



## Full Featured & Versatile Maskless Microlithography



### Everything You Need to Pattern Sub-Micron Features

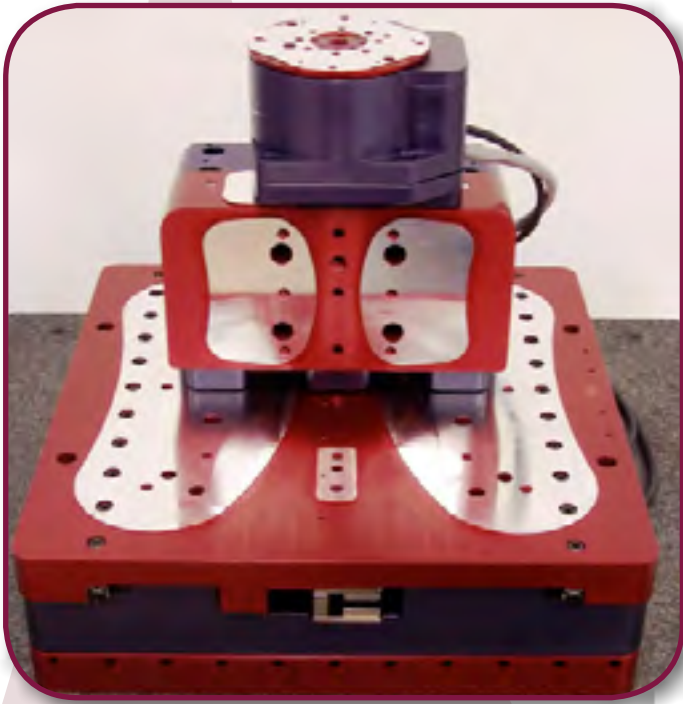
If you need a complete maskless lithography system to do advanced research or photomask fabrication, look no further than the SF-100 LIGHTNING+. This system comes with everything you need to do high precision, quick turnaround maskless photoresist patterning. Through advanced system design, important process variables such as exposure wavelength, pixel size and exposure energy level are easily chosen by the user so the system can work within your existing process and be compatible with your existing materials.



### The SF-100 LIGHTNING+ Comes Complete with Many Standard Features

- High powered LED light source provides standard wavelength energies for compatibility with most commercial photoresists, polyimides, and SU8.
- Our patented, field proven Smart Filter Technology is the heart of our system, using a TI DLP® chip to generate patterns.
- Combining our high resolution CCD camera with National Instruments' Vision Development® software package, functions such as autofocus, character recognition, and level to level alignment are easily provided and tailored to your needs. Use our fully integrated XYZ theta stage to stitch together images to make large die or multiple copies of the same die on a single substrate.
- Fully integrated vibration isolation table ensures repeatable and consistent process results, down to 0.6 micron in size.
- All stages come with XYZ and theta as standard. Theta provides full 360 degree travel and Z travel is a minimum of 25mm, allowing you to run different substrates easily. X and Y stage sizes start at 100mm travel, allowing users who pattern small substrates to minimize their capital investment and avoid purchasing a stage that is too large for their needs.
- All 3 High Resolution reduction lenses are included with **fast switch optics**, so changing pixel size is a snap.
- Easy to use software provides an open platform for software customization and integration with other systems.
- Rapid prototyping of new designs and ideas without the need for costly photomasks. AMP's legendary customer service, engineering, and support services ensure your success.
- Complete two year warranty, including customer training at factory acceptance and at the customer site are included with each system purchase.

## Linear Motor Stage Technology Exceeds the Requirements of Your Process



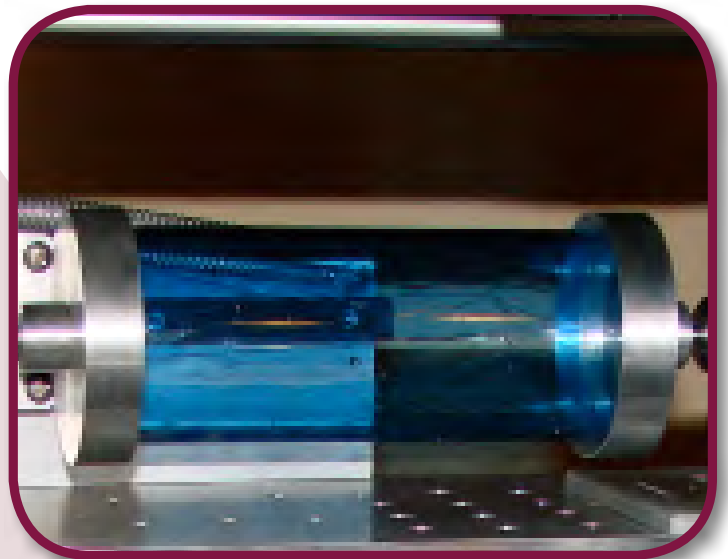
Beyond our proprietary optical design, the stage assembly is the most critical sub-assembly on the SF-100 LIGHTNING+. Stitching accuracy is critical to obtain acceptable process results and high performance of your devices. Our linear motor stage assembly offers high precision, robust design, and repeatability that will ensure very tight stitching accuracy day in and day out. Typical results from this stage include:

	X Axis	Y Axis	Z Axis	R Axis
<i>Travel</i>	150mm	150mm	25mm	360 degrees
<i>Resolution</i>	4.88nm	4.88nm	4.88nm	0.03 arc-sec
<i>Accuracy</i>	+/- 200nm	+/- 200nm	+/- 200nm	N/A
<i>Repeatability</i>	+/-50nm	+/-50nm	+/-75nm	+/-1 arc-sec

All stages are provided with Z travel of 25mm and R travel of 360 degrees. Standard XY travel sizes start at 100mm and increase to 300mm. Larger XY travel sizes can be quoted as options.

## Customize Your SF-100 LIGHTNING+ with These Available Options

- Need to pattern cylinders? Our rotational substrate stage is your answer. Pattern cylinders whose diameters range from a millimeter to several inches.
- AMP's Integrated Heater Option for the SF-100 LIGHTNING+ provides temperature variation at the substrate.
- Use our porous granite chucks for thin films and deformable substrates.
- Ensure your success over the long term through the use of our various maintenance agreements and extended product warranties.
- Integrate a cassette handler to provide cassette to cassette processing, allowing use of your system 24x7.



Contact us for more information regarding any Advanced Micro Patterning Product.

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