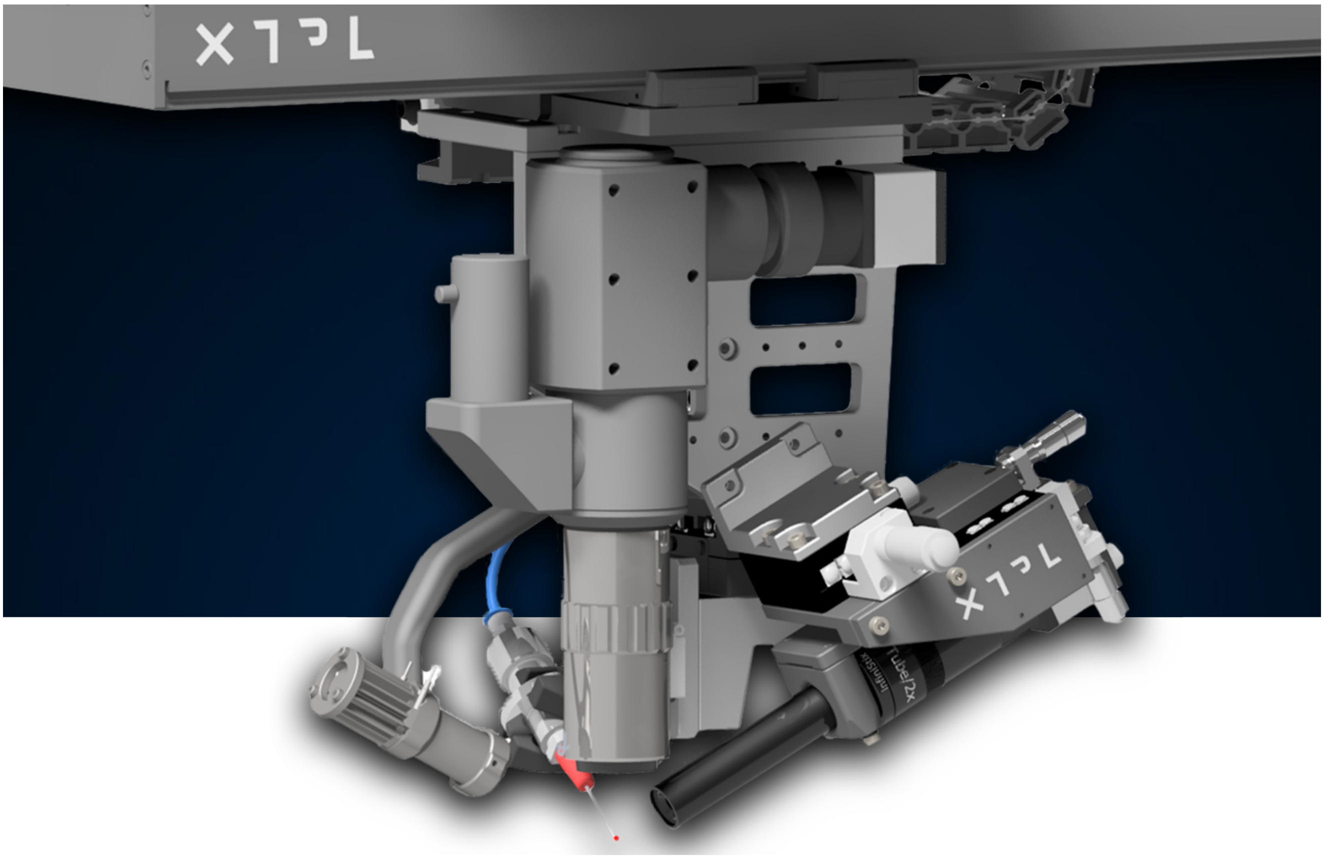
Powering the microelectronics
of tomorrow

PRODUCTS

Ultra-Precise Dispensing Systems



UPD Systems

- Precision and performance of Ultra-Precise Dispensing Technology
- Perfect fit for customer requirements due to modular architecture

Core **Core+** **Pro**

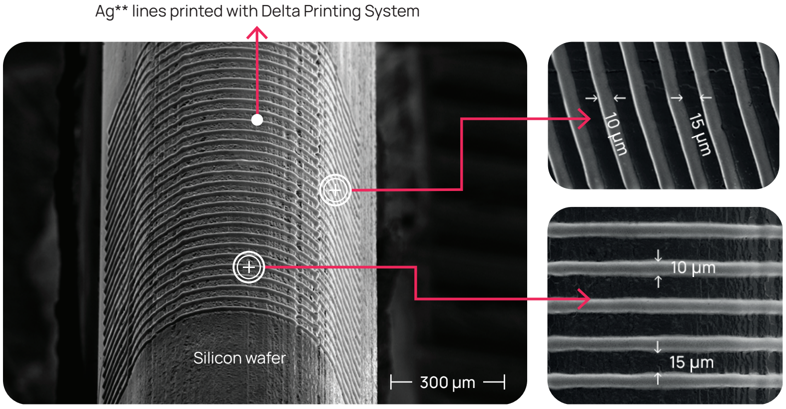
Dispensing engine for industrial integration

