

Product Sheet XRF 17

S2 PUMA Series 2 with HighSense™ XP Detector

- Enhanced Performance for all elements

The HighSense™ XP sets new standards in energy-dispersive X-ray fluorescence (EDXRF) detector technology. It is the latest addition to Bruker's HighSense Silicon Drift Detector (SDD) Series. The HighSense XP is based on Bruker's own chip technology. It is equipped with a graphene window and comes with state-of-the-art dynamic detector profiling for ultimate flexibility.

The 0.9 µm graphene window combines ultra-high transmission with robustness, making it the ideal

choice for industrial applications in all environments – dusty, humid, hot, cold, and even at high elevations. The mechanical stability during shock tests is even better than the already excellent strength of the beryllium window of the standard HighSense detector. The graphene window does not require a supporting Si grid, resulting in 15-30% higher transmission for Mg and heavier elements.

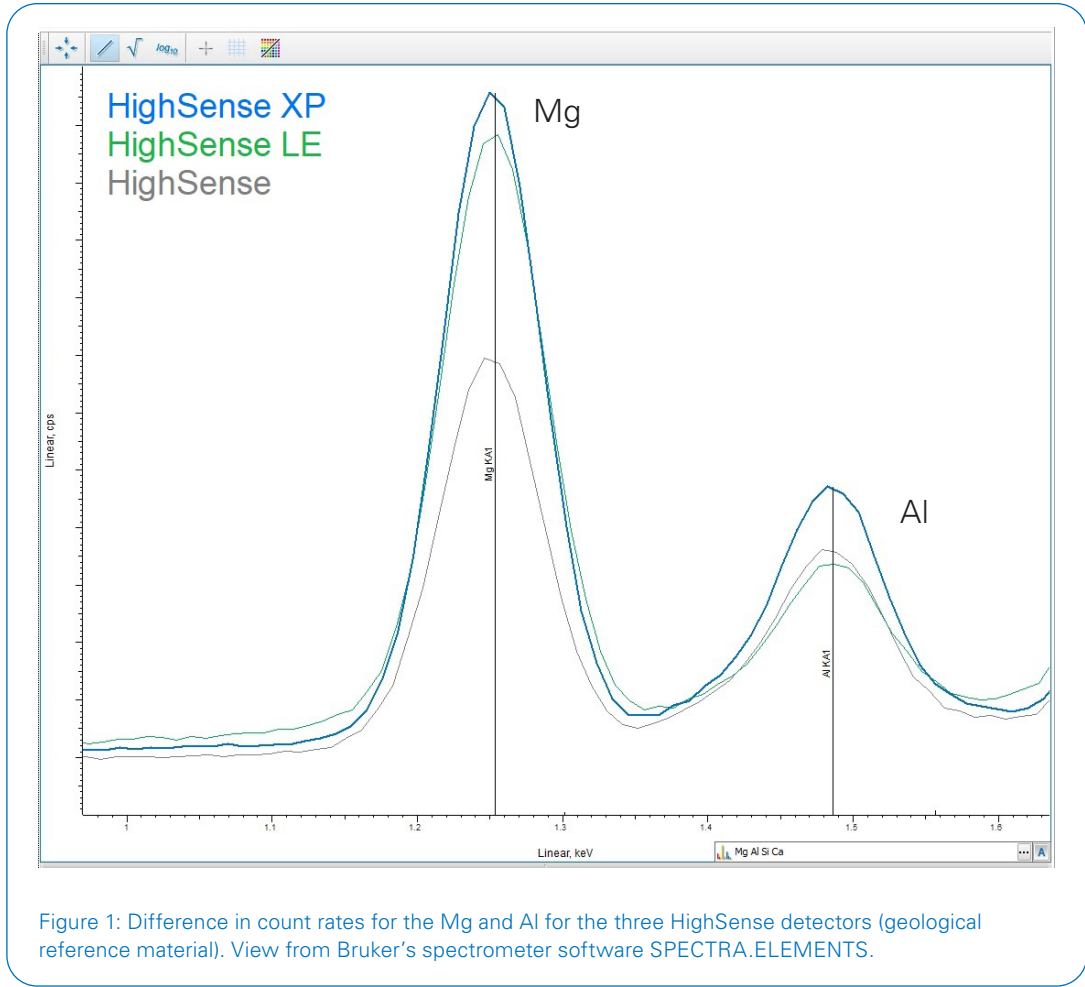


Figure 1: Difference in count rates for the Mg and Al for the three HighSense detectors (geological reference material). View from Bruker’s spectrometer software SPECTRA.ELEMENTS.

