VOLTERA

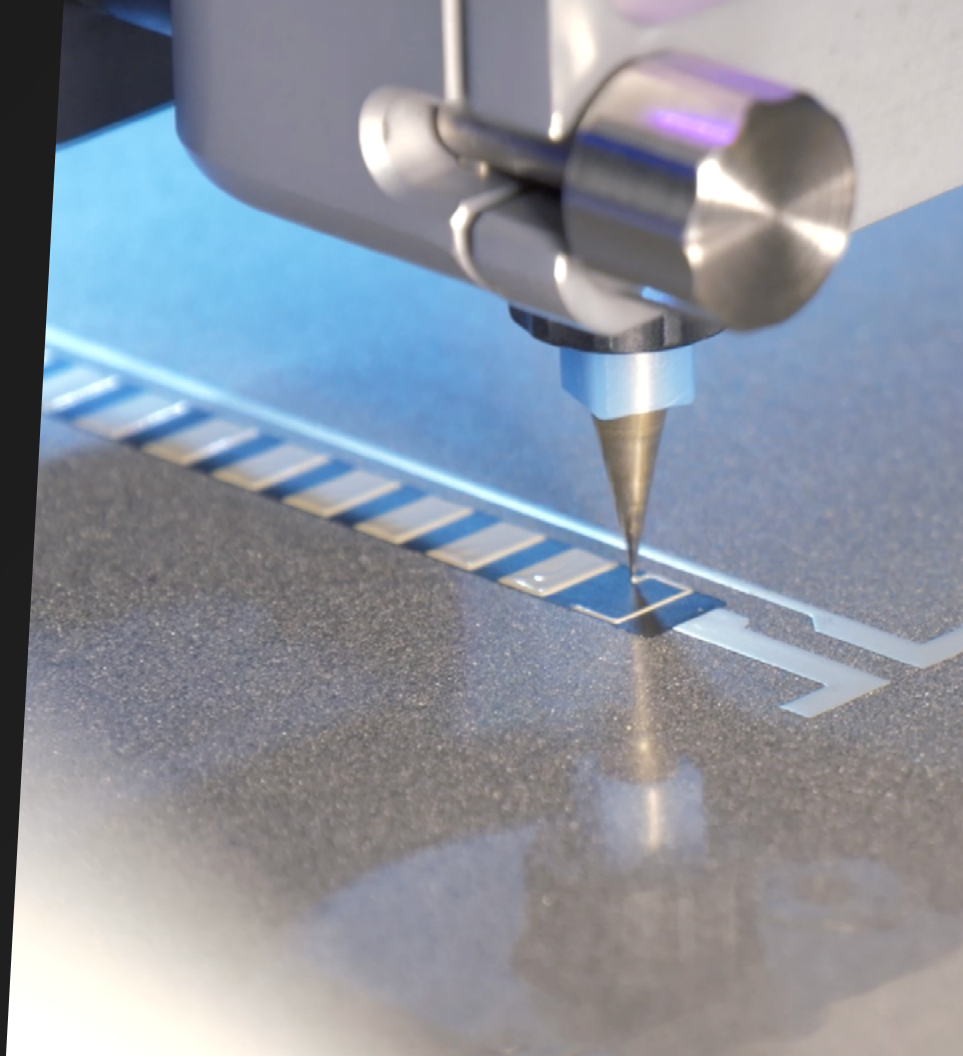
NOVA

Materials dispensing system

Push the boundaries of what's possible in electronics and material science.

Ideal for:

- ✓ Printed electronics R&D
- ✓ Microdispensing
- ✓ Flexible and stretchable electronics
- ✓ Functional materials research



Multilayer printing feature

Unlock multi-material and multilayer printing, with streamlined print job editing in NOVA's intuitive software.

Integrated vision system

Align, print, and inspect via machine vision and AR overlay print preview.

Modular platform

Expandable with quick-swap modules, drop-in fixturing, and Wi-Fi/USB/ethernet connectivity.

Flexible or rigid substrates

Print on flexible, stretchable or rigid substrates such as FR1, FR4 and silicon wafers.