- Seamless integration with manufacturing processes via an API
- Suitable for continuous/flow line production
- Small to high-volume production
- Sustainable technology - no material waste
- Easy changeover of cartridge and nozzles

Revolutionize heterogeneous integration

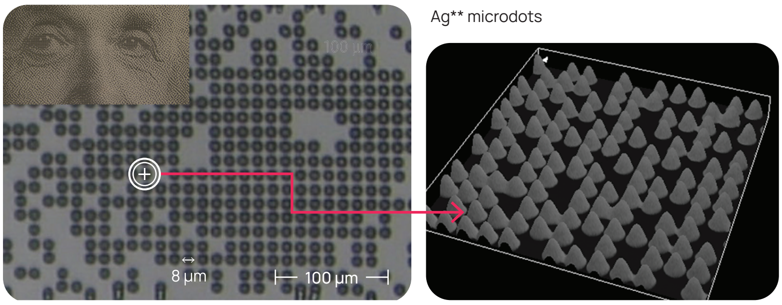
UPD for integration

- facilitates seamless integration
- provides flexibility and miniaturization for FHE, IC packaging, IoT systems, antennas, biosensors and more



Precision-driven microdots

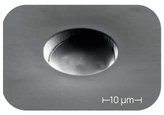
- controlled, precise dispensing of microdots below 10 µm diameter
- boosts performance in versatile scaling down of the IC packaging, system-on-the-chip designs



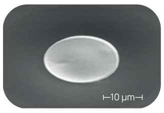
Reliable Connections - microwells filling

- enables reliable connections, enhances thermal management and miniaturization
- enhances functionality and performance for advanced packaging, flip-chip and TSV
- variety of materials: conductive, dielectric, photoresist, QDots and more

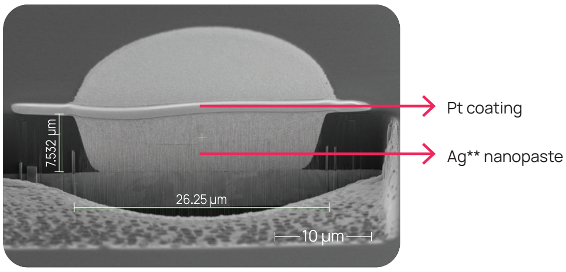
Empty microwell



Filled microwell



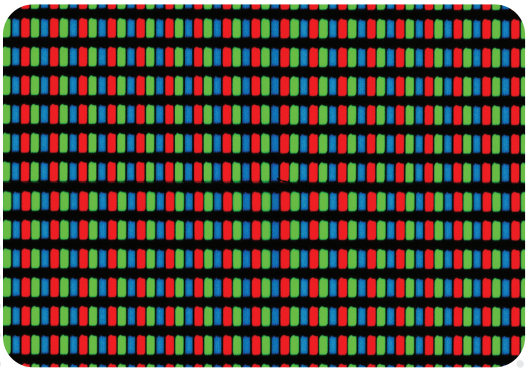
Microwell cross section



Powering microLED integration

- facilitates control, driving and power dispensing of microLED displays
- expands applications in AR/VR, smartwatches and automotive displays

