

RHEED unit PHD-30K-034

Fundamental unit of PASCAL Reflection High-Energy Electron Diffraction (RHEED) consists a compact size electron-gun with mounting via CF1.33" (ICF34) flange.

The compact size e-gun brings easy mount to a vacuum chamber or easy maintenance. And RHEED observation at high-pressure condition or sample-in-plane parallel scanning of e-beam in RHEED observation can be realized in combination with optional unit.



- up to 30 kV compact HV power supply
- up to 1Pa by Single differential pumping
- High-pressure up to 100Pa workable * by double-stage differential pumping (option)
- Multiple diffraction monitor at same condition by Electron-beam parallel scanning (option)

* 100Pa workable doesn't mean to guarantee RHEED pattern observation.

● Standard RHEED unit (RHEED with Single differential pumping unit)

- RHEED electron gun with acceleration voltage of 30 kV (max).
- High-voltage power supply with remote controller.
- Single differential pumping unit for CF1.33" (ICF34) flange mount.
- Standard round-shape fluorescent screen for CF6" (ICF152) or CF8" (ICF203) flange mount.



Standard specification		
Electron-gun	Acceleration voltage	30 kV max (25 kV rated).
	Filament	Tungsten (W), hair-pin shape.
	Electron beam diameter	φ0.5mm
	Deflection	XY-axes by coil
	Dimension / Mount	L 310 mm, phi 43 mm / CF1.33" (ICF34) mount
	Differential pumping port	CF1.33" (ICF34)
High-voltage power supply	Output high-voltage	0 to 30KV
	Stability	Less than 0.5 %
	Remote control	All parameters for e-gun operation by handy console
	Dimension	W480 mm x D400 mm x H150 mm (JIS rack mount)
	Power inlet	AC 100V, 1-phase
Fluorescent screen	Screen	CF6" (ICF152) or CF8" (ICF203) mount with shutter

OPTIONS

● High-pressure RHEED by Double-Stage Differential Pumping unit

- Double-stage differential pumping unit with XY-axes or tilt motion of electron-beam guide.
- Small round-shape fluorescent screen of phi 30 mm for RHEED observation at high-pressure.
- Variable positioning fluorescent screen for RHEED observation at low/high-pressure.



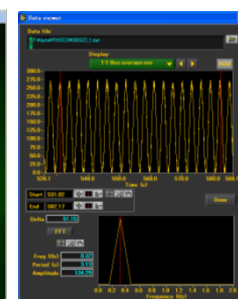
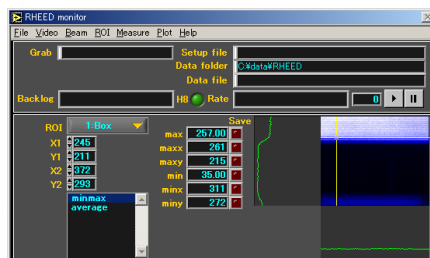
● Parallel Scanning RHEED

- Scanning coil and driver for electron-beam parallel scanning.



● RHEED Pattern Processing system

- RHEED pattern/oscillation monitoring software with CCD camera and its shading hood



* Specifications and appearances may be subject to change for improvement without notice.