Datasheet

LIBS analysis

Laser focused carbon analysis

Fast, accurate Niton Apollo handheld LIBS analyzer.

Applications

- Measure challenging structural shapes and sizes, including 1/4” piping, 1/4” bars, and larger weld wires
- Bypass additional costs and time spent with onsite small-part measurement capabilities
- Increase shots per cylinder and return on investment with a refined tapered nose and Argon seal
- Determine alloy composition and calculate carbon equivalency to grade metal samples and determine piping weldability
- Verify critical assets and inspect materials at any point of need for Positive Material Identification (PMI) and Quality Control (QC)
- Validate Material Test Reports (MTR)
- Prevent contaminated scrap from entering supply streams and detect tramp and trace elements to meet regulatory standards

Introduction

Discover the Thermo Scientific™ Niton™ Apollo™ Handheld LIBS Analyzer. Engineered to help conquer your toughest analytical challenges, the Niton Apollo analyzer specializes in measuring carbon content in a convenient, portable form factor. Powered by laser induced breakdown spectroscopy (LIBS), this analyzer delivers unmatched speed, superior performance and enhanced productivity. Unleash the possibilities and bring the power of lab analysis to the field.

Analytical performance

Designed to provide fast analysis and low detection limits, the Niton Apollo ensures superior results. Powered by an effective laser and high purity argon purge, the Niton Apollo analyzer delivers lab quality analysis in about 10 seconds. Users can calculate carbon equivalency and perform advanced averaging, while also identifying alloy grades and programming pseudo elements. Data is displayed in real time, enabling fast and efficient decision making.

Expanded field use

Avoid maneuvering heavy equipment into tight spaces. Weighing just 6.4 pounds (2.9 kilograms), the Niton Apollo analyzer transforms a traditional laboratory, or cart-mounted optical emission spectroscopy (OES) system, into a highly portable handheld analyzer. Experience a whole new range of motion with easy analysis when you climb up pipelines and into trenches. A tapered nose helps users achieve even more coverage to measure difficult-to-reach areas, such as tight welds, cavities, and small part samples.

Increased productivity

Discover high-speed performance combined with point and shoot simplicity. With minimal training, the Niton Apollo analyzer is easily operated even by non-technical users. Fast analysis times help increase sample throughput and production. A hot-swap Milwaukee Tool™ battery also keeps users up and running when it’s time to replace a low battery.

Safe analysis

A powerful laser should be operated with the utmost care. The Niton Apollo analyzer comes equipped with three (3) robust safety interlocks to help users reduce the risk of a laser misfire. Tried, tested, and validated by a third party, our interlocks help keep operators safe. Designed to measure chamber pressure, spectral type, and light/ dark conditions, users can securely operate this analyzer with peace of mind.

thermo scientific

Functionality

Vivid icons and an intuitive application interface ease navigation and configuration. Utilize swipe and touchscreen functionality, even with a gloved hand. The Niton Apollo analyzer's optional directional keys provide added usability. A micro and macro camera enable precise sample positioning and collect images for better record keeping. WiFi accessibility also automatically and securely transmits data from your device to PC.

Reliability

Partner with dedicated service professionals ensuring instrument performance to deliver consistent results. Our service solutions optimize your instrument investment with calibration services, unlimited technical support, remote diagnostics, convenient depot repair, and parts availability.

Specifications

Weight	6.4 lbs with battery (2.9 kg)	
Dimensions	12 x 13 x 4 in (30.48 x 33.02 x 10.16 cm)	
Laser	1064nm laser	
Safety features	Chamber pressure, spectral type, and light/ dark sensor interlocks	
Modes / analytical range	Stainless steel: C, Al, Si, Ti, V, Cr, Mn, Co, Ni, Cu, Nb, Mo, W Low alloy/carbon steel: C, Al, Si, Ti, V, Cr, Mn, Ni, Cu, Mo, W	
Argon usage	About 200 shots per cartridge	
Libraries	Default alloy libraries based on SAE, AISI, ASTM standards. Users may create, clone and edit libraries	
IP rating	IP54 (splash and dust proof)	
Operating environment	Temperature: 32°F - 104°F (0°C - 40°C)	
Altitude	6,000 ft maximum	
Display	Tilting, color, resistive touchscreen display	
Power	24V, 3.75A, 90W power supply	
Macro camera	Integrated CCD macro camera for capturing overview images of parts and tagging measurement locations	
Micro camera	Integrated CCD micro camera for locating and recording measurement positions	
Global positioning system	Internal GPS (ability to include coordinates with sample information)	
Bluetooth™	Bluetooth 4.0 (supports print functionality)	
Memory / data storage	512 MB internal system memory / 16 GB industrial grade storage Stores approximately 5,000 readings with spectra (fewer if macro and micro images are saved)	
Data entry	Touchscreen keyboard. User customizable data entry	
Data transfer	WiFi, USB	
Operating system	Linux™	
Support software	NitonConnect PC software	
Security	Password-protected user security	
Languages	English	
Standard accessories	Locking shielded carrying case Two (2) Milwaukee M18™ Redlithium™ High Demand™ CP2.0 battery packs One (1) Milwaukee M18™ & M12™ multi-voltage charger One (1) box analytical argon inert gas (5 pack)	Setup standards Laser safety glasses Instrument cleaning kit Safety lanyard and carabiner PC connection cable
Optional accessories	Thermo Scientific™ bulk argon adapter. Additional laser safety glasses	
Compliance	CE, RoHS, FCC, Industry Canada, Safety to IEC 61010-1:2010	
Licensing / Registration	Varies by region. Contact your local distributor.	

WARNING: INVISIBLE LASER RADIATION AVOID EXPOSURE TO THE BEAM. CLASS 3B LASER

Wavelength: 1064 nm **Peak Pulse Energy: <12.5 mJ**
Pulse Duration: <10ns **Repetition Rate: 20 Hz**

Complies with 21 CFR 1040 with deviations pursuant to Laser Notice No. 50 dated June 24, 2007 and IEC/EN 60825-1:2014, Ed. 3.0

Learn more at **thermofisher.com/nitonapollo**