NANOFABRICATOR LITE™
Technical Specification

ATLANT 3D NANOSYSTEMS

Printing process	Deposition technology	Microreactor selective area direct atomic layer processing (µSADALP) with ALD mode
	Lateral resolution	400 µm[1] (100 µm in development)
	Vertical resolution	0.1 nm
	Printing speed[2]	Up to 10 mm/s
	Materials[3]	Up to 450[3]
	# of precursors	1 precursor source, upgradable up to 3
	Atmosphere	Ambient or inert inside a glovebox
	Pressure	Atmospheric / slight overpressure
	Printhead alignment	Manual
	Printhead tilting	Manual[4]
	# of printheads	1
Samples and materials	Compatible surfaces	Flat, corrugated up to 20 µm, porous, curved[5]
	Sample substrate material	Process-dependent, compatible with common substrates
	Sample size	Up to 50x50 mm[6]
	Sample temperature range	Room temperature to 300°C +/- 5°C
	Precursor/reactant temperature	RT to 150°C
IT	Network connectivity	Ethernet
	Software	Fully automated control system and recipe editor
Safety / monitoring features	Interlock	N/A
Device specifications	Composition	1 printing unit 1 gas box Either can be mounted inside or outside a glovebox
	Footprint – tool size	Expected 26x26x50 cm[7]
	Weight	20 kg
	Power supply	230VAC, 20A, 50-60 Hz

[1] Lateral resolution improvements pending new interchangeable nozzles
[2] Higher speeds can be offered for a custom priced setup
[3] Currently tested TiO2, Pt, ZnO, Al2O3, SiO2. Continuous testing ongoing
[4] Automatic module can be purchased separately
[5] Maximum flatness nozzle size dependent, curved surfaces require separate customized nozzle
[6] Printing area is 25x25 mm but sample holder can be repositioned for larger effective printing area
[7] Form factor can be customized based on selected modular design

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