

e-CLIPSE Column

UHV Focused Electron Beam
for surface analysis



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e-CLIPSE is a UHV focused electron beam column dedicated to surface analysis systems. This fully electrostatic column e-CLIPSE, designed to reach sub-10 nm spot size, is equipped with a Schottky emitter. The current dynamics (pA to more than 150 nA) is suited for both local imaging and surface analysis techniques involving low and medium energy electrons (up to 30keV). The mechanical and optical design ensure the maximum compactness of the column. The dimensions and shape of e-CLIPSE objective lens are appropriated to short working distance imaging and offers the optimised configuration with other analysis equipments. e-CLIPSE is available for R&D laboratories as well as for equipment manufacturers, and is easily adaptable on standard vacuum chambers.

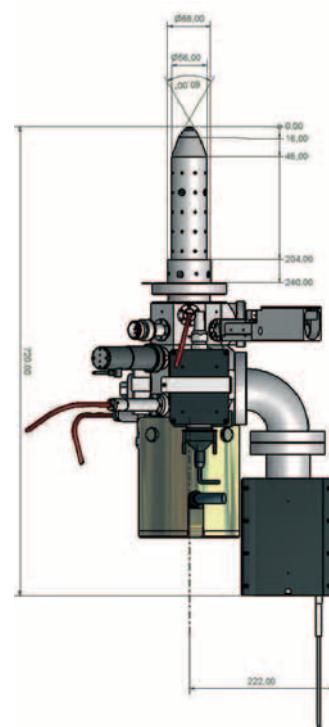


Spécifications :

- Schottky electron Source
- Electrostatic Condensor lens
- Electrostatic Beam Blanker
- Faraday cup
- Differential pumping system (1 ion getter pump 55 l/s)
- Pneumatic valve for the ion source isolation
- Motorised aperture changer : 13 Aperture positions
- Double octupole for deflectors and stigmators
- Objective lens
- 63 CF flange

Some technical data :

- Accelerating voltage : 1 to 30 kV continuously
- Source : Schottky emitter (TFE)
- Source lifetime : Typically 4000 hours
- Spot Diameter : < 8 nm
- Probe current : Few pA to more than 150 nA
- Acceptance apertures : Motorised, fully automatic
- Number of apertures : 13
- Source vacuum : < $8 \cdot 10^{-9}$ mbar
- Chamber vacuum : < $5 \cdot 10^{-10}$ mbar
- Beam Blanking : 20 ns
- Bakeout Temperature : 170°C



Guaranteed performances at 25 keV :

Beam current	30 pA	100 pA	500 pA	1 nA	10 nA
Beam resolution	8 nm	10 nm	20 nm	25 nm	50 nm

