



ADVANCED MODULAR EVAPORATION SYSTEM

MiniLab 080

Advanced evaporation platform for thermal, organic and e-beam thin-film process development.

8"

MAX SUBSTRATE

E-beam

+ THERMAL / LTE

4

QCM (UP TO)

Yes

LOAD LOCK OPTION

Evaporation-first modular thin-film development

MiniLab 080 is strongest where evaporation flexibility is the deciding factor: thermal sources, organic / LTE methods, e-beam options and monitoring in one modular research platform. Its tall chamber suits long working distances for high-uniformity coating and near-90° incidence for lift-off, while magnetron sputtering can be added for multi-technique work.

- Evaporation-first modular platform for research workflows
- Tall chamber for long working distances and uniformity
- Substrates up to 8" (200 mm); stage heating to 800°C
- Thermal, organic / LTE and e-beam methods by configuration
- QCM monitoring for rate and thickness control
- Load-lock and dual-chamber options

Why choose the MiniLab 080

- ✓ **Evaporation flexibility**
Thermal, organic / LTE and e-beam sources cover optics, organics and sensitive materials.
- ✓ **High-uniformity geometry**
A tall chamber gives long working distances and near-90° incidence for lift-off.
- ✓ **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 evaporation architecture**
Configure sources, stages and monitoring around the research programme.
- 🔬 **Thermal, LTE & e-beam**
TE1 and LTE sources plus Telemark 246-6 e-beam evaporation.
- 📄 **Tall high-uniformity chamber**
Long working distances and near-90° incidence for lift-off applications.
- 🔗 **Multi-technique option**
Magnetron sputtering can be added for hybrid film stacks.
- ⊕ **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.

Thermal evaporation R&D

Metals, interfaces and optical coatings.

- High-temperature thermal sources
- QCM monitoring
- Repeatable recipe workflows

Organic & LTE

Sensitive and volatile materials.

- LTE / organic source options
- Low-rate process development
- Device and interface research

E-beam evaporation

Materials needing high-temperature evaporation.

- Telemark 246-6 e-beam
- Monitoring and control
- Advanced thin-film materials

Technical specifications

Parameter	Specification
System type	MiniLab modular PVD (evaporation)
Base pressure (HV)	$<5 \times 10^{-7}$ mbar
E-beam evaporation	Telemark 246-6
Thermal / LTE evaporation	TE1 + LTE sources
Sputtering	Available by configuration
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

- Cadmium- and zinc-doped p-type Sb_2Se_3 single crystals and solar cells — University of Liverpool
- Compositional transformation in co-evaporated $\text{Cu}_2\text{AgBiI}_6$ films for photovoltaics — University of Oxford
- 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
- HexAuFoil: cryo-EM with sub-1 Å specimen movement — MRC Laboratory of Molecular Biology
- Thin-film Bragg reflector for monolithic GaAs devices — Published study