

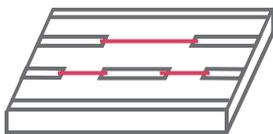
Ultra-Precise Dispensing Technology

XTPL. Powering the microelectronics of tomorrow.

Key features

XTPL Ultra-Precise Dispensing (UPD) technology offers an unparalleled set of features that are not available in any other additive method. These include high-resolution printing (down to submicron feature size), the ability to use high-viscosity materials (up to 1 000 000 cP) and precise printing in 3D. The combination of these features makes it possible to achieve capabilities that were previously impossible with any other additive method.

Open defect repair



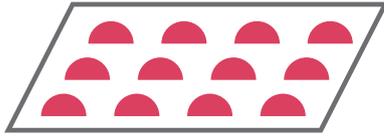
- Dispensing of ultra-high resolution features: $< 1 \mu\text{m}$
- Photonic sintering enabling resistance: $< 1\Omega/\mu\text{m}$
- Materials compatibility

Edge interconnections printing



- Edge interconnections printing
- High resolution traces, below $10 \mu\text{m}$
- Possibility to print over the edge of glass, silicon and flexible foils

Microdots dispensing



- Microdots printing
- Excellent height to width aspect ratio
- Capability to use conductive and non-conductive adhesives

Filling of microwells and TSV



- Precise filling of microlavities, high aspect ratio vias, microwells
- Variety of materials like: conductives, dielectrics, photoresist, quantum dots
- Use-cases like QD color conversion, high-density TSV, RDL interconnection, sacrificial layer in MEMS fabrication

Printing through microchannels



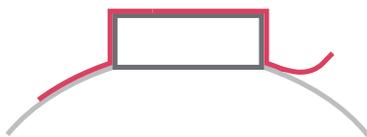
- Printing structures across different types of microchannels
- Direct dispensing of conductive electrodes or photoresist (ex. SU-8)
- Fast and reliable solution for microfluidic, med-tech and MEMS

Redistribution layer prototyping



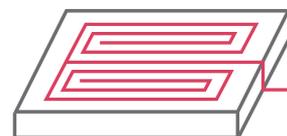
- All printed RDL structure
- Down to 1 μm / 1 μm L/S density
- Variable materials possible to use in one system, for example metallic nanoparticle paste and high viscous polyimide

3D micro-electronics printing



- Directly on vertical step
- No ramps needed
- Reliable connection for flexible hybrid electronics and advanced IC packages

High-frequency structures



- High resolution antenna on-chip
- No satellite droplets and high uniformity to prevent high frequency signal losses
- Wire-bonding interconnection alternative

Contact us

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