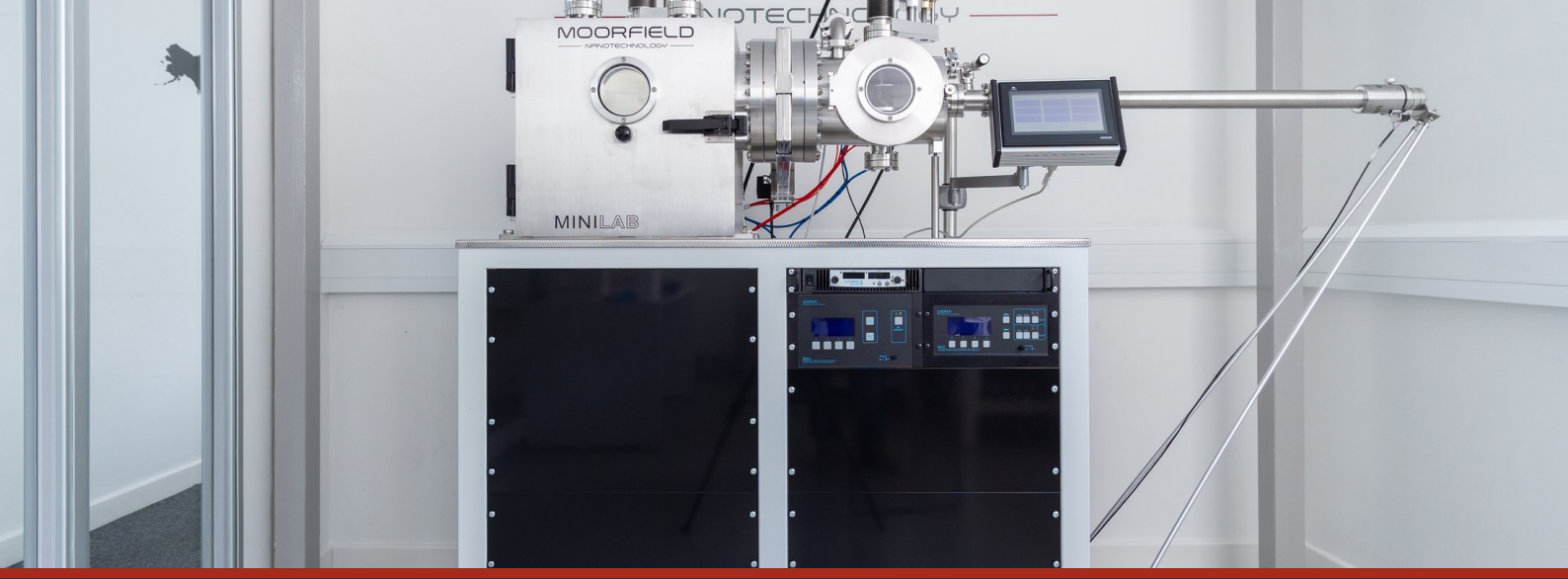

ADVANCED MODULAR SPUTTERING SYSTEM

MiniLab 070

Advanced modular magnetron sputtering for multi-source thin-film research and development.

8″	4×3″	HiPIMS	Yes
MAX SUBSTRATE	SPUTTER SOURCES	POWER OPTION	LOAD LOCK OPTION

Multi-source sputtering for advanced thin-film R&D

MiniLab 070 is the MiniLab sputtering workhorse for research teams that need more sources, larger substrates, reactive gases, bias, QCM monitoring and advanced power options. The front-loading box chamber accepts up to four 3″ magnetron sources and substrates up to 8″, with HiPIMS / pulsed DC, load-lock and dual-chamber options for demanding programmes.

- Multi-source magnetron sputtering for advanced research
- RF, DC, pulsed DC and HiPIMS power options
- QCM monitoring and recipe-led process control
- Up to four 3″ sources for multilayers and alloys
- Substrates up to 8″ (200 mm)
- Load-lock and dual-chamber options

Why choose the MiniLab 070

Multi-source capability
Up to four 3″ sources support multilayers, alloys, reactive and co-deposition workflows.

Advanced power options
HiPIMS and pulsed DC extend the platform beyond standard DC and RF sputtering.

Integration flexibility
Add load-lock, transfer and automation capability when the application requires it.

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

Key features

Modular sputtering architecture
Configure sources, gases, stages and monitoring around the research programme.

Up to four 3″ sources
Multi-source capacity for multilayers, alloys and reactive films.

Advanced power options
HiPIMS / pulsed DC via HiPSTER 1 + Pinnacle 1.5 kW supplies.

Larger substrates
Substrate positioning up to 8″ (200 mm) beyond benchtop limits.

Load-lock & dual chamber
Optional load-lock (up to 8″) and dual-chamber configurations.

Recipe-led control
PC + IntelliDep control with up to 4 QCM and SQC-310 option.

Typical configurations

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

Multi-source sputtering

Multilayers, alloys and functional coatings.

- 4 × 3″ source capability
- Reactive gas options
- Sequential and co-deposition

Advanced power

Beyond standard DC or RF sputtering.

- HiPIMS and pulsed DC options
- Bias and monitoring options
- Process development flexibility

Larger-substrate R&D

Thin-film development beyond benchtop limits.

- Up to 8″ (200 mm) positioning
- MiniLab platform scale
- Research-first configuration

Technical specifications

Parameter	Specification
System type	MiniLab modular PVD (sputtering)
Base pressure (HV)	<5×10^{-7} mbar
Max sputter sources	4 × 3″
E-beam evaporation	Telemark 246
Thermal / LTE evaporation	TE1 + LTE sources
HiPIMS / pulsed DC	HiPSTER 1 + Pinnacle 1.5 kW
Max substrate size	8″ (200 mm)

Parameter	Specification
Substrate heating	Up to 800°C (SSIC heater)
Substrate bias	RF + DC bias
Load lock	Optional (up to 8″)
Dual chamber	Available
Control software	PC + IntelliDep
Rate / thickness	Up to 4 × QCM; SQC-310 option
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
- Engineering Cu_2O nanowire surfaces for photoelectrochemical H_2 evolution — Luleå University of Technology
- Thin-film Bragg reflector for monolithic GaAs devices — Published study
- Transmissive hybrid metal–dielectric metasurface bandpass filters for the mid-IR — University of Cambridge
- Direct single-molecule detection with a low-cost smartphone microscope — University of Fribourg
- Cadmium- and zinc-doped p-type Sb_2Se_3 single crystals and solar cells — University of Liverpool