

XL-PMI+ Ultra XRF Analyzer



Eliminate the guesswork. Verify metal alloys for manufacturing quality assurance.

GE introduces the XL-PMI x-ray fluorescence (XRF) analyzers—powered by Thermo Fisher Scientific technology. Where low detection limits and high sample throughput are critical, our perfect combination of hardware, software, and direct industry experience helps meet your specific analytical requirements.

The XL-PMI Series is just another example of how we're improving the health of industry.

Breakthrough Technology—the XL-PMI+ Ultra Advantage

GE's XL-PMI+ Ultra combines advanced electronics and materials technology with dynamic features and the most versatile x-ray tubes ever used in a handheld XRF instrument. When this power is harnessed to the largest-area silicon drift detector (SDD) available in a handheld analyzer, it takes your analytical capabilities to a whole new level. From their extraordinary speed and precision to the integrated, tilting, color, touch-screen display and the customizable menus for ease of use, ergonomic XL-PMI analyzers are lightweight, ruggedly constructed, and fast.

What is the XL-PMI+ Ultra advantage? Ultra technology delivers vast improvements in sensitivity and measurement times—as much as 10-times faster than conventional Si-PIN detectors, and up to 3-times more precise than conventional silicon drift detectors. We achieved this improvement by uniquely combining an improved 50kV, 200 μ A x-ray tube, closely optimized geometry, and patented signal processing hardware and software. These advantages are coupled with our proprietary drift detector, one of the largest area drift detectors that is commercially available in a handheld XRF analyzer, providing you with superior performance in the form of faster analysis and lower detection limits.



The CCD camera and WeldSpot small-spot focus feature allows isolation and analysis of weld beads and other small sample areas.

GE's XL-PMI+ Ultra analyzer provides you with many distinct advantages:

- Superior light element detection (Mg, Al, Si, P, S) without helium purge or vacuum
- Highest performance and sensitivity for the most demanding applications
- Excels at analyzing components for residual elements in HF alkylation (API RP-571) and low Si sulfidation (API RP-939-C) systems including tramp/trace elements

Positive Material Identification (PMI)

PMI using handheld XRF analyzers has become essential for verifying all process components, including incoming materials inspection, in-process verification, and final product inspection. The XL-PMI+ Ultra has set the industry standard for fast, accurate alloy analysis and positive alloy grade identification.

The Instrument of Choice

GE's XL-PMI+ Ultra is the PMI instrument of choice when you require extreme accuracy, precision, and ease of use. With its faster analysis, higher precision, and the ability to measure light elements without helium or vacuum assistance, it is the ideal instrument to:

- Rapidly verify alloys
- Recover lost material traceability
- Isolate finished welds to validate filler material and dilution
- Confirm the integrity of process piping, valves and reaction vessels

Nondestructive XL-PMI XRF analyzers are leading the way for rapid and accurate positive material identification. Lightweight and ruggedly built for virtually any environment or weather condition, they deliver exceptionally accurate elemental analysis and alloy grade identification in seconds. Thousands of companies in the oil & gas, transportation, and power generation industries rely on our analyzers every day to ensure operational safety and maintain regulatory compliance.

GE's XL-PMI+ Ultra stands alone with its many standard features and available options. You can isolate welds for analysis on a sample using the integrated color CCD camera and the optional integrated

WeldSpot™ 3 mm small-spot focus, and then store the test area image along with the analysis data. Take advantage of the standard Thermo Scientific Niton Data Transfer (NDT) PC software suite to customize your instrument. You can set user permissions, generate custom reports, print certificates of verification personalized with your own company logo, or remotely monitor and operate the instrument hands-free from your PC. Integrated USB and Bluetooth™ communications provide direct data transfer to your PC or networked storage device, eliminating the cumbersome data synchronization procedures required by Windows Mobile®-based XRF analyzers.



With point-and-shoot simplicity, you can view the alloy grade and chemistry on the built-in, color, touch-screen display.

XL-PMI+ Ultra XRF Analyzer Specifications

Weight	<3.0 lbs (1.3 kg)
Dimensions	9.6 x 9.05 x 3.75 in. (244 x 230 x 95.5 mm)
Tube	Ag anode (6-50 kV, 0-200 µA max)
Detector	Large Area Drift Detector Proprietary detector with 300,000 throughput cps Resolution: <185 eV @60,000 cps @4µ sec shaping time
System Electronics	533 MHz ARM 11 CPU 300 MHz dedicated DSP 80 MHz ASICS DSP for signal processing 4096 channel MCA 32 MB internal system memory/128 MB internal user storage
Display	Tilting, color, touch-screen display
Standard Analytical Range	Up to 30 elements from Mg to U (varies by application)
Optional Light Elements	Ultra-low light element detection via He purge
Data Storage	Internal >10,000 readings with spectra
Data Transfer	USB, Bluetooth™, and RS-232 serial communication
Security	Password-protected user security
Mode (Varies by application)	Alloy Mode Coating Mode Mining Mode Industrial Pb Paint Mode
Data Entry	Touchscreen keyboard User-programmable pick lists Optional wireless remote barcode reader
Standard Accessories	Integrated CCD camera for locating and storing images Locking shielded carrying case Shielded belt holster Two lithium-ion battery packs 110/220 VAC battery charger/AC adaptor PC connection cables (USB and RS-232) Niton Data Transfer (NDT) PC software Safety lanyard Check samples/standards
Optional Features and accessories	WeldSpot 3 mm small-spot collimation Thermo Scientific SmartStand™ portable test stand Stationary (bench-top) test stand Mobile test stand Field Mate™ Thermo Scientific Extend-a-Pole™ extension pole Welding mask Thermo Scientific HotFoot™ hot surface adapter
Licensing/Registration	Varies by region. Contact your local distributor.

XL-PMI Analyzers

Whether you need an analyzer for incoming material inspection, verification of in-stock parts, or PMI of in-service process components, GE's XL-PMI+ Ultra raises the bar—combining outstanding analytical performance with cutting-edge technology.

GE's XL-PMI analyzers represent just one of our handheld analyzer solutions, which include XRF tools for metal alloy identification and many other analysis needs.



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