

EDAX Element EDS System

Product Bulletin – EDS



- Compact design easily integrates into an industrial environment
- High-performance SDD for SEM EDS
- Optimized for low energy x-ray transmission to increase the efficiency of light element detection
- Easy-to-use APEX software with touchscreen capability
- Fast, efficient results for industrial needs
- Advanced, low-noise electronics

The EDAX Element energy dispersive spectroscopy (EDS) system delivers powerful analytical capability in a compact package, maximizing performance and flexibility while providing streamlined operation to guarantee fast results and ease of use. It is ideal for the industrial market, where application-specific problems must be solved quickly and accurately. Combining an Element silicon drift detector (SDD) with the user-friendly APEX™ software provides a complete EDS microanalysis solution for all levels of analysis and high throughput industrial applications.

Element SDDs

- Excellent resolution
- Designed with a silicon nitride (Si_3N_4) window to optimize low-energy x-ray transmission for light element analysis
- Advanced low-noise electronics for outstanding throughput
- Small footprint offers flexibility to ensure ideal geometry and data collection conditions

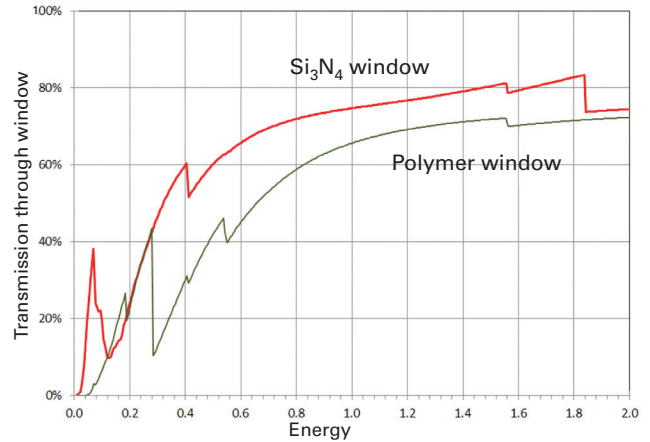


Figure 1. Comparison of Si_3N_4 windows with polymer windows.

APEX software

The intuitive APEX software for EDS ensures high-end results and ease of use. APEX software simplifies compositional analysis and delivers high-quality data processing with accurate and reliable results. The user interface can be customized for a specific workflow, offering various layouts, colors, and data report formats.

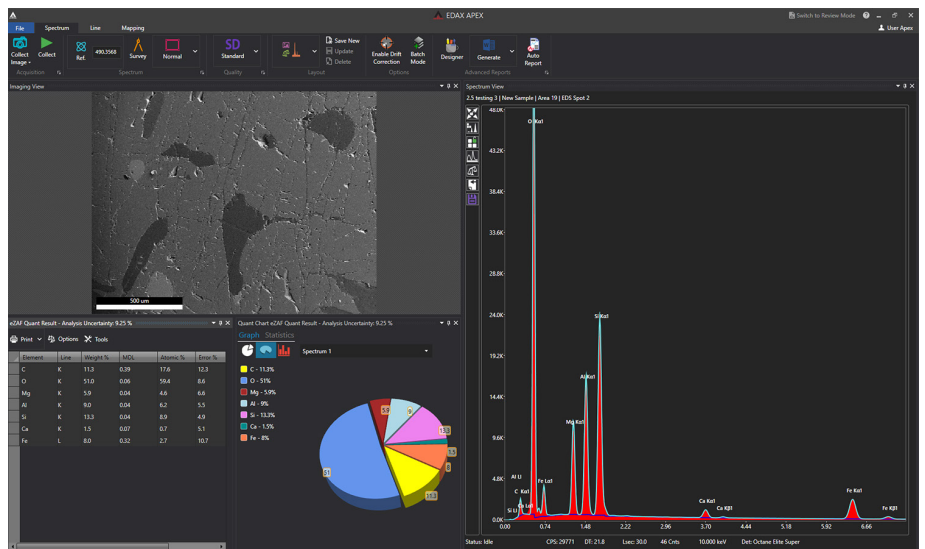


Figure 2. Comparison of Si_3N_4 windows with polymer windows.

