



Microlight3D unveils Smart Print-UV, a new maskless lithography system equipped with UV light

Compatible with all standard microelectronic photoresists, including i-line resist SU-8

Grenoble, France, December 1, 2020 – Microlight3D, a specialty manufacturer of high-resolution micro-scale 2D & 3D printing systems for industrial and scientific applications, today unveils Smart Print-UV (SP-UV), a new maskless lithography system equipped with a UV light source. This new capability, a 385 nm LED source, means SP-UV is compatible with the most commonly used photoresists, including SU-8, which is indispensable for microfluidics applications. Developers can now choose from a broader variety of photoresist materials for semiconductor processing.

A key advantage of SP-UV lies in its optical projection technology. This gives users access to four different writing resolutions and combines writing precision with speed. Due to Microlight3D's 'quick release' objective-system, resolution can be changed within a mere two seconds.

"Microlight3D's SP-UV is bringing new capabilities to maskless lithography by enhancing this system's compatibility with a wider range of photoresist materials, while satisfying developer needs for versatility and affordability," said Denis Barbier, CEO of Microlight3D. "We are making it easier and quicker for lab-on-chip researchers and those in other fields – optoelectronics, MEMS, spintronics – to fabricate structures on large surfaces (120x120 mm²) at micrometric resolution. As the system is highly integrated to improve user experience, we expect the SP-UV to open up new market opportunities in microfluidics as well as small series production in various fields."

Equally desirable is SP-UV's objective lens range that has been carefully selected to allow for long working distance (up to 3cm). This means that SP-UV also operates with non-standard substrates, including those that are curved, such as an optical lens, flexible or thick. Competing models often have short working distances rendering them inadequate for handling non-flat substrates.

SP-UV's 385nm UV light source is coupled with a feedback camera for easy focusing, inspection and alignment procedures. As a new projection technology, the 385nm LED source combined with high-performance motorized stages allows developers to quickly carry out microstructure fabrication at micron-resolution levels.

Alignment accuracy and stitching-error are improved through the system's offer of a higher-grade motorized stage. Housed in a compact user UV-protective packaging that can be safely used in any indoor environment, SP-UV has one of the fastest writing speeds (up to 1000 mm²/min); making it twice as fast as competing brands at 6µm resolution and up to ten times faster at 15µm resolution.

Preliminary orders have been placed in France and Germany for delivery in February 2021.

About Microlight3D

Microlight3D is a specialty manufacturer of high-resolution micro-scale 2D & 3D printing systems. The company enables scientists and industrial researchers with new design needs to produce the most demanding precision micro parts in any geometric or organic shape, with a flawless finish. By combining 2D & 3D microprinting techniques, Microlight3D offers customers more flexibility in creating larger complex parts. It aims to provide faster and more complex micro-fabrication systems for tomorrow's applications. Microlight3D's equipment is designed for application in microoptics, microfluidics, microrobotics, meta-

materials, cell biology and microelectronics. Microlight3D was founded in 2016, following 15 years' research and development of its 3D microprinting technology at Grenoble Alpes University (UGA). The company is located in Grenoble, France.
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