HighSense Detector Series

Like the other two detectors of the HighSense Series, the HighSense XP offers high count rates, super-fast signal processing, and excellent energy resolution. Compared to previous EDXRF detector series, the HighSense family comes with at least 300% higher count rates and significantly improved energy resolution. This pays back immediately, allowing to measure faster,

to reach lower detection limits and/or to improve the analytical precision.

Within the HighSense Series, the HighSense XP is the top-of-the-line EDXRF detector, offering best-in-class sensitivity for all elements detectable with EDXRF (see Figure 1 and Table 1).

Table 1: Specifications of the HighSense Detector Series.

	HighSense XP	HighSense LE	HighSense
Detector Type	SDD	SDD	SDD
Element Range	C – Am	(C) F – Am	(Na) Mg - Am
	Graphene (0.9 µm)	Polymere window	Be (8 µm)
Light element sensitivity (≤Si)	++	++	o
Medium element sensitivity (>Si)	++	+	+
Heavier element sensitivity (>Fe)	++	+	++
Dynamic Detector Profiling	Yes	No	No
Best Energy Resolution at Mn kA	<132 eV*	~135 eV	~135 eV
Max. input count rate	2.400.000 cps	1.500.000 cps	1.500.000 cps

*At count rate of 400.000 cps

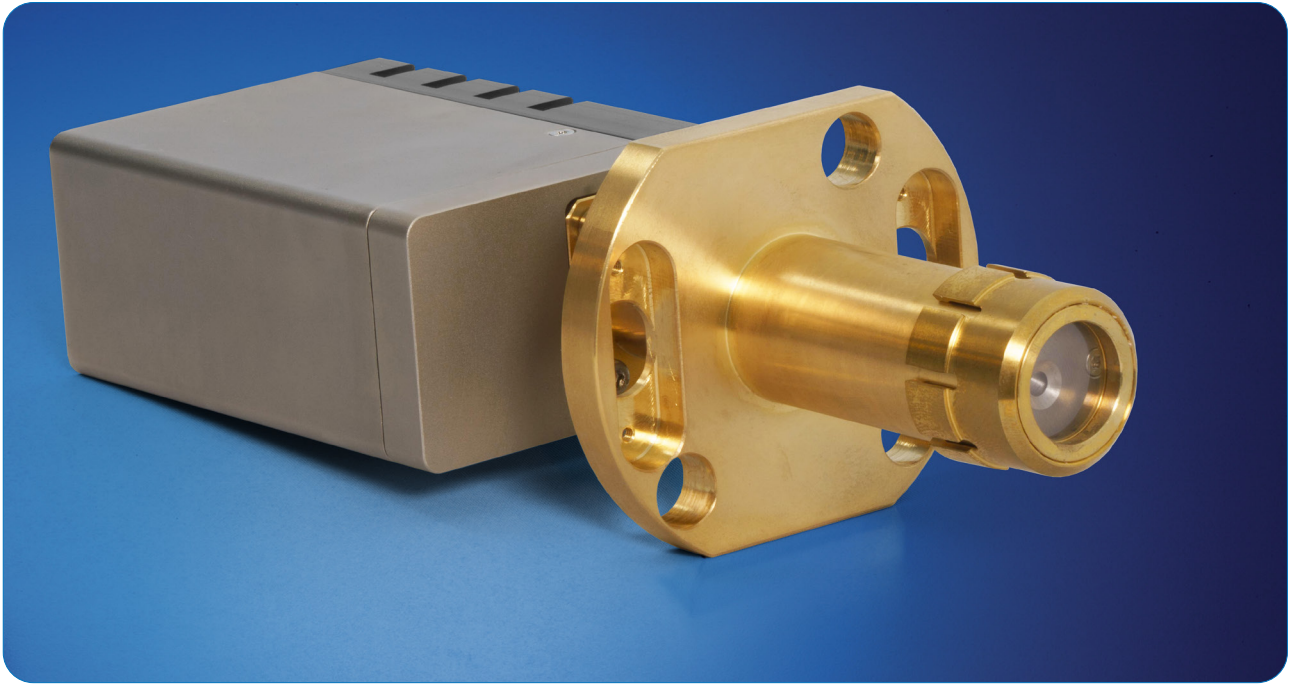


Figure 3: HighSense XP with Detector Cap – unrivaled performance meets ultimate robustness!

Bruker AXS is continually improving its products and reserves the right to change specifications without notice. Order No. DOC-S80-EXS017 © 2021 Bruker AXS.

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