



FPD Lithography System

FX-68SH/68S

Gen 6 Plate FPD Lithography System for
Small-and-medium-sized High-definition Panel Production



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The FX-68SH/68S produces leading edge small-and-medium-sized high-definition panels from Gen 6 plates. The scanner method enables improved productivity, excellent resolution and high overlay accuracy. The FX-68SH also achieves high productivity and a high resolution of $1.2 \mu\text{m}^{\ast 1}$.

Key Features

• Multi-lens System

The FX-68SH/68S features the multi-lens system consisting of multiple projection lenses. This design enables a wide exposure field and excellent resolution.

• High Resolution

While succeeding our well-known multi-lens system, Nikon has developed a new i-line projection lens that enables higher resolution. In addition, we developed an innovative correction system that takes advantage of our multi-lens system in large plate exposure. In this correction system, the focal surface follows inclination changes in a plate. This enables the high volume production of panels with a high resolution of $1.2 \mu\text{m}^{\ast 1}$ (L/S) in Gen 6 plates.

• High Overlay Accuracy

The new interferometer system for position measurement is designed to realize high overlay accuracy by enhancing measurement accuracy and position control performance.

• High Throughput

With the new projection lens and stage, the FX-68SH/68S achieves a high throughput of 85 plates per hour by enabling 4-scan on a Gen 6 plate.

• Improved Exposure Performance

The FX-68SH/68S employs a variety of calibration functions developed utilizing our unique technology and provides enhanced exposure performance stability.

Performance

	FX-68SH	FX-68S
Resolution (L/S)	$1.2 \mu\text{m}^{\ast 1}$ (i-line)	$1.5 \mu\text{m}$ (i-line)
Projection magnification	1:1	
Overlay	$\leq \pm 0.27 \mu\text{m}$	
Plate size	1,500 mm × 1,850 mm	
Takt time	42 s/plate Conditions: 1,500 mm × 1,850 mm, 4 scans, i-line, 30 mJ/cm ²	

^{\ast 1} When using a phase shift mask



WARNING

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

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<https://www.nikon.com/business/fpd/>

Nikon Corporation
Precision Equipment Group
FPD Lithography Business Unit
Sales Department

Shinagawa Intercity Tower C, 2-15-3, Konan, Minato-ku, Tokyo 108-6290, Japan
Tel: +81-3-6433-3641

Nikon Precision Korea Ltd.

2, Singal-ro 124beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do, 16968 Korea
Tel: +82-31-288-5601

Nikon Precision Taiwan Ltd.

3F.-1, NO.28, Taiyuan Street, Zhubei City, Hsinchu County 302, Taiwan, R.O.C.
Tel: +886-3-552-5888

Nikon Precision (Shanghai) Co., Ltd.

11-12F, Tower 5, Crystal Plaza No. 36, Ping Jia Qiao Road, Pudong New District, Shanghai 200126, China
Tel: +86-21-5899-0266