Specifications

- Element SDD – 30 mm²
- Si₃N₄ window
- 129 eV resolution at Mn Ka at 10k cps
- Hermetically sealed vacuum encapsulated module
- X-ray input >1m cps
- Throughput >300k cps
- Peak/Background >10,000/1
- Stable resolution
- Detection range: Be to Am
- Thermoelectric Peltier cooling (fan and LN free)
- Fixed or manual slide options
- Only available with APEX Standard software

Features and benefits

Outstanding light element results and best low-energy performance

- The clearest window and low-noise electronics deliver a detection range down to Be.

Reliability

- The design of the SDDs with the material properties and durability of the Si₃N₄ window offers the most robust and reliable detectors for EDS applications. The unique module design means they are corrosion and shock resistant and suitable for plasma cleaning.

Conclusion

The Element EDS system offers powerful analytical capability and market-leading performance. It is compact and has a small footprint, making it ideal for use in the growing tabletop and compact scanning electron microscope markets. With an excellent price-to-performance ratio, Element is about getting results as quickly and accurately as possible, making it an ideal tool for industrial applications.

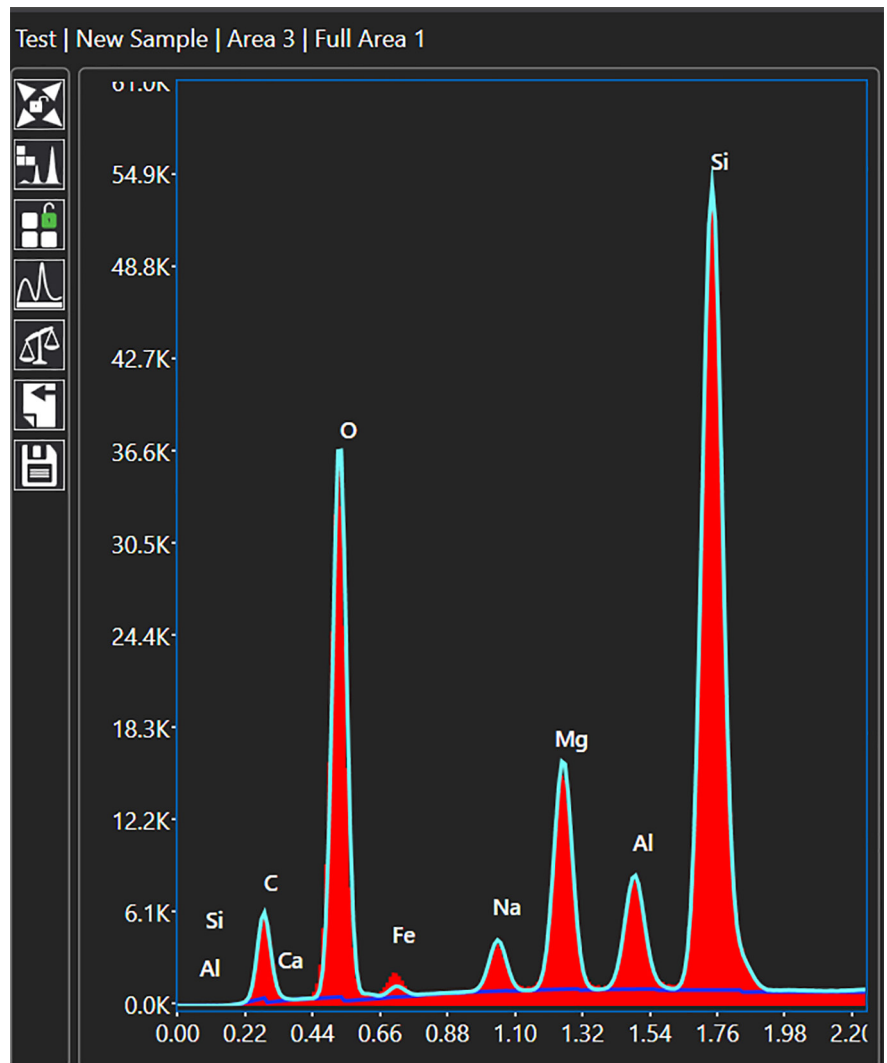


Figure 3. EDS spectrum of a mineral sample captured at an accelerating voltage of 20 kV.