

Electron Guns

Components for Semiconductor Manufacturing and Inspection Equipment

A&D
Discover Precision

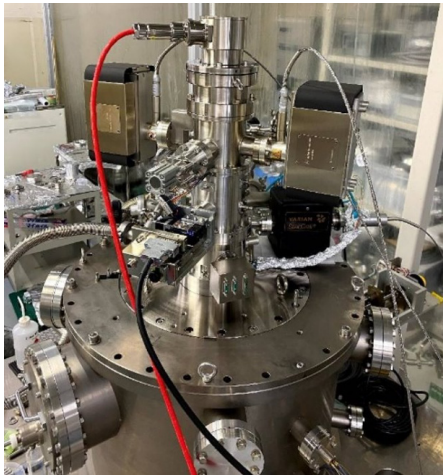
A&D's high precision, high stability, and high vacuum electron guns and accessories are used in electron beam lithography and microscopy for nano-scale observation, inspection, measurement, and fine processing applications.

➤ Electron gun

For Thermionic-Field Emission

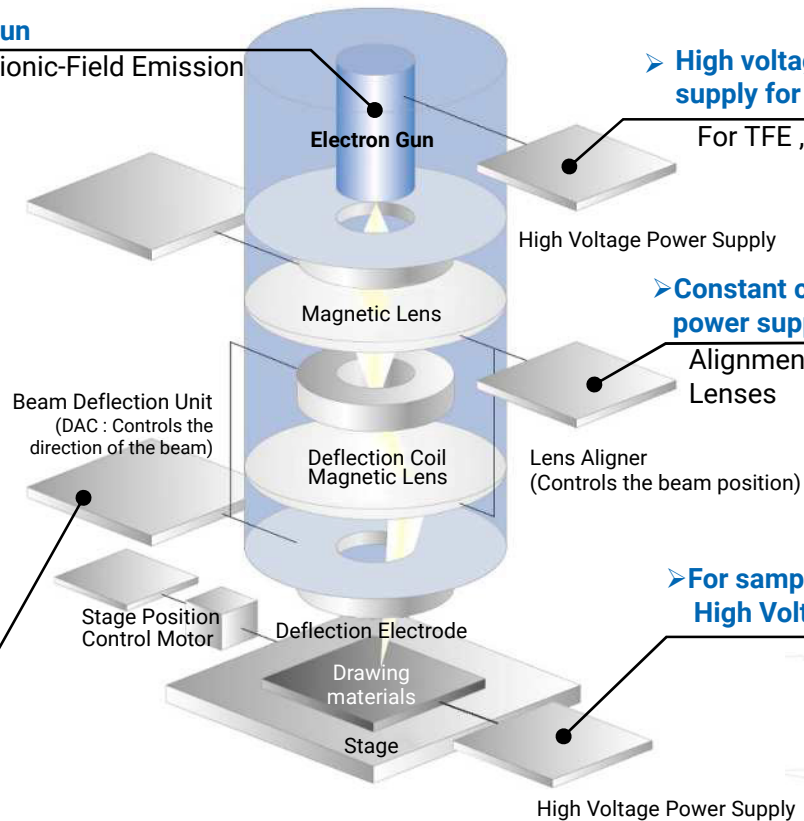
➤ High voltage power supply for electron gun

For TFE, for LaB6



➤ For beam deflection DAC+AMP unit

Electron beam position control



➤ Constant current power supply for:

Alignment Lenses

Lens Aligner (Controls the beam position)

➤ For sample bias High Voltage Power Supply



■ Lineup

- TFE electron gun (**high stability, high vacuum, high precision assembly**)
Acceleration voltage : -5 kV , -15 kV , -30 kV , -50 kV (standard model)
: -80 kV (under development)
- Ultra-high performance high voltage power supply for TFE and LaB6 (**high stability, low ripple**)
Acceleration voltage Stability : -5 kV , -15 kV , -30 kV , -50 kV (standard model)
: -80 kV (under development), -120 kV (under consideration for development)
: 2 ppm/12 h ($\pm 0.3^\circ\text{C}$) , Ripple: 2 ppm (Stability and ripple of 0.1V or less at 50kV output)
- High voltage power supply for sample bias
: Customizable, including integration into the power supply for electron guns and adding additional functions
- High-performance constant current power supply for deflection and focusing (**high stability, low noise**)
High stability : 2 ppm/24 h ($\pm 0.3^\circ\text{C}$)
Bipolar constant current power supply : Bipolar constant current power supply $\pm 1.0\text{ A}$
Unipolar constant current power supply 2.0 A
- High performance DAC+AMP unit
Resolution: 20 bit / Output voltage: $\pm 150\text{ V}$ / Settling time: 10 μs or less
Resolution: 16 bit / Output voltage: $\pm 15\text{ V}$ / Settling time: 100 ns or less



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