

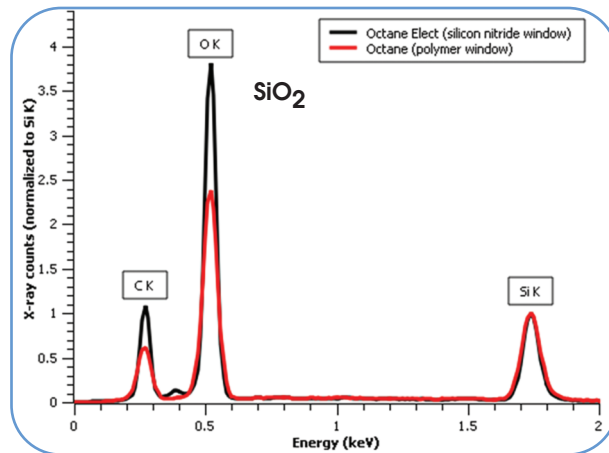


- Octane Elect EDS System with manual slide
- Fast SDD with silicon nitride window
- Increased light element sensitivity
- Outstanding low-energy performance
- Unparalleled resolution stability
- High speed data processing
- Market-leading throughput count rate
- Integrated EDS-EBSD option with Pegasus Analysis System

The Octane Elect EDS System is an enhanced Energy Dispersive Spectroscopy (EDS) platform with the latest advancements in Silicon Drift Detector (SDD) technology and high speed electronics. Tailored for users who demand higher performance and functionality than the options available in entry-level systems, the Octane Elect EDS System provides excellent resolution and high throughput at an optimal value with a remarkable low energy sensitivity for light element detection and low voltage (kV) microanalysis.

### Best light element performance

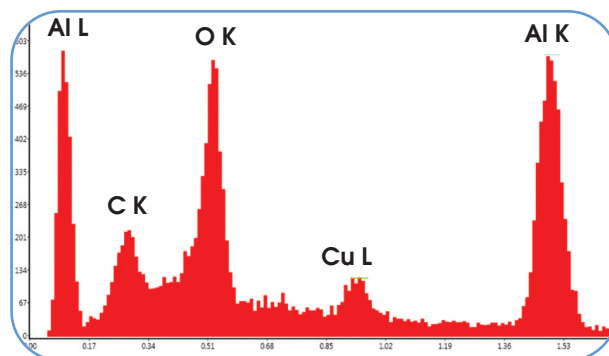
The Octane Elect SDD with a silicon nitride ( $\text{Si}_3\text{N}_4$ ) window offers major transmission improvements compared to detectors with a polymer window, leading to greatly improved light element performance and significantly more critical data for the materials analyst.



Spectra acquired from a silicon dioxide sample at 10 kV. The comparison of the scaled spectra to the Si K peak clearly shows the increased oxygen and carbon peak intensities achieved with a  $\text{Si}_3\text{N}_4$  window.

### Low kV performance

The mechanical properties of  $\text{Si}_3\text{N}_4$  allow the use of thinly fabricated windows with a low aspect ratio support grid, offering a great benefit in terms of low energy sensitivity and optimal low voltage analysis.



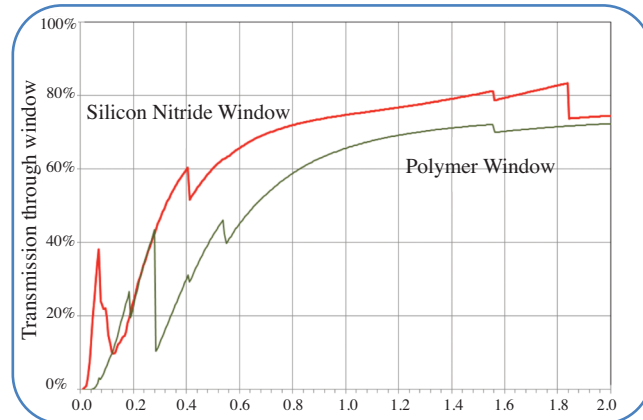
Al L to Al K peak height ratio of 1:1 at 2.5 kV

## Features

- Octane Elect SDD options:
  - Plus (30 mm<sup>2</sup>)
  - Super (70 mm<sup>2</sup>)
- 127 eV resolution at Mn K
- Carbon detection:
  - >500 k cps for ultra fast mapping and particle acquisition
- Detection range:
  - AL L (73 eV) - Am
- Throughput: 850 k ocps at 1.6 M icps
- Cooling: Peltier
- Al L to Al K peak height ratio of 1:1 at 2.5 kV
- Standard with EDS Analysis Software
  - Fast Phase Mapping routine (patent pending) and materials libraries
  - Smart Diagnostics
  - Smart Acquisition
  - EXpert ID
  - Smart Mapping
  - Smart Data Management

## Benefits

### Silicon Nitride window



The Si<sub>3</sub>N<sub>4</sub> window offers superior low energy transmission compared to a polymer window.

### Optimized SDD electronics for stable energy at high collection rates

- Fast pulse processing for mapping and quantification
- Optimized data quality at all count rates
- High resolution quantitative analysis at mapping speeds greater than 400,000 output cps

### Throughput

The EDAX EDS systems with advanced detection electronics offer the highest throughput count rate on the market for the best possible analysis and increased productivity.

### Reliability

The design of the SDDs with the material properties and durability of the Si<sub>3</sub>N<sub>4</sub> window offer the most robust and reliable detectors for all EDS applications. The unique design means that they are corrosion and shock resistant, and suitable for plasma cleaning.

### EDS Analysis Software allows users to optimize their analysis time and get the best possible data from their sample

- Smart Diagnostics and Smart Acquisition facilitate optimized collection and analysis conditions
- Smart Pulse Pile-Up Correction minimizes concerns typical of high count rate collections and allows maximum use of SDD technology

### Conclusion

The design enhancements and analytical benefits of the EDAX EDS Systems advance SDD technology to the highest level of performance. The Octane Elect EDS System offers users great value and sophisticated solutions to meet their materials characterization challenges with the best results.