



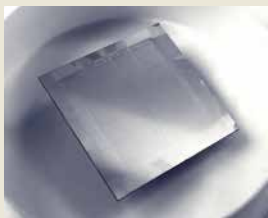
CHANGING THE FUTURE OF ADDITIVE MICROMANUFACTURING

μAM systems to realize & extend your metal micromanufacturing competence

CERES
Standalone 3D
Microprinting System

Multiple
Applications
for Industry and Research

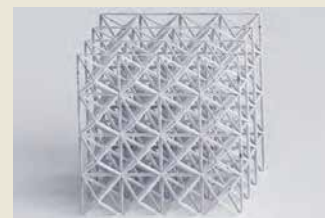
12
Papers Published
/ Underway



Semiconductor
open defect repair



Microelectronic
Applications



Science & Fundamental
Research

Distributed
in USA by:



Quantum Design

10307 Pacific Center Court, San Diego, CA 92121
Tel: 858.481.4400 info@qdusa.com www.qdusa.com

Realize the limitless possibilities of additive micromanufacturing with CERES

The CERES system is designed for researchers and scientists to conduct additive micromanufacturing (μ AM) of metals on the micrometer scale. CERES has the precision to fix semiconductor die defects. In addition, nanoliter liquid quantities and particles can be dispensed. CERES can also be used for scientific and industrial application development.

Printing Process Parameters	Parameter Value
Estimated max. printing volume with one filling of probe reservoir	6'000'000 μm^3
Printing tip reservoir contents (max.)	1 μl
Printing resolution (min. voxel diameter)	< 1 μm
Standard printing nozzle opening (diameter)	300 nm
Estimated flow range during printing	picoliter to femtoliter per second
Estimated max. throughput (process dependent)	> 60 $\mu\text{m}^3 / \text{s}$
Height of a printed stucture (max.)	> 10 nm
3D printing area (max.)	16 mm diameter
Printing Capabilities	Parameter Value
3D printable metals	Cu, Au, Ag, Pt
3D copper printing rate	Up to 4 $\mu\text{m}/\text{s}$
2D dispensable materials	Many liquids, viscosity/size dependent
Subsystem	Microfluidics Control System
Pressure range	[-800 to +1000 mbar]
Sensor resolution	0.5 mbar

Contact us for more information

Distributed
in USA by:



Quantum Design

10307 Pacific Center Court, San Diego, CA 92121
Tel: 858.481.4400 info@qdusa.com www.qdusa.com