

## **Eulitha unveils new photolithography system “Phabler 100” for photonic patterning**

Villigen, Switzerland, Dec 12, 2013

[Eulitha AG](#), A Swiss based company specializing in novel nano lithography technologies, today announced the availability of a new photo-lithography system PhableR 100 for printing high resolution nano-structures, especially for research and development applications as well as pilot and low-volume production use. The system particularly targets the production of periodic patterns such as gratings and photonic crystals required in optics and photonics.

The PhablerR 100 system is based on the proprietary PHABLE (short for Photonics Enabler) photolithographic technology developed by Eulitha AG, which makes it possible to print high-resolution structures in a non-contact, proximity photolithography system. The resolution obtained with the “PhableR 100” is essentially the same as what is obtainable from a DUV projection lithography system, but without the complex and expensive optics and mechanics of such a system. For example, linear gratings with a half-pitch of 150nm can be printed with high uniformity with the new system. As an added advantage, the practically unlimited depth of focus of the image formed by the PhableR 100 system means that the high-resolution patterns can be printed with high uniformity even onto non-flat substrates, which are commonly encountered in photonics applications.

The PhableR 100 system can expose substrates with diameters up to 100mm using industry standard chrome-on-glass or phase-shifting masks. The mask and the substrate are loaded manually onto the system and the exposure process is controlled by an onboard computer. Standard i-line photoresists, both positive and negative tone, which are available from common vendors, can be used. Linear or curved gratings, 2D photonic-crystal type patterns with hexagonal or square symmetry can be printed with feature periods less than 300nm. The system may also be used like a standard mask-aligner in either proximity or contact mode to print micron-scale structures. Targeted applications include research and development projects in photonics, fabrication of gratings for optical diffraction and spectroscopy, light extraction patterns on LEDs, patterned sapphire substrates and color filters.

Harun Solak, CEO of Eulitha AG stated “we are proud to introduce a solution that will enable our customers to perform high resolution photolithography with a low-cost system for the first time. This equipment is a result of a long-term development effort at both the Paul Scherrer Institut and Eulitha.” The system is available for immediate demonstration at the Eulitha site in Switzerland. The PhableR 100 system will be presented at the 13<sup>th</sup> International Nanotechnology Exhibition which will take place between, January 29-21, 2013 in Tokyo, Japan. For more information please visit [www.eulitha.com](http://www.eulitha.com)

**Eulitha AG** is a spin-off company of the Paul Scherrer Institute, Switzerland. It specializes in the development of lithographic technologies for applications in photonics, biotech. It produces and markets nano-patterned samples and templates using its own PHABLE tools and state-of-the-art e-beam lithography systems. PHABLE is the brand name of its proprietary photolithography platform, which includes exposure tools and wafer patterning services.

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