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New Orbotech Flex PCB Manufacturing Solutions Enable Future Generations of Advanced Electronics

Innovative roll-to-roll solutions for direct imaging and UV laser drilling increase yield, ease operation and overcome throughput and quality challenges

YAVNE, Israel, Dec. 1, 2020 /PRNewswire/ -- [Orbotech](#), a KLA (NASDAQ: KLAC) company, today announced two new roll-to-roll (R2R) manufacturing solutions for flexible printed circuit (FPCs), enabling the design and mass production of new generations of electronic devices, including 5G smartphones, advanced automotive and medical devices. Orbotech's innovative roll-to-roll solutions for direct imaging (DI) and UV laser drilling overcome many of the yield, throughput and quality challenges inherent in flex material manufacturing. Leveraging newly developed and field-proven technologies, the solutions facilitate high quality, cost-effective mass production of ultra-thin flexible printed circuits that are critical in advanced electronics.

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The two new series of solutions are the drum-based Orbotech Infinitem™ for R2R direct imaging, and the Orbotech Apeiron™ for flex R2R and sheet-by-sheet panel UV laser drilling.

The [Orbotech Infinitem](#) series:

- Uses Orbotech's new breakthrough DDI Technology™ (Drum Direct Imaging) for optimal material handling and high-speed imaging to deliver extremely high yield and throughput
- Delivers fine line structure and uniformity enabled by continuous exposure and high depth-of-focus (DoF) with Orbotech's Large Scan Optics (LSO) Technology™
- Is compatible with a wide range of resists and processes enabled by simultaneous multiwave exposure thanks to Orbotech's MultiWave Technology™
- Offers maximum efficiency and cleanliness as a one-box, minimal footprint solution with a highly intuitive, user-friendly GUI to ensure smooth operation

The [Orbotech Apeiron](#) series:

- Delivers high drilling quality and accuracy
- Uses Orbotech's Multi-Path Technology™ with two laser beams and four large scan area drilling heads that can drill in four locations simultaneously and optimize laser power usage
- Provides internal roll-to-roll using Orbotech's new Roll-Inside Technology™, which also results in a small footprint.
- Provides built-in beam validation tools for size, roundness and energy distribution with Orbotech's newly developed Continuous Beam Uniformity (CBU) Technology™
- Offers both roll-to-roll and sheet-by-sheet handling of thin flex cores with capacity to drill two panel sheets side by side for maximum drilling capacity

"Based on the insights gained from nearly 40 years of working with leading manufacturers around the world, Orbotech has created breakthrough technologies and solutions that turn designers' dreams into reality," said Yair Alcobí, President of the PCB division at Orbotech. "Orbotech Infinitem and Orbotech Apeiron build on our existing solutions for flex PCB manufacturing to solve the most pressing challenges faced by advanced flex PCB manufacturers today."

New and future advanced electronics with their light weight, smaller form factor and higher functionality increasingly employ delicate flex materials. Both of Orbotech's new solutions optimize the handling of the most delicate flex materials during direct imaging or UV laser drilling. and provide more flexibility to increase production with options for roll widths of 260mm and up to 520mm.

Additionally, PCB manufacturers gain significant efficiencies with the smaller footprint of both solutions: smaller clean rooms are required, production capacity per square meter is increased, and power consumption is reduced. These advances create the opportunity for greener flex PCB manufacturing.

For more information about the Orbotech Infinitem series, go to:

<https://www.orbotech.com/pcb/products/orbotech-infinitem-series>

For the Orbotech Infinitem product video: <https://youtu.be/CHG7mrPGhy4>

For more information about the Orbotech Apeiron series, go to:

<https://www.orbotech.com/pcb/products/orbotech-apeiron-series>

For the Orbotech Apeiron product video: <https://youtu.be/t65cgvPHyDQ>

About Orbotech Ltd.:

Orbotech Ltd., a KLA company, is a leading global supplier of yield-enhancing and process-enabling solutions for the manufacture of electronics products. Orbotech provides cutting-edge solutions for use in the manufacture of printed circuit boards (PCBs), flat panel displays (FPDs) and more. Orbotech's solutions are designed to enable the mass production of innovative, next-generation electronics and improve the cost effectiveness of existing and future electronics production processes. For more information, visit orbotech.com

About KLA:

KLA develops industry-leading equipment and services that enable innovation throughout the electronics industry. We provide advanced process control and process-enabling solutions for manufacturing wafers and reticles, integrated circuits, packaging, printed circuit boards and flat panel displays. In close collaboration with leading customers across the globe, our expert teams of physicists, engineers, data scientists and problem-solvers design solutions that move the world forward. Additional information may be found at kla.com (KLAC-P).

Forward Looking Statements: This press release contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements, including statements regarding the expected performance of the Orbotech Infinitem™ and the Orbotech Apeiron™ series of solutions and their expected operational, economic and environmental benefits, are subject to risks and uncertainties. Factors that may cause actual results to differ materially from those projected and anticipated in the forward-looking statements in this press release include delays in the adoption of new technologies (whether due to cost or performance issues or otherwise), the introduction of competing products by other companies or unanticipated technology challenges or limitations that affect the implementation, performance or use of Orbotech's and KLA's products, and other risk factors included in KLA's annual report on Form 10-K for the year ended June 30, 2020 and other filings with the Securities and Exchange Commission (including, without limitation, the risk factors described therein). KLA and Orbotech assume no obligation to, and do not currently intend to, update these forward-looking statements.



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