MicroLED

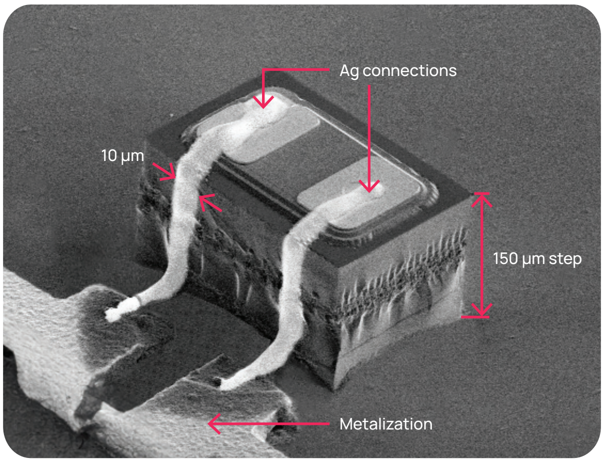


Revolutionize yield management

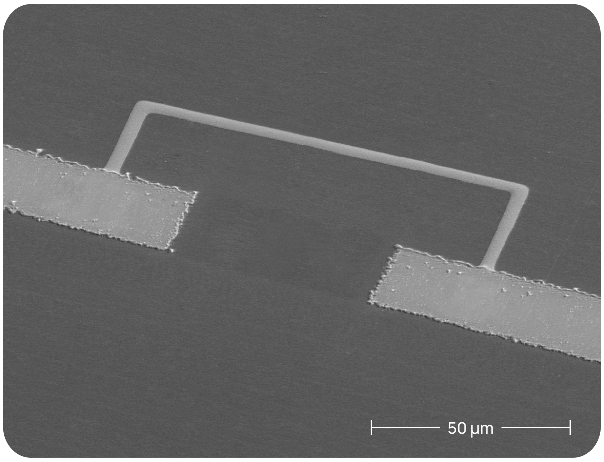
2D, 3D conductive micro-scale interconnections

- open defect repair on complex technological substrates and system-on-the-chips
- conductive and insulating microvias in High Density Interconnect (HDI)
- ultra-high resolution features below 1 µm
- photonic sintering enables electrical resistances ‹1 Ω/µm (post-sintering)

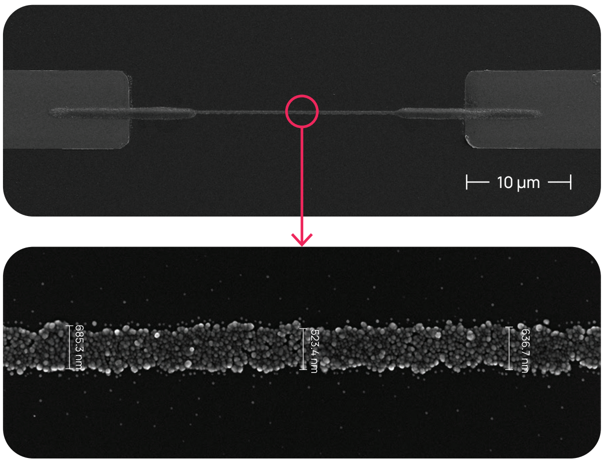
Ag** interconnections



Open defect repair



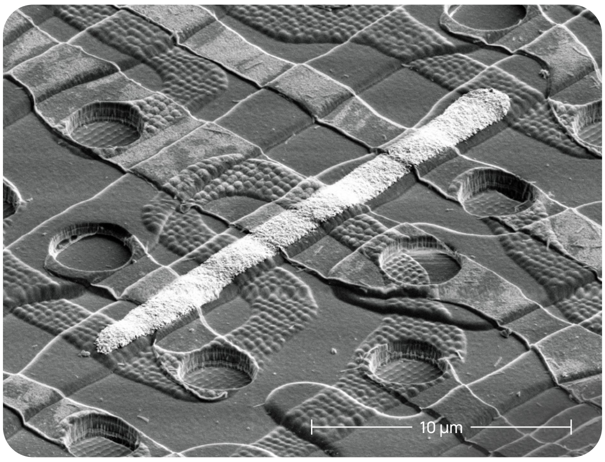
State of the art Ag** sub-micron line



Ultra-precise circuit editing

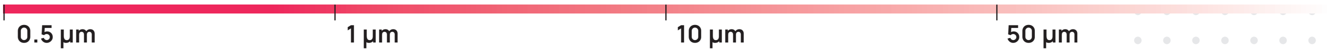
- fixing design flaws or intentional changes by local dispensing on 2D/3D connection
- via and microwells filling directly on the circuit
- versatile material dispensing on complex technological substrates

Ag** interconnections



** XTPL Ag nanopaste CL85

Feature sizes range



UPD System configurations

UPD System modules	UPD Core	UPD Core+	UPD Pro
Automation solutions	●	●●	●●●
Dispensing unit	✓	✓	✓
Standard feature size	1-50 µm	1-50 µm	1-50 µm
Working area (XY-axes)		70 × 70 mm	300 × 300 mm
Horizontal stroke motors (XY-axes)		Optional	✓
Vertical stroke motor (Z-axis)		✓	✓
Coarse vertical stroke motor			✓
Top view process monitoring			✓ Microscopic
Side view process monitoring	✓ Manual	✓ Manual	✓ Motorized
Process control systems + Software	✓	✓	✓
API for integration	✓	✓	✓

- UPD System physical parameters depend on the configuration, motor strokes, fixture and accessories.

XTPL Software

- Intuitive navigation: icons, toolbars, and other visual elements provide clues and make it easier to understand app features
- Increased productivity & minimize errors: with visual cues and easier navigation, users are less likely to make mistakes
- Faster access to features: well-designed software allows to quickly find and use the features

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