

## Electron Source for RHEED

Home / RHEED-15

### Products

- > RHEED
  - > Standard RHEED Systems
    - > RHEED-12
    - > **RHEED-15**
    - > RHEED-20
    - > RHEED-30
    - > RHEED-35
    - > RHEED-40
    - > RHEED-50
    - > RHEED-60
  - > TorrRHEED™ for PLD, Laser MBE, CVD
  - > Specialized RHEED Systems
  - > RHEED Accessories
  - > RHEED Software and Control
- > AUGER / XPS / EELS / REELS
- > Electron Sources
- > Ion Sources
- > X-ray Source
- > Energy Analyzers & Imaging Energy Filters

## RHEED-15

RHEED guns from STAIB Instruments provide unique electron optics systems for diffraction studies. Important options include **differential pumping (DP)** for use in high pressures and **beam rocking** to expand the sample positions that can be monitored. Short (S) or super short (SS) housings can be selected for confined spaces.

### Key features

- Energy range 500 eV to 15 keV
- Beam current (max.) 30  $\mu$ A
- Beam size (min.) 100  $\mu$ m at low current and 150 mm WD and max. energy

### Characteristics

- Working distance 50 mm – 500 mm
- Differential pumping (DP) (optional)
- Beam rocking (optional)
- Basic beam blanking
- Beam blanking, external (optional)
- Advanced beam steering (patented)
- Parallel beam shift (optional)
- Computer control (optional)
- Remote control
- Microprocessor controlled beam current regulation (optional)
- Magnetic shielding (optional)



Not all parameters can be reached simultaneously. Above specifications may change without notice. Pictures / diagrams for reference only.

- > Charged Particle Detectors
- > PEEM & IEEM
- > UHV-Systems for Surface Analysis
- > Packages for Surface Analysis
- > Data Acquisition & Instrument Control Software

## Typical Applications

- In situ* Characterization
- Molecular Beam Epitaxy (MBE)
- Oxide Molecular Beam Epitaxy (Oxide MBE)
- Pulsed Laser Deposition (PLD)
- Laser Molecular Beam Epitaxy (Laser MBE)
- Ion Beam Assisted Deposition (IBAD)
- Sputter deposition
- Atomic Layer Deposition (ALD)
- Metalorganic Chemical Vapor Deposition (MOCVD)
- Combinatorial approaches
- Reflection Electron Energy Loss Spectroscopy (REELS)
- Cathodoluminescence

## Accessories & Related Products

- Fluorescent screens
- Screen shutters
- Magnetic shielding for the beam path
- Filaments
- Pre-mounted, pre-aligned cathode units
- X-ray shielding glass covers
- Complete service kit
- Diagnostic box
- RHEED data acquisition & data analysis package
- STAIB Computer Control Module
- RHEED imaging analyzer
- RHEA100
- In-situ* AugerProbe™

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## APPLICATIONS

- > *In situ* Characterization
- > Surface Analysis Techniques
- > Material Growth Monitoring
- > Electron Diffraction
- > Scanning Electron Microscopy
- > Photoelectron Microscopy (PEEM)
- > Depth Profiling
- > Space Environment Simulation
- > Surface & Materials Modification

## STAIB INSTRUMENTS

- > Company
- > Where to meet us
- > Contact
- > Jobs

## INFORMATION

- > Home
- > Contact
- > Legal Disclosure
- > Privacy Policy

