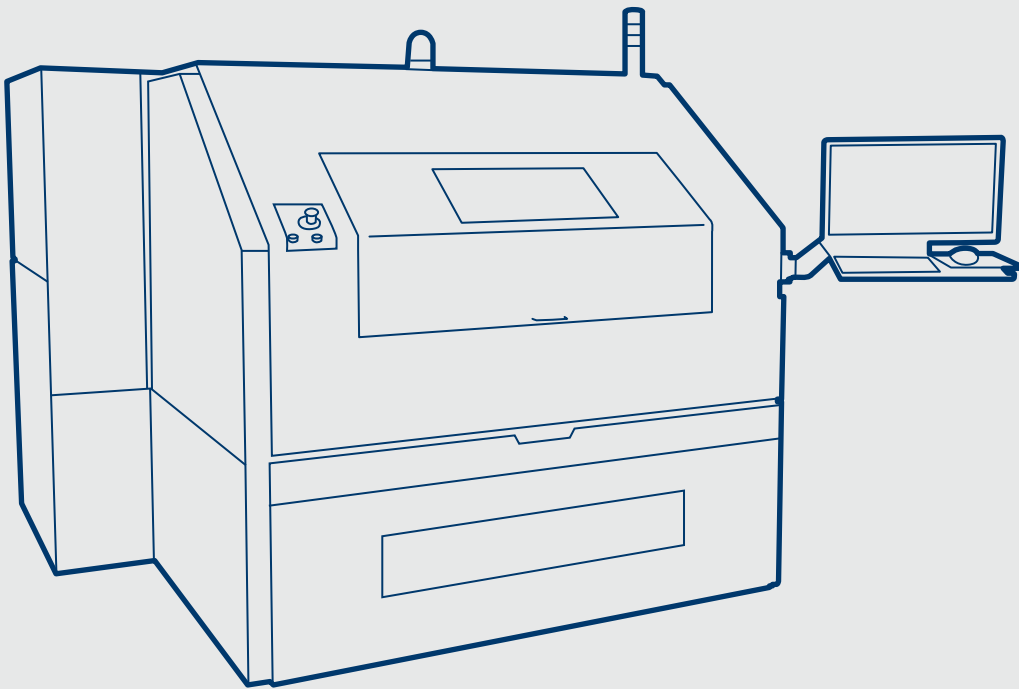


ORBOTECH APEIRON™ 800 SERIES

UV Laser Drilling for Flex PCB



ORBOTECH APEIRON™ 800 SERIES

Drill More. Drill Flex.

Orbotech Apeiron™ provides best in-class, high speed UV drilling for roll-to-roll (R2R) and sheet-by-sheet panel manufacturing of flexible printed circuits. Leveraging two new Orbotech technologies - Roll Inside Technology™ and Continuous Beam Uniformity (CBU) Technology™ - together with its field proven Multi-Path Technology™, Orbotech Apeiron enables manufacturers to achieve continuously high quality, high accuracy drilling of the smallest vias with maximum throughput. Orbotech Apeiron is designed for a wide variety of drilling applications including blind vias (BV), through hole vias (THV) and routing.



Benefits

High Throughput

- High speed drilling powered by Orbotech's field-proven Multi-Path Technology™
- ~100% laser pulse utilization with up to 4 drilling channels
- Large drilling area of 65mm x 65mm per head

Superior Drilling Quality and Accuracy

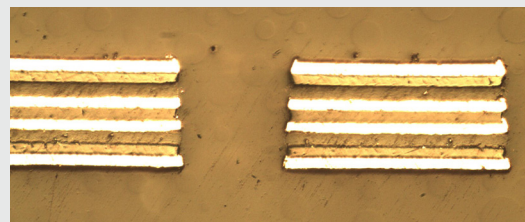
- Built-in beam validation tools for size, roundness and energy distribution with Orbotech's CBU Technology™
- Built-in automated accuracy tool enables registration accuracy down to $\pm 12\mu\text{m}$
- Multiple beam shapes for high quality, high throughput drilling

Optimized for Flex R2R

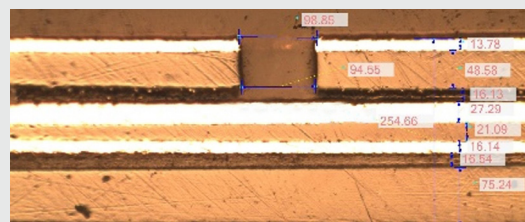
- Fully integrated, internal R2R solution enabled by Orbotech's proprietary Roll Inside Technology™
- Clean process with minimal handling damage
- Small total footprint [5.1m²]