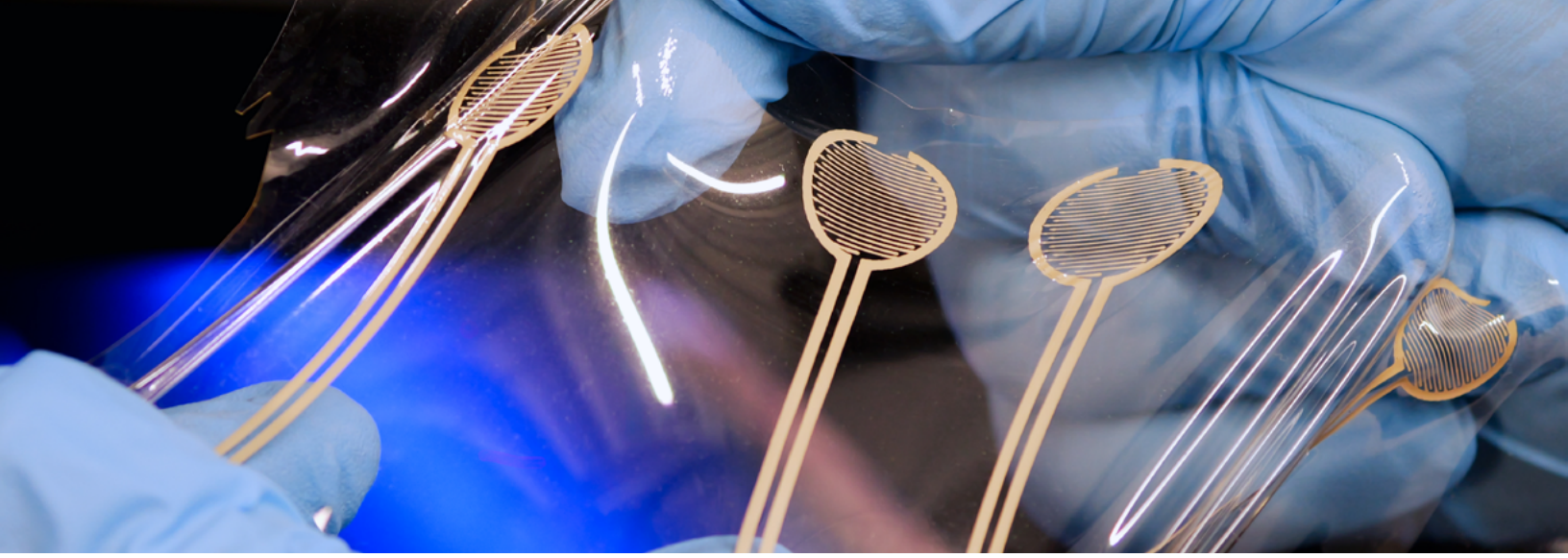
Materials freedom

Use screen-printable materials: conductive and insulating inks, adhesives, or custom materials.

Pressure-feedback dispensing

Precision printing with real-time closed-loop pressure and temperature control.

Contact **sales@voltera.io** for more information.



NOVA specifications

General	Metric	Imperial
Print area	220 mm × 300 mm x 40 mm	8.7” × 11.8” 1.6”
XYZ resolution	2.5 µm x 7 µm x 1.25 µm	
Layer capacity	Up to 4 stack-up layers*	
Module slots	2	
Compatible modules	• Smart Dispenser • Smart Probe • Vacuum table	
Compatible substrate materials	• Rigid: PCBs, glass, ceramic, etc. • Flexible: Polyimide, PET, etc. • Stretchable: TPU, etc. • Porous: Paper	
Substrate thickness	Up to 30 mm	Up to 1.2”
Substrate fixturing	• Elevated clamping • Vacuum table • Customizable (M5 threads, 40 mm grid)	
Alignment and registration	Manual with camera assist (8 MP, 17 µm/px resolution)	
Print area temperature	Ambient, no heater	

Software	
Application type	Browser-based web application
Recommended browser	Chrome
File formats	• Gerber • SVG (beta)

Hardware	Metric	Imperial
Printer dimensions	675 mm x 605 mm x 345 mm	26.6” x 23.8” x 13.6”
Weight	35 kg	77.2 lbs
Power requirements	100-240 VAC, 50/60 Hz, 221 W	
Connectivity	• 1x USB-A 2.0 • 1x USB-A 3.0 • Ethernet • Wi-Fi*	

** Designs with more than 4 stack-up layers are achievable but depend on a number of factors. For more information, contact Support at **support@voltera.io**.*
*** With provided Wi-Fi dongle*

Smart Dispenser

Dispensing technology	Direct ink write (DIW)
Compatible syringe barrels	Nordson EFD – 5CC
Syringe capacity	Up to 2.5 mL
Recommended viscosity range	1,000 – 1,000,000 CPS
Compatible fluids	• Conductive ink • Solder paste • Other
Wetted materials	• Polypropylene (PP) • Stainless steel (SS) • Fluroelastomer (FKM)
Temperature control	Up to 40°C
Pressure control	Yes, configurable
Max pressure	70 PSI
Nozzle compatibility	Luer lock
Feature size	Min, 0.1 mm

Smart Probe

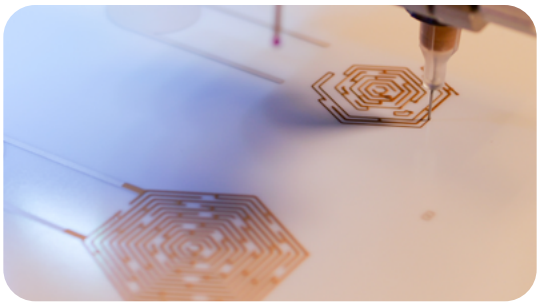
Repeatability	+/- 2.5 µm
Trigger force	1.2 N max
Stylus material	Ruby

