e-CLIPSE Plus

High resolution electron imaging for all your analysis







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Key Features

Energy Range

Probe Current

Working Distance

Beam Current

Ultimate

Resolution

Source

e-CLIPSE *Plus* is the **ultimate electrostatic SEM** present on worldwide market offering extreme compactness thanks to its objective design. This SEM column is optimized to reach **the best resolution at large working distance** (compared to standard electro-magnetic SEM columns). e-CLIPSE *Plus* enables to work at both low and high currents keeping a sharp beam especially for analysis. Its wide energy range allows to reach great performances on a large panel of applications from equipment manufacturers to R&D laboratories.



Carbon nanowires observation using e-CLIPSE Plus (FOV = $20 \mu m$) Courtesy of National Synchrotron Radiation Research Center (NSRRC)



Observation of a Collembola with e-CLIPSE Plus $(FOV = 30 \ \mu m)$



Schottky FEG (Field Emission Gun)

500 eV - 30 keV

10 pA - 100 nA

12 mm (up to 45 mm)

Electron Beam Guaranteed Performances at 25 keV / WD = 12 mm

8 nm

500 pA

12 nm

1 nA

20 nm

10 nA

50 nm

< 30 pA 100 pA

4 nm



e-CLIPSE Plus Fish-Eye mode with FOV = 4,73 mm at 10 keV (WD = 12mm)

Main characteristics

- Mechanically-controlled 2-axis XY and tilt motion for source alignment
- Schottky source inserted in a cartridge for easy and fast refill and maintenance
- Pneumatic valve isolating the gun from the bottom part of the column for easy replacement and maintenance of the source
- 12 movable apertures for higher reproducibility and performances
- Fully integrated electrostatic beam blanker and Faraday Cup for precise current measurements



Ant antenna observation using e-CLIPSE Plus (FOV = $250 \ \mu m$)

Description

e-CLIPSE *Plus* is a **high resolution SEM** column equipped with **electrostatic lenses** to avoid magnetic field perturbation problematic for analysis in vacuum atmosphere. This technology allows a **compact architecture** facilitating the placement of other detectors and accessories near the sample surface.

Thanks to the column design, **high resolution is reachable even at large working distance.** The range of accelerating voltages and currents are suitable for most surface analysis techniques.

Its 12 apertures allow an optimized use of the system at both low and high currents making it the most universal SEM and fitting to many applications in one instrument.

e-CLIPSE *Plus* can be set-up with the **"Fish-Eye mode"** condition offering a wide field of view (up to 4.3 x 4.3 mm at 12 mm WD), ideal for sample surface navigation.

e-CLIPSE *Plus* is easily adaptable on any vacuum chambers as it is also **available in a UHV configuration** and so bakeable up to 120°C.



High resolution imaging of dust using e-CLIPSE Plus

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