Top Drilling Throughput for Flex Sheets

- Supports 2 x 260mm sheets drilled side by side
- Utilizes 4 drilling heads in parallel
- Sheet handling automation-ready



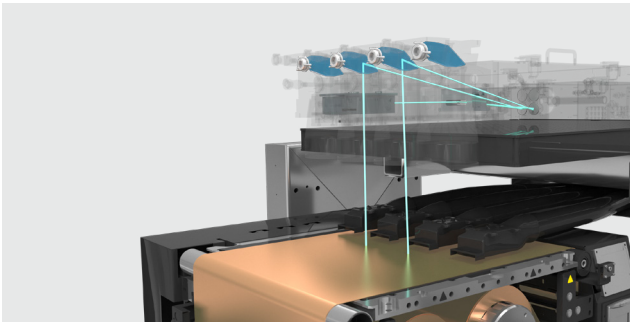
High quality through hole via in multi-layer flex



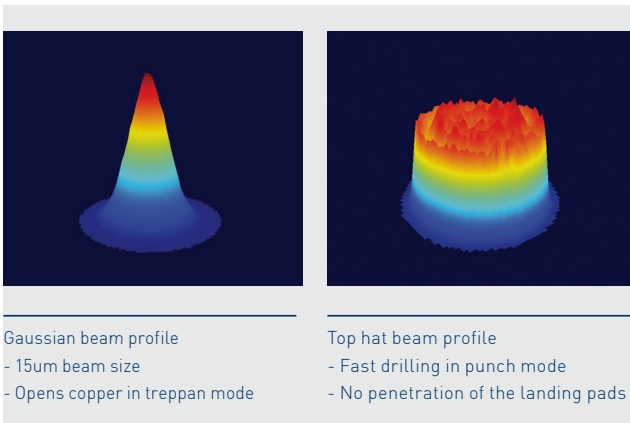
High quality blind via in multi-layer flex with adhesive

High Throughput

With ~100% laser pulse utilization and up to 4 drilling channels, Orbotech Apeiron maximizes throughput.

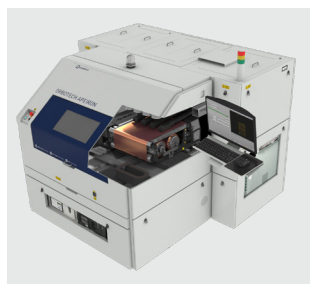
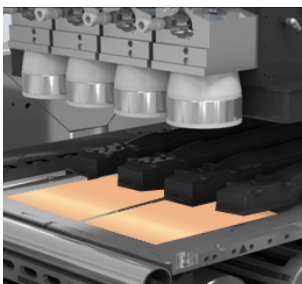


Multiple beam shapes for high throughput and high quality drilling.



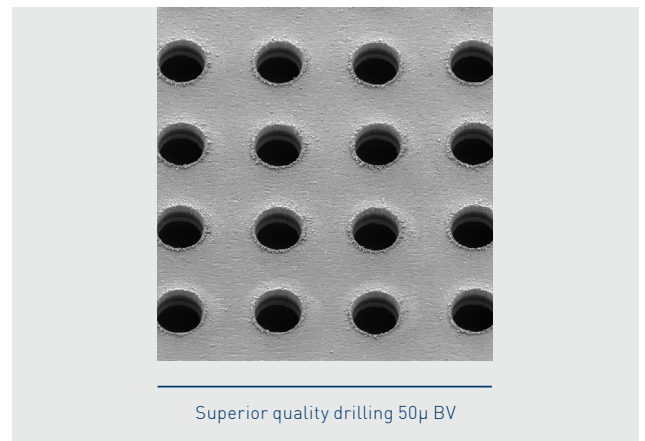
Designed for Efficient Flex Drilling

Orbotech's new, innovative Roll Inside™ technology makes Orbotech Apeiron an optimal solution for flex R2R drilling in a small 5.1m² footprint. Orbotech Apeiron supports 260mm and 520mm rolls and sheet panels.



Superior Quality Drilling

Optimized beam quality throughout the panel area with built-in beam validation tools for size, uniformity, roundness and energy distribution.



Outstanding Drilling Accuracy Down to ±12µm

Built-in, patented, accuracy tools enable online calibration of laser beam positioning. Via patterns are marked on an erasable plate and their position is measured in reference to the fixed black spots.

