

Components for Surface Analysis

RHD-30

**High Energy Electron Source for Structural Analysis and
In-situ Growth Monitoring of Thin Films**

- 30 kV Maximum Primary Energy
- Factory Calibrated
- X-Y Deflection
- Ex-Vacuo Magnetic Lens and Deflection System
- Adjustable X-Y Orientation
- Wired Remote Control Option



The RHEED Gun RHD-30

The SPECS 30 kV RHEED (Reflection High Energy Electron Diffraction) electron gun RHD-30 is a fully UHV compatible RHEED gun bakeable to 200 °C and includes all the features and options required to take advantage of this powerful analysis technique. Capable of being operated over a wide range of pressures, RHEED can be used in a variety of applications such as molecular beam epitaxy, thin film deposition, chemical vapor deposition, sputter deposition, and other coating and deposition techniques.

Main Features:

- Electron energy: 1 - 30 keV
- Beam current: < 0.01 - 50 μ A
- Focal length: 200 mm - 1000 mm
- Spot size: < 100 μ m
- X-Y deflection: +/-15°
- Mounting: 4.5" (NW63CF) standard (2.75" optional)
- Filament: Tungsten
- Length: 295 mm
- Diameter: 114 mm
- Operating pressure: 10⁻¹¹ to 10⁻⁴ mbar
- High Pressure Option: operating pressure up to 1 mbar
- Bakeout up to 200 °C



RHD-30 Deflection Unit

Options:

- Remote control – for adjusting the beam from a more convenient location near the screen. Including Beam Blanking – beam may be turned off without disturbing the HV and filament settings for rapid beam recovery and minimised electron load on the sample.
- RHEED screen – for viewing the electron diffraction pattern.
- Viewport shutter – protects the screen from being coated by materials in the chamber.
- High Pressure Option (up to 1 mbar): allows the RHEED gun to be used in higher pressure applications, like PLD, CVD, magnetic sputtering and reaction MBE.

Power Supply

- Independent control of the Wehnelt voltage.
- Easy servicing and maintenance.
- Complete control of the beam quality and characteristics, with independent adjustment of spot size and position, kinetic energy and beam current.



RHD-30 RHEED Gun Power Supply

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ISO 9001 Certificate

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