

SF-100 XPRESS



Small Lines at a Great Price

Affordable, Custom Microlithography for Patterning Features as Small as 1 Micron

Since its introduction in January, 2009, the **SF-100 XPRESS** has become the leading maskless lithography system for researchers who need advanced microlithography capabilities that are competitively priced. Based on the wildly successful **SF-100 XTREME** system, the **SF-100 XPRESS** offers you access to many features that are found only on large, expensive and complicated laser writers. By providing a fully customizable system, you can purchase only those capabilities that are needed now and then upgrade the system later at your site, when needs change and budgets become available. All of these features are available on a platform that is field proven, easy to use, and requires only minimal maintenance.

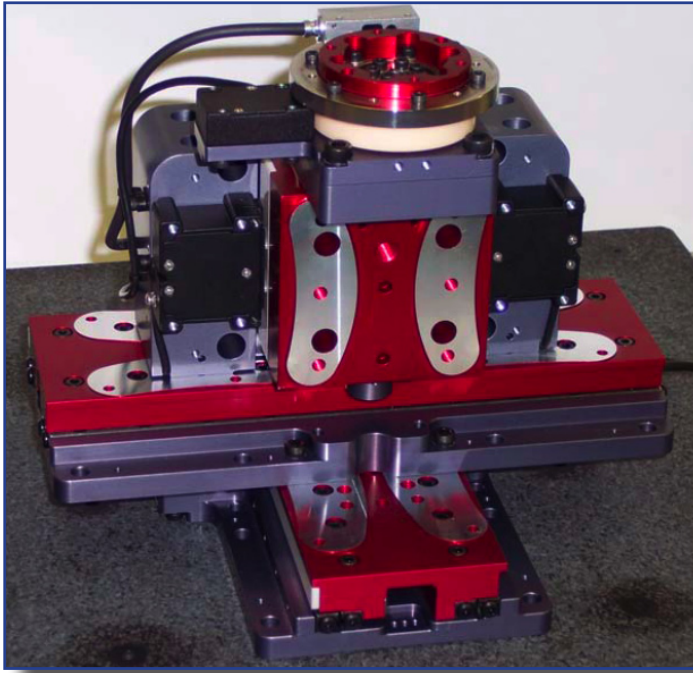


The SF-100 XPRESS Offers Many Standard Features that Provide Extraordinary Benefits

- Mercury arc lamp provides standard g-, h-, and i-line energies for compatibility with most commercial photoresists, polyimides, and SU8. Ensures low operational cost, typically less than \$2000 per year.
- 6 position filter wheel for choosing wavelength spectra specific to your process.
- Field proven optical design integrated with patented Smart Filter Technology.
- Integrated CCD camera for in-line substrate viewing, supporting standard optical functions, such as Auto Focus and Level to Level Alignment.
- Fully automated XYZ stage provides 1 button operation and auto stitching for large substrates.
- Labwindows™ based software integrates all systems functions, while providing an open platform for software customization and integration with other systems.
- Labwindows™ based Vision Developers Module provides the basis for all camera functions on the system, ensuring reliability and ease of customization.
- Full field upgradability to the **SF-100 XTREME** maskless lithography system.
- Rapid prototyping of new designs and ideas without the need for costly photomasks.
- IMP's legendary customer service, engineering, and support services ensure your success.
- Complete 1 year warranty, including customer training at system witness and at the customer site.

SF-100
XPRESS

Piezo Electric Stage Technology Ensures Your Success



The **SF-100 XPRESS** performance is tightly tied to the ability of the stage to accurately position the substrate. Piezo Electric (PE) technology offers the user exceptional precision on a cost effective platform. Stages are available for 100mm, 150mm, or 200mm XY travel. All stages come with a 25mm travel Z stage, The optional theta stage is available for level to level alignment and processing.

Typical specifications include:

	<i>X Axis</i>	<i>Y Axis</i>	<i>Z Axis</i>	<i>R Axis</i>
<i>Travel</i>	150mm	150mm	25mm	360 degrees
<i>Resolution</i>	4.88nm	4.88nm	4.88nm	0.03 arc-sec
<i>Accuracy</i>	+/-1 um	+/-1 um	N/A	N/A
<i>Repeatability</i>	+/-350nm	+/-350nm	+/-350nm	+/-1 arc-sec

Here's a Sampling of What an SF-100 XPRESS Can Do for You!

- The **SF-100 XPRESS** will save you money:
 - Each system includes a personal computer, so you do not need to provide your own PC.
 - Low cost lamps eliminate the need to purchase expensive laser light sources. These lamps are the only consumable on the system.
 - Changing feature sizes requires only a different reduction lens, not an entire new set of optics and laser.
 - No spare parts are needed, due to the field proven inherent system reliability.
- Full area exposures are standard. You can expose any size features over the entire area of the stage movement, providing complete exposure capabilities over large areas. For example, if you have a 150mm x 150mm XY stage, you can expose 1 micron patterns over the full 150mm x 150mm area. Larger stages support complete exposures over larger substrates, even with small minimum features.
- Changing wavelengths is easy and low cost. Add your specific filters to the filter wheel, using standard 1" round optical filters, and you are off and running. Changing the filters requires a mouse click and a few seconds for the filter wheel to index. No need for changing lasers or other system optics.
- SU8 can be processed with the standard system configuration. No additional costs or set up time for different optics or lasers.
- Thick resist processing is a snap. Up to 1 millimeter thick resists have been processed on **SF-100 XPRESS** systems. All thick resist processes can be performed in single exposure step, without the need for complicated and slow Z stage movement.
- Process your samples quickly, due to the high throughput offered by our multipixel exposures. These throughput advantages become very significant as your minimum feature size approaches 1 micron.
- True 3D exposures are available, using single exposure techniques. We've been patterning curved and not-flat substrates for almost a decade, without the need to use Z movement or other complicated mechanisms.

And, finally, you get all of the above with an extensive customer support package that includes multiple opportunities for customer training, system qualification, and process development support. Add in our remote access software to provide local support anytime via a directly link to our entire engineering staff, options for extended warranties, and other customer specific maintenance programs, and you are guaranteed success with your **SF-100 XPRESS** maskless lithography system.

Contact your local customer service representative for more information on the **SF-100 XPRESS**.

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