

# Meet the Z-200C+ PREMIER

## The Highest Performance Laser Gun (LIBS)



## How Does it Work?

The Z-200 C+ Premier utilizes LIBS (laser induced breakdown spectroscopy). We've replaced the bulky, power-hungry electric spark source in OES with a miniature, military-grade, high energy pulsed laser. The laser's small beam profile reduces argon consumption by a factor of 1,000. Now the argon supply is a small user-replaceable canister in the handle of the analyzer, instead of a large external tank. For general alloy analysis the argon yields about 600 tests. For L-grades, the number of tests drops to about 125 because several tests are averaged. Miniature laser, reduced argon volume combine to yield the world's ONLY handheld for carbon in stainless, steels, and other alloy materials.

### Z-200C+ Premier

Spectral range 190 nm to 625 nm, 5-6 mJ/pulse, 50 Hz laser, argon purge. The Z-200C+ Premier offers in-field analysis of key elements Li, Be, C, B, Na, Mg, Al, Si, Ca in addition to transition and heavy metals. The Z-200C+ Premier analyzes may be calibrated to measure every element EXCEPT H, F, Br, Cl, O, N, Rb, Cs, S.

### Unique Features of the Z

#### Most Powerful Laser

**High speed laser cleaning shots.** Eliminates most surface sample prep.

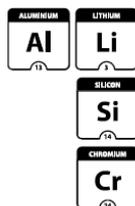
**Argon Purge.** Precision and detection limits improve by up to 10x with argon purge.

**Eliminates bad burns.** On-board camera and laser targeting eliminates poor quality "burns,"

**Android OS and Data SHARE Apps.** Share data direct to phone, sync with any computer globally, print to wireless printers. Eliminate inefficient data downloading forever



### More than just Carbon!



**Lithium, Boron, Beryllium in Aluminum alloys.** LIBS technology excels at measuring critical alloy elements such as Mg, Si, Li, Be, B, Cr, Mn, Cu and other transition, heavy metals.

**Sulfidic corrosion.** The Z measures Si down to 0.02% in 3 seconds for sulfidic corrosion. In use at major refineries.

**Cr for Flow accelerated corrosion (FAC).** The Z measures Cr content < 0.03% in just a few seconds, without the need for X-ray radiation sources.

**Specialty alloy applications?** The Z measures elements that X-ray can't: Li, Be, B, Na. Many specialty materials are distinguished by presence of alloying low atomic number elements not detectable with handheld X-ray technology.

# SciAps Z Series LIBS Specifications

The most advanced, most precise laser-based (LIBS) analyzer available.



<b>Weight</b>	4 lbs with battery
<b>Dimensions</b>	8.25" x 11.5" x 4.5"
<b>Excitation Source</b>	5-6 mJ/pulse, 50 Hz repetition rate, 1064 nm laser source.
<b>Spectrometer/Range</b>	Multiple CCD based spectrometers: Z-200 C+ range 190 nm – 625 nm
<b>Available Apps</b>	Alloy, Geochem (Mining), Empirical, Environmental Apps. New Apps are added regularly please check with company or website.
<b>Spectral Data</b>	Spectral data collected in either ungated or gated operation, with user settable gate delays
<b>Acquisition Operation/Argon Purge</b>	On-board, user replaceable argon cartridges for operating in argon purge environment. Air-based operation optional. Argon canister provides approximately 600 tests before replacement.
<b>Analytical Range</b>	Z-200C+ Premier: Capable of measuring carbon content down to 0.008%, suitable to distinguish L-grade stainless from straight and H-grades, and to analyze most carbon steels. One or more lines from all elements except H, F, Cl, Br, N, O, Rb, Cs, S.
<b>Laser Raster</b>	On-board XY stage for rastering laser to discrete locations for targeted analysis or averaging. Raster pattern up to 16 x 16 grid, 256 locations.
<b>Processing electronics Auto-focus</b>	ARM Cortex -A9 dual-core / 1.2 GHz Memory: 1 GB DDR2 RAM, 1 GB NAND Z-direction stage, computer controlled for manually or automatically adjusting laser focus location on sample. Essential for liquids analysis.
<b>Power</b>	On board rechargeable Li-ion battery, rechargeable inside device or with external charger, AC power.
<b>Display</b>	5" color touchscreen Smartphone type display - PowerVR SGX540 3D graphic
<b>Data Storage</b>	Results Storage: 16 GB SD
<b>Comms/Data Transfer</b>	Wifi, Bluetooth, USB. Connectivity to most devices, including SciAps ProfileBuilder PC software.
<b>Sample viewing</b>	On-board camera/video for viewing sample before, during analysis, laser spot finder to show where laser strikes sample.
<b>Apps</b>	Alloy, Geochem factory calibrated, Empirical App for user-generated calibrations, ElementPro for qualitative analysis of any sample.
<b>Calibration check</b>	Internal shutter is also 316 stainless for totally automated calibration and wavelength scale validation.
<b>Drift Correction</b>	Only needed for higher accuracy analysis (argon purge). Automated drift correction using factory provided or user provided reference materials.
<b>Grade library (alloy)</b>	500+ grades, multiple libraries supported, grades may be added on analyzer or via PC software package (ProfileBuilder).
<b>Security</b>	Password protected usage (user level) and internal settings (admin).
<b>Regulatory</b>	CE, RoHS, USFDA registered. Class 3b laser. Sample sensor on-board, allows for operation under Class 1 conditions, subject to local LSO approval. CE, RoHS, USFDA registered.

#### Standard Accessories

Waterproof carrying case, 2 Li-ion batteries, charger, USB cable, Standard ProfileBuilder software for importing, editing alloy grade libraries (alloy App), viewing, saving results, data display. Wrist strap, Factory start-up training and support, Lifetime free software upgrades, Spare Prolene windows.

VIDEO <http://goo.gl/EmIBKp>



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