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Technical Specifications of Integrated EDS and WDS System

PV7400/E-PL-LP Neptune Integrated EDS-WDS with Octane
Elite Plus and Lambda Plus Neptune Integrated EDS-WDS
with Octane ElitePlus and Lambda Plus

Octane Elite Plus Silicon Drift Detector delivers high-quality
EDS data at previously unachievable speeds.

• Maximum energy resolution of 125 eV guaranteed for
  Mn Ka, measured according to ISO 15632:2012
• Resolution stability greater than 90% up to 200 kcps ensures
  high quality data at high collection speeds
• CUBE Technology-based electronics for fastest EDS processing
• Enables input counts up to 2.0 Mcps and throughputs up to 850 kcps
• Silicon Nitride window with honeycomb grid for element
  detection down to Al L (73 eV)
• 1:1 Al Lα to Al Kα peak ratio at 2.5 kV
• Ethernet communication allows remote control and
  troubleshooting of detector
• Liquid Nitrogen-free with integrated Peltier cooling system
• Motorized slide
• Octane Elite Plus sensor area: 30

mm2Lambda Plus Spectrometer

Lambda Plus is designed for X-ray analysis in a wide energy
range to provide very high-count rates, Peak-to-Background ratios
and better than 20 eV energy resolution for X-ray energies below
10 keV. Lambda Plus is a parallel beam X-ray spectrometer
(PBS)with polycapillary X- ray optics.

Lambda Plus has capacity for up to 5
crystals. Standard Crystal Selection
Lambda Plus:
2d = 80 Å (Cr/Sc) Optimized N //185-
420 eV2d = 60 Å Optimized O &
F//420-1100eV 2d= 30 Å OVO 30 O-S//
1100-1700eV
2d=8.74 Å PET Al-S // 1700-3600eV

2d= 4.027 Å LiF200 Optimized for Ti-Zn // 3300-10800eV

Crystals for Lambda Plus:

2d=80 Å Cr/Sc Optimized for N but works well for C.

2d=60 Å Works well for O and F, not as good as 2d=80 Å Cr/Sc for N. Works for energies from about 400 eV up to 1000 eV. Very good for Mn,Fe, Co, Ni, Cu and Zn.

2d=30 Å for energies above 1000 eV to about 2700 eV. Particularly good for Mg and Al. It works for higher energies giving about 2 times the count rates of PET but the resolution ofPET is much better.

PET 2d=8.74 Å for energies above 1700 eV. High resolution. Can resolve the Ta (M)/Si (K) overlap easily.

LiF200 2d=4.027 Å Ideal for transition elements, high sensitivity with good resolution

TEAM™ EDS Enhanced Software Suite blends powerful elemental analysis routines with an intuitive, easy to use interface that ensures ideal data collection, analysis and reporting for users of all levels. Smart Features in the TEAM™ software streamline analysis and facilitate Electron Microscope interface for Beam Control package.
workflow, while optimizing data quality and helping users solve characterization problems quickly and easily.

• Smart Drift Correction
• Dynamic Reporting
• Dynamic data editing

TEAM™ WDS Software

Suite

TEAM™ WDS Analysis Software provides an intuitive and easy to use analytical package available for the SEM. The workflow functions are automated with Smart Features that guide Startup, Analysis, and Reporting. TEAM™ WDS works seamlessly with TEAM™ EDS and TEAM™ EBSD. EDS and WDS spectra can be collected simultaneously and displayed side by side or overlapping.

• Smart Focus
• AutoWDS
• Smart Quant

Beam Control and Data Acquisition Package - ScanGenerator with Embedded DPP

Beam control and data acquisition package provides digital control of the electron microscope beam and acquisition of up to two simultaneous videos signals with 16-bit resolution.

• Advanced signal acquisition electronics for SDD drive high through put and stable resolution performance
• User-selectable processing times allow collection tailored to application-specific needs. Faster processing times drive higher throughput. Longer times improve resolution performance.
• 5-level fast discriminator settings offer better pile-up rejection and reduce sum peaks
• Choice of 5 or 10 eV/channel resolution for spectral collection to improve overlap deconvolution

Column Software enables control of reading and changing of electronmicroscope column parameters through EDAX software. Offered if capability available on electron microscope.

Stage Software enables control of microscope stage (X, Y and Z axes) through EDAX software. Offered if access controls are available from electron microscope.

Warranty: One Year