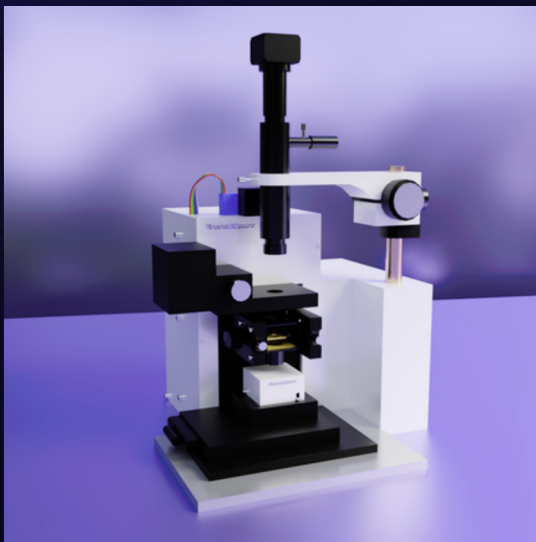


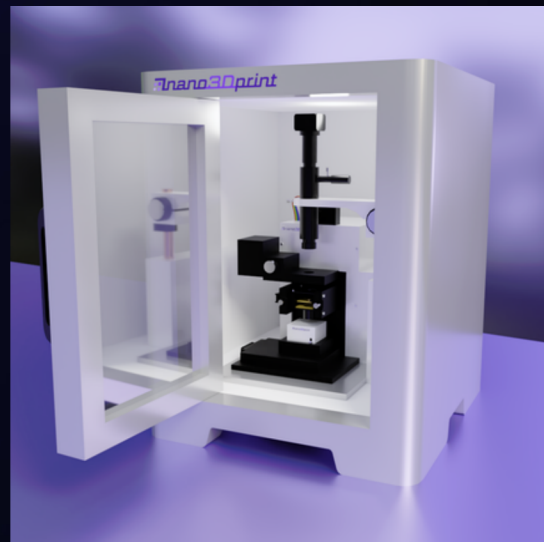
D4200S Datasheet

Prototype, research, and manufacture on-demand with the sub-micron resolution D4200S 3D printer. 3D print at micro and nanoscale levels with versatility, ease, and precision. The print head accommodates various print materials, such as Au, Ag, Cu, polymers, metallic oxides, dielectrics, organic compounds, photosensitive polymers, and more.

The high-precision, ultra reliable positive displacement print head is capable of precisely metering functional inks with viscosities ranging from 1mPa·s to 54000 mPa·s. The sample stage is 3 cm x 3 cm x 2 cm with an XYZ precision of < 3 nm. The high-speed microdeposition mode dispenses functional materials with feature sizes from 100 μm to 1 mm. The nanodeposition mode prints feature sizes from 50 nm to 250 μm.



D4200S



D4200S in its Environmental Chamber

Applications

- Flexible Electronics
- Prototyping
- Maskless Lithography
- Mask Repair
- Bioprinting
- Tissue Engineering

...and more

Key Features

- Print features from 250 μm to 50 nm
- Customizable sample stage and capabilities
- Swappable dispensing tips to support a wide range of print materials
- Compact; can easily fit on any desktop

D4200 Specifications



FEATURES	
Nozzle/ Tip Sizes	200 μm , 50 μm , 30 μm , 10 μm , 5 μm , 1 μm , 500 nm, 200 nm, and sub-100 nm
Supported Inks	Metal, Metallic Oxides, Polyimide, Ag, Au, Pt, Pd, Dielectrics, Organic Semiconductors, Photosensitive Polymers, Biomolecules, etc.
Sample Size	3 cm x 3 cm x 2 cm
Precision Stage	XYZ < 3 nm 3 cm x 3 cm x 2 cm (Custom sizes available)
Modes	Micro Deposition, Nano Deposition, Topographical Analysis
Video Optical Microscope	Zoom to 400x, 2 μm resolution
Stage and Control Box	Compact Table-Top Design 7.5 in x 12 in

XY MOTION	
Type	Modified Tripod
XY Linearity	< 1%
XY Range	> 50 μm
XY Resolution	< 3 nm closed loop, < 1nm open loop
XY Actuator Type	Piezo
XY Sensor Type	Strain Gauge
Z Range	>16 μm
Z Linearity	< 5%

Z MOTION	
Type	Direct Drive
Drive Range	25 mm
Drive Type	Stepper Motor
Min. Step Size	330 nm
Slew Rate	8 mm/minute

