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**3D-MICROMAC RECEIVES ORDER FOR NEW MICROMIRA EXCIMER LASER LIFT-OFF SYSTEM FROM DPIX FOR X-RAY SENSOR MANUFACTURING**

*More than 400 laser systems from 3D-Micromac installed worldwide; dozens of excimer laser systems used for display and microelectronics manufacturing*

**Chemnitz, Germany, May 16, 2018**—3D-Micromac AG, a leading supplier of laser micromachining and roll-to-roll laser systems for the photovoltaic, medical device and electronics markets, today announced it has received an order for the company’s new microMIRA excimer laser lift-off (LLO) system from dpiX, a leading manufacturer of high-resolution digital sensors. The microMIRA system will be shipped to dpiX’s fab in Colorado Springs, Colo., where it will provide laser lift-off processing from Gen 4.5 glass substrates used in manufacturing X-ray sensors for medical, industrial and military applications.

3D-Micromac’s new microMIRA laser lift-off system provides highly uniform, force-free lift-off of flexible layers on large surface areas and at high speeds (up to 500 wafers/hour and up to 200 sheets/hour on Gen 6 substrates depending on the application). The system is built on a highly customizable platform that can incorporate different laser sources, wavelengths and beam paths to meet each customer’s unique requirements.

The microMIRA system can be used for a variety of applications, such as device lift-off from glass and sapphire substrates in semiconductor manufacturing as well as organic light emitting diode (OLED) and microLED display manufacturing. Additional applications include laser annealing and crystallization for surface modification, including printed electronics such as near-field communication (NFC) sensors and tags.

“In evaluating various laser approaches for our manufacturing needs, 3D-Micromac’s microMIRA laser lift-off system provided the best possible combination of cost of ownership, throughput and uniformity results,” stated Frank Caris, President and CEO of dpiX. “We look forward to installing this system in our production fab for use in manufacturing our latest silicon-based X-ray sensor arrays.”

In addition to its high configurability, speed and uniformity, 3D-Micromac’s microMIRA laser lift-off system provides many other benefits, including:

- Force-free and extremely selective laser processing
- No damage due to thermo-mechanical effects
- Low production costs, including the ability to recycle/reuse carrier substrates
- Elimination of costly and polluting wet chemical processes
- Easy integration of adjacent manufacturing steps for greater fab productivity

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“Our new microMIRA laser lift-off system takes advantage of the extensive process and applications knowledge we have built up from the more than 400 3D-Micromac laser systems installed and in use worldwide to date, including dozens of excimer laser systems used for display and microelectronics manufacturing,” stated Uwe Wagner, 3D-Micromac’s chief technology officer. “We look forward to closer engagement with dpiX to explore new opportunities and applications that can benefit from our laser products, processes and expertise.”

3D-Micromac will showcase its suite of laser processing systems for display manufacturing, including the new microMIRA laser lift-off system, at the 55th SID International Symposium, Seminar and Exhibition, also known as Display Week 2018, being held May 20-25 at the Los Angeles Convention Center. Attendees interested in learning more about these products are invited to visit the company’s booth #631. More information on microMIRA can also be found at <http://3d-micromac.com/laser-micromachining/products/micromira-laser-lift-off-system/>.

**About dpiX**

dpiX is the #1 supplier of digital X-ray imaging sensors for medical, military and industrial applications. The company is headquartered in Colorado Springs where we established a 300,000 sq. ft. state-of-the-art clean room production facility to allow for our rapid expansion. If you have ever had a digital X-ray taken, anywhere in the world, chances are 1 out of 2 that dpiX sensor technology was being used to acquire the image. For more information, visit our website at <http://www.dpix.com/>.

**About 3D-Micromac**

Founded in 2002, 3D-Micromac AG is the industry leader in laser micromachining, delivering powerful, user-friendly and leading-edge processes with superior production efficiency. We develop processes, machines and turnkey solutions at the highest technical and technological level. 3D-Micromac systems and services have been successfully implemented in various high-tech industries worldwide, including photovoltaic, semiconductor, glass and display industries, micro diagnostics, and medical technology. For more information, visit the company’s website at <http://www.3d-micromac.com>.

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