



FPD Lithography System

FX-6AS

Gen 6 Plate FPD Lithography System with
the Highest Level of Resolution: 1.2 μm



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The FX-6AS produces leading edge small-and-medium-sized high-definition panels from Gen 6 plates. The combination of the newly-developed projection lens with the existing scanner method enables the highest level of resolution of 1.2 μm using a binary mask, improved productivity and high overlay accuracy.

Key Features

• Multi-lens System

The FX-6AS features the multi-lens system consisting of multiple projection lenses. This design enables a wide exposure field and excellent resolution.

• High Resolution

Nikon has developed a new projection lens with a high NA that has further advanced the evolution of the previous model. The FX-6AS employs an i-line light source which has a track record in high volume production, and an innovative focus correction system that was developed for the FX-68SH/68S. These enable the high volume production of panels with a high resolution of 1.2 μm (L/S) using a binary mask, while ensuring high CD uniformity over the entire surface of Gen 6 plates.

• High Overlay Accuracy

High overlay accuracy is realized by using a new projection lens with reduced aberration in combination with highly accurate measurement and position control performance of the previous model.

• High Throughput

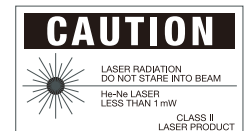
The FX-6AS achieves a high resolution of 1.2 μm with the same exposure field as the previous model. It also provides a high throughput of 85 plates per hour due to increased illuminance resulting from optimization of the illumination system, while enabling 4-scan on a Gen 6 plate.

• Stable Exposure Performance

The FX-6AS employs a variety of calibration functions from the previous model, providing stable exposure performance during operation.

Performance

| | |
|--------------------------|--|
| Resolution (L/S) | 1.2 μm (i-line) |
| Projection magnification | 1:1 |
| Overlay | $\leq \pm 0.23 \mu\text{m}$ |
| Plate size | 1,500 mm \times 1,850 mm |
| Takt time | 42 s/plate Conditions: 1,500 mm \times 1,850 mm, 4 scans, i-line, 30 mJ/cm ² |



WARNING

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

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<https://www.nikon.co.jp/pec/>

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