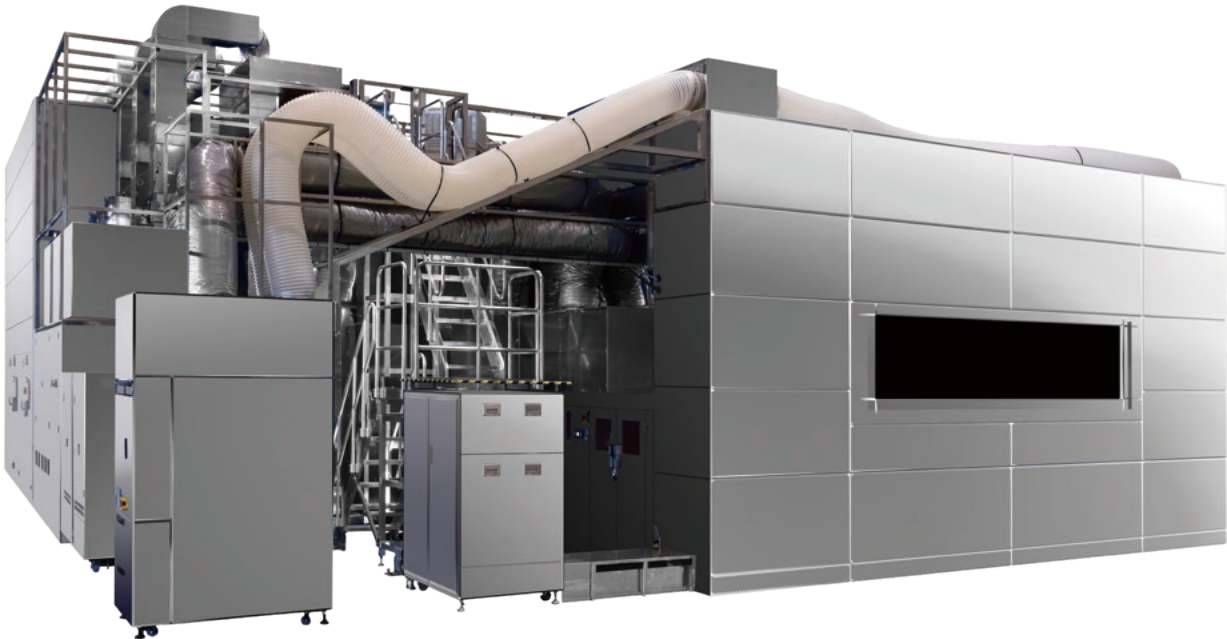




FPD Lithography Systems

FX-103SH/103S

Gen 10.5 Plate FPD Lithography Systems for
High-definition Panel Production



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FPD Lithography Systems FX-103SH/103S

By incorporating techniques from both the FX-67S2, which is ideal for the production of small-and-medium-sized high-definition panels, and the FX-86SH2, which excels in the production of TV panels, the FX-103SH/103S is optimized for manufacturing large-sized high-definition panels and achieves a shorter takt time than our conventional Gen 10 lithography system. The FX-103SH achieves a high resolution of 2.2 μm .

Key Features

• Multi-lens System

Both models feature the multi-lens system consisting of multiple projection lenses. This design enables a wide exposure field and excellent resolution.

• Short Takt Time

Incorporating the renewed exposure sequence and calibration sequence of the conventional model, the FX-103SH/103S realizes faster and higher accuracy exposure.

• High Resolution

In making the Gen 10.5 FPD lithography system, the FX-103SH has fully enhanced illumination and multi-lens systems, both of which use Nikon's proprietary resolution enhancement technique, originally developed for the FX-86SH2. The FX-103SH incorporates

a new auto-focus system that optimally corrects the measurement errors of mask bending and plate flatness. This enables a high resolution of 2.2 μm (L/S) while also ensuring a wide depth of focus.

• High Overlay Accuracy

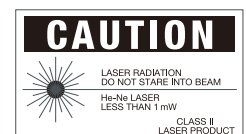
The position measuring system of the conventional model is renewed to improve measurement results, achieving a high overlay accuracy of $\pm 0.5 \mu\text{m}$.

• High Throughput

The FX-103SH/103S achieves a high throughput of 480 plates per hour for 65-inch panels, up 77 % compared with the conventional model, and 322 plates per hour for 75-inch panels.

Performance

	FX-103SH	FX-103S
Resolution (L/S)	2.2 μm (g+h+i-line)	3.0 μm (g+h+i-line)
Projection magnification	1:1	
Overlay	$\leq \pm 0.5 \mu\text{m}$	
Plate size	2,940 mm \times 3,370 mm	
Takt time	60 s/plate Conditions: 2,940 mm \times 3,370 mm, 4 scans, g+h+i-line, 30 mJ/cm ²	



WARNING

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

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