Vacuum table	Metric	Imperial
Size	220 mm x 300 mm	8.7” x 11.8”
Vacuum pressure	85 kPa	
Flow rate	80 L/min	

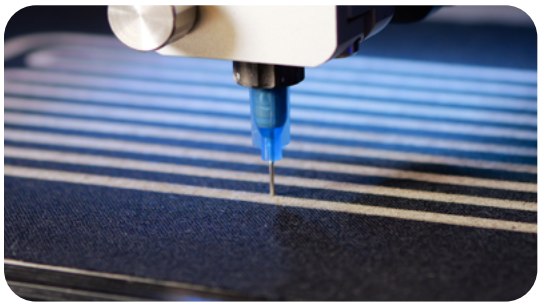
Materials flexibility and layer capacity

With NOVA, the right ink for your project is at your fingertips. You can iterate **90% faster** and get to **proof of concept within hours**. Experience material flexibility to solve unique challenges, while stacking layers to save space and reduce weight for miniaturized designs.

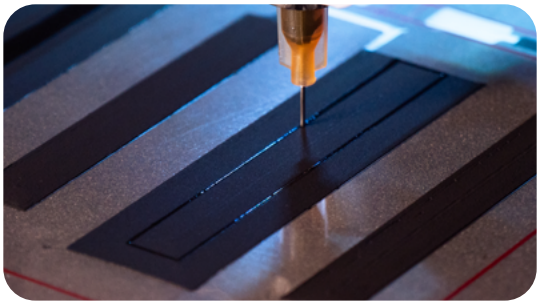
4-layer display printed with electroluminescent ink
Read the white paper: voltera.io/EL



2-layer ECG electrodes printed with gold and silver ink
Read the white paper: voltera.io/gold



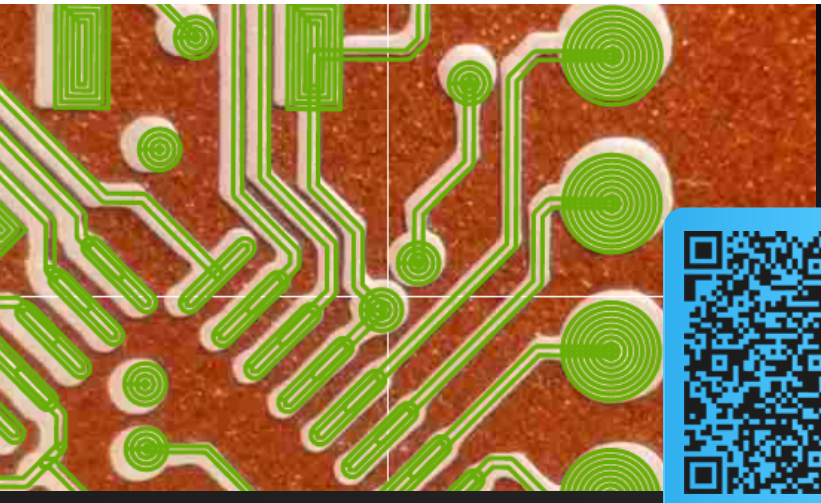
Silver ink printed directly on cotton fabric
Read the white paper: voltera.io/fabric

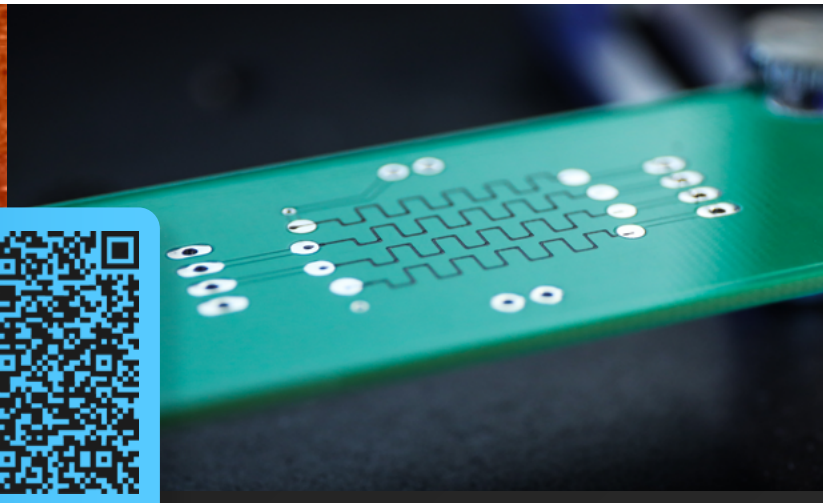


7-layer flexible battery printed with battery ink suite
Read the white paper: voltera.io/battery

Camera-based inspection and AR overlay

With a camera focused directly down on the print, NOVA provides you with improved accuracy and precision for both calibration and printing. Get a sense of what your design will look like on your substrate before you print it with our AR overlay feature. Save on frustration and materials by knowing exactly where ink will be from the word “go”.





Learn more about NOVA

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