



Innovator In Spectroscopy Equipment

LGS2515

2" & 2.5" & 3"



**LAB GAMMA
SPECTROMETER
(2 & 3) LAYER SHIELD
MODEL LGS2515
(2", 2.5" & 3")**

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CATALOG



SPECTROMETER



FREE DOWNLOAD

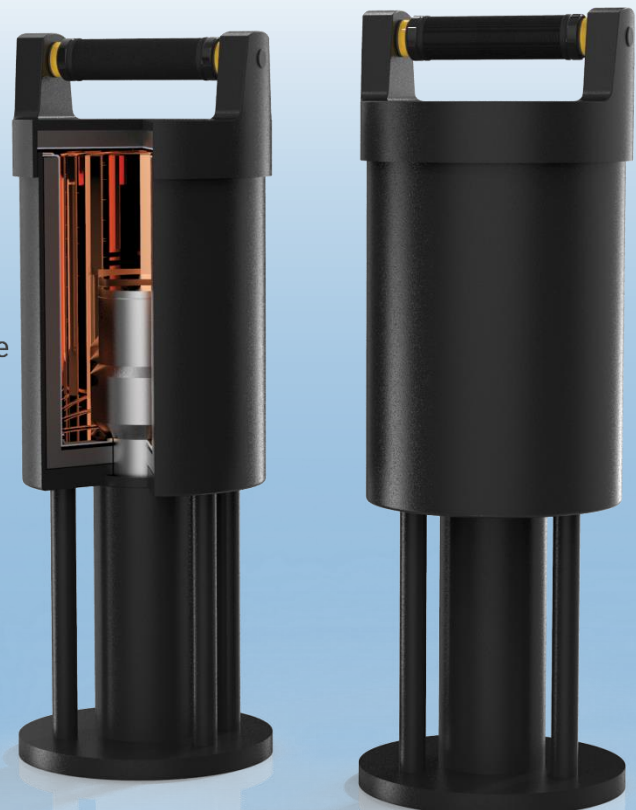
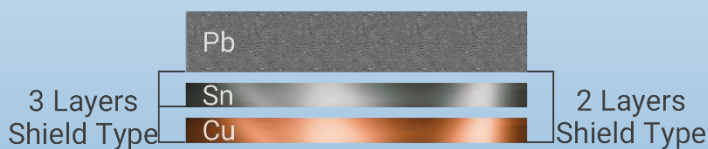
LAB GAMMA SPECTROMETER (2 & 3) LAYER SHIELD MODEL LGS2515 (2", 2.5" & 3")

Features

- Field Gamma spectrometer
- Closed measuring chamber with scintillation detector
- Efficient scintillator probes (2", 2.5" or 3" NaI(Tl)) with 2 or 3-layer shield (in 6 version)
- Extreme sensitivity to gamma rays
- Clear, immediate indication if any nuclide-specific maximum permissible concentrations are exceeded
- Supports all data extraction and reanalysis data
- 4096 channels spectrum presentation
- Very high counting rate
- High sensitivity and uniform response
- High efficiency
- Low limits of detection and decision
- Documentation of measured values
- Unique Full Spectra Analysis method
- Simultaneous and separate measurement
- Ready for field operation
- Continuous operation under severe environmental condition
- Wide temperature range
- Special rugged design to withstand typical field usage,
- Waterproof against streaming water and fully dust protected

FAST, HIGH RESOLUTION AND ACCURATE GAMMA SPECTROSCOPY BASED ON CUSTOMIZED SHIELD DESIGN

X- and Gamma-Rays Low Background Shield



Description

The LGS2515 (2", 2.5" & 3") from Control Farayand Pasargad (CFP) is a well-shielded (2 or 3-layer shield) gamma activity measurement system offering gamma spectrum calculations in the sample. The system can be utilized in various applications including environmental analysis, food samples and nuclear medicine.

The LGS2515 in six versions is equipped with a 2", 2.5" or 3" NaI(Tl) detector which leads to impressively short measuring time. In the first version with 2" NaI(Tl) detector and the shield comprises 2 layers (2L) including copper and lead from interior to exterior, respectively. The second version is similar while tin layer has been added (3L). In third and fourth version with 2.5" NaI(Tl) detector and the shield built 2 and 3 layers, fifth and sixth version with 3" NaI(Tl) detector at 2 and 3 layers with the above mentioned materials, respectively.

The overall dimension of the system is 562.4mm height and 200mm diameter while the cavity for sample holder has diameter of 148mm and depth of 219mm, approximately.

