FPD Lithography Systems

FX-86SH2/86S2

Gen 8 Plate FPD Lithography Systems for Large Panel Production
Gen 8 Plate FPD Lithography Systems for Large Panel Production

FPD Lithography Systems FX-86SH2/86S2

The FX-86SH2/86S2 incorporates techniques from both the FX-67S, which is ideal for high-definition panel production, and our Gen 10 lithography system, which supports ultra-large plates, enabling high-definition large panel production. The FX-86SH2/86S2 achieves reduced takt time compared with previous Gen 8 lithography systems. The FX-86SH2 also enables 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.

- **High Throughput**
  2,200 mm × 2,500 mm plate size:
  - 587 panels/hr (46-inch panels)
  - 378 panels/hr (55-inch panels)

- **High Resolution**
  The multi-lens system paired with the proprietary Nikon focus control system ensures excellent resolution across the entire plate. The FX-86SH2 achieves a high resolution of 2.2 μm (L/S) while also ensuring a wide depth of focus.

- **High Overlay Accuracy**
  The increased number of interferometer measurement axes and the newly designed measurement system have led to improved measurement stability and a high overlay accuracy of ±0.5 μm.

- **Improved Exposure Performance**
  The FX-86SH2/86S2 employs a variety of calibration functions developed utilizing our unique technology and provides enhanced exposure performance stability.

![Resolution and Projection Magnification Table](resolution_table.png)

### Performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>FX-86SH2</th>
<th>FX-86S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution (L/S)</td>
<td>2.2 μm</td>
<td>3.0 μm</td>
</tr>
<tr>
<td>Projection magnification</td>
<td>1:1</td>
<td>1:1</td>
</tr>
<tr>
<td>Overlay</td>
<td>±0.5 μm</td>
<td>±0.5 μm</td>
</tr>
<tr>
<td>Maximum plate size</td>
<td>2,200 mm × 2,500 mm</td>
<td>2,200 mm × 2,500 mm</td>
</tr>
<tr>
<td>Takt time</td>
<td>49 sec./plate</td>
<td>Conditions: 2,200 mm × 2,500 mm, 4 scans, g+h+i-line, 30 mJ/cm²</td>
</tr>
</tbody>
</table>

**WARNING**

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

All of the products in this brochure are under export restriction. The export of these products is controlled by Japanese Foreign Exchange and Foreign Trade and International export control regime. They shall not be exported without authorization from the appropriate government authorities.

Performance and equipment are subject to change without any notice or obligation on the part of the manufacturer. Products and brand names are trademarks or registered trademarks of their respective companies. March 2019

©2019 NIKON CORPORATION

**NIKON CORPORATION**
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  Fax: +81-3-6433-3758

**NIKON PRECISION INC.**
1399 Shoreway Road, Belmont, CA 94002-4107, U.S.A.
Tel: +1-(650)-508-4674  Fax: +1-(650)-508-4600

**NIKON PRECISION EUROPE GmbH**
Robart-Busch-Strasse 11, D-63225 Langen, Germany
Tel: +49-6103-973-0  Fax: +49-6103-973-333

**NIKON PRECISION KOREA LTD.**
2, Singil-ro 134beon-gil, Geungjeong-gu, Yongin-si, Gyeonggi-do, 16968 Korea
Tel: +82-31-288-5601  Fax: +82-31-288-5609

**NIKON PRECISION TAIWAN LTD.**
3F No. 28, Tai Yuan Street, Chu Pei City, Hsin Chu Hsien, Taiwan
Tel: +886-3-552-5888  Fax: +886-3-552-5858

**NIKON SINGAPORE PTE LTD.**
Precision Division
60 Anson Road, #09-01 Mapletree Anson, Singapore 079914
Tel: +65-6559-3618  Fax: +65-6559-3665

**NIKON PRECISION SHANGHAI CO., LTD.**
RM. 601 Xin Jin Qiao Tower, No. 28 Xin Jin Qiao Road, Pudong New District, Shanghai 201206, China
Tel: +86-21-5899-0266  Fax: +86-21-5899-1660

[http://www.nikon.co.jp/pec](http://www.nikon.co.jp/pec)