### Performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>≤ 110 nm</td>
</tr>
<tr>
<td>NA</td>
<td>0.82</td>
</tr>
<tr>
<td>Exposure light source</td>
<td>KrF excimer laser (248 nm wavelength)</td>
</tr>
<tr>
<td>Reduction ratio</td>
<td>1:4</td>
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<tr>
<td>Maximum exposure field</td>
<td>26 mm × 33 mm</td>
</tr>
<tr>
<td>Overlay</td>
<td>SMO<em>1: ≤ 3 nm, MMO</em>2: ≤ 6 nm</td>
</tr>
<tr>
<td>Throughput</td>
<td>≥ 230 wafers/hour (96 shots)</td>
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</tbody>
</table>

*1 Single Machine Overlay: machine-to-self overlay accuracy (NSR-S220D#1 to S220D#1)

*2 Mix and Match Overlay: machine-to-machine overlay accuracy (NSR-S220D#1 to S220D#2)

### Key Features of the Stream lign Platform

**Bird's Eye Control Enabling superior yield**
- Hybrid encoder/interferometer system for wafer stage position measurements delivers optimal stage performance.
- Use of 2D encoders for reticle stage position measurements delivers measurements of the stages that are insensitive to air fluctuations.
- Dramatically improves accuracy and stability.
- Provides superior focus control.
- Improved overlay capabilities of 3 nm or less

**Stream Alignment Enabling optimal affordability**
- Straight Line Auto-Focus generates dense map of the wafer surface to enhance focus control (using a wide AF beam span).
- Enables increased alignment sites with minimal productivity impact using Five-Eye FIA.
- Greatly reduces wafer overhead time.
- Throughput capabilities of 230 WPH or more

**Modular Structure Enabling rapid production ramps**
- Modular design enables efficient installations and simplifies maintenance.
- Provides optimal uptime with modular design and replacement of individual components.
- Extendible platform enables multigenerational use.

*WARNING* FOR YOUR SAFETY: TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT.