COMPACT MODULAR PVD SYSTEM

MiniLab 026

Compact modular deposition for glovebox-compatible and multi-technique research workflows.

6″	<5×10⁻⁷	3	Yes
MAX SUBSTRATE	BASE PRESSURE (MBAR)	SOURCES (UP TO)	GLOVEBOX COMPATIBLE

Compact modular PVD for glovebox-ready research

MiniLab 026 bridges compact ownership and modular PVD capability for laboratories that need more flexibility than nanoPVD without over-specifying a larger system. Floor-standing with an easy-access 'clam-shell' chamber, it supports magnetron sputtering or thermal and low-temperature evaporation onto substrates up to 6″. It is also the only MiniLab that can be retrofitted to an existing glovebox.

- Compact modular PVD architecture for research labs
- Sputtering and thermal / LTE evaporation options
- Recipe-led control via touchscreen HMI / PC
- Glovebox-compatible; retrofittable to an existing glovebox
- Up to three sources on the chamber baseplate
- Expandable pathway beyond benchtop systems

Why choose the MiniLab 026

Compact modular capability
More configuration freedom than a benchtop system, in a floor-standing footprint that suits most research labs.

Glovebox-ready by design
The only MiniLab that retrofits to an existing glovebox, for air-sensitive material handling.

Multiple deposition techniques
Magnetron sputtering plus thermal and low-temperature evaporation for metals, dielectrics and organics.

Research-to-pilot thinking
Develop and prove practical deposition processes before committing to production-scale infrastructure.

Key features

Compact modular architecture
Configure sources, stages and monitoring around the research programme in a compact platform.

Clam-shell chamber
Easy-access chamber design for straightforward loading and servicing.

Sputter & evaporation
Magnetron sputtering and TE1 / LTE thermal sources for metals, dielectrics and organics.

Glovebox compatible
Retrofittable to an existing glovebox for air-sensitive and protected workflows.

High-vacuum performance
Turbomolecular pumping for base pressures below 5×10^{-7} mbar.

Recipe-led control
Touchscreen HMI / PC control with saved recipes for repeatable R&D.

Typical configurations

Start with a proven configuration, then tailor sources, gases, substrate handling and integration around your materials and workflow.

Glovebox compatible

Air-sensitive materials needing protected handling.

- MiniLab glovebox-compatible setup
- Air-sensitive material workflows
- PV, OLED and interface research

Compact modular PVD

Modularity without the maximum MiniLab scale.

- Sputtering and evaporation methods
- Research-lab ownership
- Expandable configuration

Training & shared use

Repeatable local access across multiple users.

- Recipe-led operation
- Practical serviceability
- Flexible process coverage

Technical specifications

Parameter	Specification
System type	Compact MiniLab modular PVD
Base pressure (HV)	<5×10^{-7} mbar
Sputtering	Available by configuration
Thermal / LTE evaporation	TE1 + LTE sources available
E-beam evaporation	Not available as standard
HiPIMS / pulsed DC	HiPSTER 1 + Pinnacle 1.5 kW option
Max substrate size	6″ (150 mm)

Parameter	Specification
Substrate heating	Up to 800°C (SSIC heater)
Substrate bias	RF + DC bias
Load lock	Not available as standard
Glovebox compatible	Yes; retrofit to existing glovebox
Control software	PC + IntelliDep
Rate / thickness	Up to 3 × QCM; SQC-310 option
Chamber material	Stainless steel; CF flanges
Warranty	2 years

MiniLab platforms are configurable; exact specifications depend on the final build and are confirmed at quotation.

Selected publications citing the MiniLab range

- High-efficiency semitransparent solar cells from magnetron-sputtered Sb_2S_3 films — Luleå University of Technology
- Rewritable resistive memory effect in a carbazole-methacrylamide memristor — Charles University
- Photophysics of functionalised diketopyrrolopyrrole derivatives — Charles University
- Transmissive hybrid metal–dielectric metasurface bandpass filters for the mid-IR — University of Cambridge
- Synapse-mimicking memristors from a di(tpy)-phenylcarbazole copolymer — Charles University
- Engineering Cu_2O nanowire surfaces for photoelectrochemical H_2 evolution — Luleå University of Technology