Using modern digital signal processing algorithms, the USB Base can accurately distinguish between the two types of radiation and accurately measure their energies. It is easy to operate and provides quick and reliable measurement results. The system can accurately distinguish between gamma, beta and mixed pulses. The instrument is ideally suited for nuclide-specific activity measurements in the radionuclide laboratory.

The measurement electronics is a modular designed system including a high voltage unit with preamplifier and an ADC for the acquisition of spectra. The measurement electronics LGS2515 is operated via PC software. This allows very intuitive user guidance. Pulse height spectra can be evaluated, several service functions are available including background measurement, energy calibration and spectrum recording.

Specifications

Model	LGS2515-2"	LGS2515-2.5"	LGS2515- 3"
Type (Crystal size)	2" (5.08 cm)	2.5" (6.3 cm)	3" (7.62 cm)
Shield (layers)	2L (Cu, Pb), 3L (Cu, Sn, Pb)		
Layer thickness	2mm copper, 1mm tin and 13mm lead		
Input(s)			
USB port	DC +5V USB (200mA)		
Output(s)			
Output	No output signal		
Control(s)			
USB port	Setting configure via USB cable		
Indicator(s)			
Indicator	No indicator		
Performance			
Resolution	< 7% FWHM @ 662 keV	< 7.2% FWHM @ 662 keV	< 7.5% FWHM @ 662 keV
Energy rang	20 – 3000keV	20 – 3000keV	20 – 3000keV
Background measurement	~ 180-220cps	~ 250-300cps	~ 450-550cps
Detector			
Gamma detector	NaI(Tl)		
PMT	14-pin 10-stage PMTs		
Data Acquisition and Analysis			
OS	Windows 7 or higher versions		
Software	LGS2515 (SOFTWARE)		
Measurement/Spectrum			
High voltage	0 - 2000V, Positive, 12 Bit resolution		
Energy calibration	Linear calibration		
ROI selection	4 ROIs to select on store		
	Spectrum Type		
	cumulative spectrums		
ADC			

Channels	12bit in 4096CH @120MHz FRQ
Conversion time	200nsec with 8.3nsec time interval
Digital Signal Processing	
ADC	12-bit and 120 MHz ADC
Charge sensitive preamplifier gain	10 – 150mV/pC (selectable)
Amplifier coarse gain	(x1 to 150x) in 15 step
Amplifier fine gain	Amplifier fine gain: (0 - 2x) in 65536 step
Rise time	Integration time filter for the energy calculation with software adjustable rise time in the range 0 to 0.546ms @80Mhz in 0 - 65536 step
Trigger	Trigger threshold software adjustment (0 to 100% scale) in 1024 step
Pole-Zero cancellation	Software fine tuning of the Pole-Zero cancellation
?????	Software gain stabilization
Pile-up	Pile-up rejection and Live time correction
Baseline	Baseline restorer with programmable averaging
Mechanical	



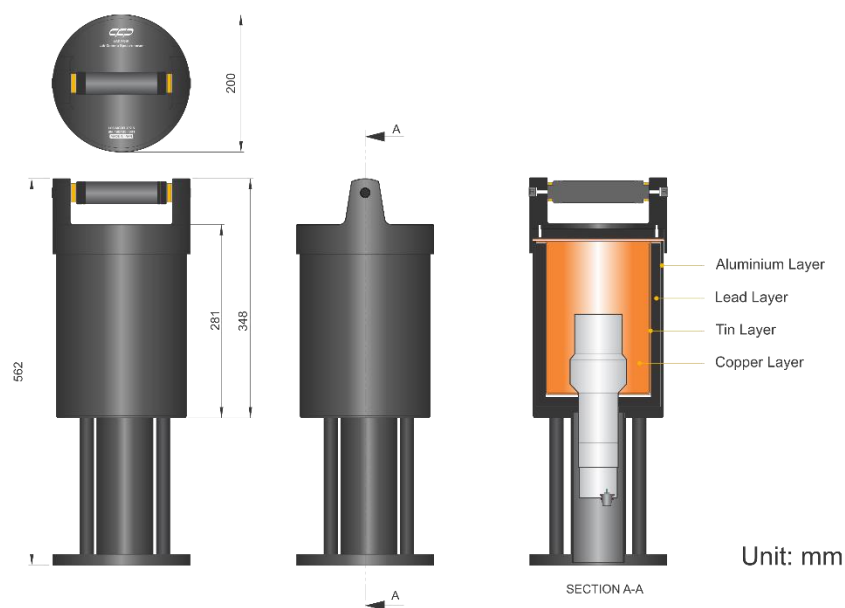
Application

- Analysis of Food samples and determine their particle
- Analysis of fluid samples and determine their particle
- Analysis of Bulk materials samples and determine their particle
- Nuclear medicine
- In-vitro test
- Mining and mineral analysis
- Monitoring in nuclear facilities
- Radiation protective measures in case of nuclear disasters Radionuclide laboratories
- Environmental monitoring
- Environmental science and industrial uses of radioisotopes
- Research in materials

