



OmniVac

Surface Analysis and Vacuum Technology

Electron Beam Evaporator

EBV 100



The OmniVac EBV 100 Electron Beam Evaporator is designed for high precision thin film growth and molecular beam epitaxy

- evaporation
- thin film growth
- molecular beam epitaxy
- high stability and reliability
- uniform deposition
- up to 3600 K

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EBV 100 Electron Beam Evaporator

The **OmniVac EBV 100 Electron Beam Evaporator** is designed for high precision thin film growth and molecular beam epitaxy.

The precisely defined vapor beam allows for a highly uniform deposition on the substrate.

The deposition area is determined by the distance between the source and sample and the choice of an easily exchangeable exit mask.

The PS-EBV 100 power supply is designed to provide highly stable operation conditions, i.e. beam energy and filament current.

An ion flux controller allows for an automated deposition using PID regulation.



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|------------------------------|--|
| <i>Temperature range</i> | 400 - 2600 K, up to 3600 K using Mo connectors |
| <i>Electron energy</i> | 0 - 1500 eV |
| <i>Max. emission current</i> | 200 mA |
| <i>Max. power current</i> | 300 W |
| <i>Filament current</i> | 1.8 - 2.2 A, max. 2.5 A |
| <i>Working distance</i> | 70 - 75 mm |
| <i>Diameter</i> | 0.5 - 2.3 mm |
| <i>Cooling system</i> | Water flow > 0.5 L/min, max. 6 bar |
| <i>Insertion depth</i> | min. 190 mm (standard, custom length available on request) |
| <i>Mounting flange</i> | DN 40 CF (OD 35 mm) |

- ▶ high stability
- ▶ uniform deposition
- ▶ up to 3600 K
- ▶ internal water cooling
- ▶ flux monitor

Related products:

- EBV 200** Electron Beam Evaporator, 3 kW (DN 63 CF)
- EV 300** Electron Beam Evaporator, 3-pocket evaporator (DN 40 CF)

PS-EBV 100 Power Supply

| | |
|--------------------------------|--|
| <i>Beam energy</i> | Error < 1 eV, ripple < 0.5 V _{pp} |
| <i>Filament current</i> | Error 0.1 A, ripple < 0.5 V _{pp} |
| <i>Ion flux monitor</i> | 10 nA - 100 mA, 8 ranges, 1% accuracy per range |
| <i>Flux regulation control</i> | PID controller |
| <i>Dimensions (W x H x D)</i> | 19" x 133 mm x 350 mm |
| <i>Modes</i> | auto (flux controlled), manual (no flux control) |



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