Electrical, Mechanical and Environmental

Unit:LGS2515(2", 2.5" & 3")			
Type	2"	2.5"	3"
Electrical			
Power required	5V (200 mA) DC USB port (1W)		
Physical			
Dimensions (∅ × H)	200mm x 562.4mm		
Environmental			
Storage temperature	0°C to 50°C		
Operating temperature	10°C to 45°C		
Relative Humidity	10 to 80%		

Mechanical



Software and user interface

PC software

LGS2515 (SOFTWARE)

LGS2715 software containing fast access toolbar, menu bar, and different panels including new gamma histogram, gamma trace and state info

Fast access toolbar provide several functionalities usually used by user.

New gamma histogram panel represents the gamma spectrum in real-time manner.

Gamma trace panel shows the gamma pulses sensed by detector.

State info panel shows some information of detector parameters along with real time measurement results

Menu bar shows the total command needed throughout the device functioning

Input /Output (Using supplied LABS2615 software)

USB

Data Output formats





CSV, TXT, MCA, KML, XLS, LOG






Software main window

Ordering info

LGS2515-2" 2L Standard package includes

Part #	Image	Description
LGS2515-2" 2L main		Includes the main body of device (Detection system, linear stage, integrated display) 2" NaI(Tl) with 2 layer shield (copper and lead)
ACCE2515001-2" 2L		CD user guide (1 Pack)
ACCE2515003-2" 2L		Guaranty (one year)
ACCE2515011-2" 2L		USB cable (1 Pack)

LGS2515-2" 3L Standard package includes

Part #	Image	Description
LGS2515-2" 3L main		Includes the main body of device (Detection system, linear stage, integrated display) 2" NaI(Tl) with 3 layer shield (copper, tin and lead)
ACCE2515001-2" 3L		CD user guide (1 Pack)
ACCE2515003-2" 3L		Guaranty (one year)
ACCE2515011-2" 3L		USB cable (1 Pack)

LGS2515-2.5" 2L Standard package includes

Part #	Image	Description
LGS2515-2.5" 3L main		Includes the main body of device (Detection system, linear stage, integrated display) 2" NaI(Tl) with 3 layer shield (copper, tin and lead)
ACCE2515001-2.5" 3L		CD user guide (1 Pack)
ACCE2515003-2.5" 3L		Guaranty (one year)
ACCE2515011-2.5" 3L		USB cable (1 Pack)





LGS2515-2.5" 2L Standard package includes

Part #	Image	Description
LGS2515-2.5" 2L main		Includes the main body of device (Detection system, linear stage, integrated display) 2" NaI(Tl) with 3 layer shield (copper, tin and lead)
ACCE2515001-2.5" 2L		CD user guide (1 Pack)
ACCE2515003-2.5" 2L		Guaranty (one year)
ACCE2515011-2.5" 2L		USB cable (1 Pack)

LGS2515-3" 2L Standard package includes





Part #	Image	Description
LGS2515-3" 2L main		Includes the main body of device (Detection system, linear stage, integrated display) 2" NaI(Tl) with 3 layer shield (copper, tin and lead)
ACCE2515001-3" 2L		CD user guide (1 Pack)
ACCE2515003-3" 2L		Guaranty (one year)
ACCE2515011-3" 2L		USB cable (1 Pack)

LGS2515-3" 3L Standard package includes

Part #	Image	Description
LGS2515-3" 3L main		Includes the main body of device (Detection system, linear stage, integrated display) 2" NaI(Tl) with 3 layer shield (copper, tin and lead)
ACCE2515001-3" 3L		CD user guide (1 Pack)
ACCE2515003-3" 3L		Guaranty (one year)
ACCE2515011-3" 3L		USB cable (1 Pack)

* =we stand behind our products. We guarantee your satisfaction in the quality of our instruments by providing a complete one-year warranty covering any defect of workmanship, material, and/or design. If our products do not perform, we will provide complete repair and/or replacement. for guaranty conditions, please refer to manual device (LGS2515 - Manual)

Optional accessories and services

Part #	Image	Description
ACCE2515004		Installation
ACCE2515005		Training
ACCE2515006**		Re-Calibration (Interval) services. 1year factory maintenance suggested, not required
ACCE2515007		Hard case with foam insert

** = The proper maintenance & calibration of your instruments is critical to ensure proper performance & accuracy. for Re-calibration (Interval) services, please call with CFP company (021- 46045383)



Innovator in Spectroscopy Equipment



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