Innovator In Spectroscopy Equipment

LGBS2715-2"

Windows

LAB GAMMA BETA SPECTROSCOPT SYSTEM MODEL LGBS2715-2"

CATALOG

SPECTROMETER

FREE DOWNLOAD

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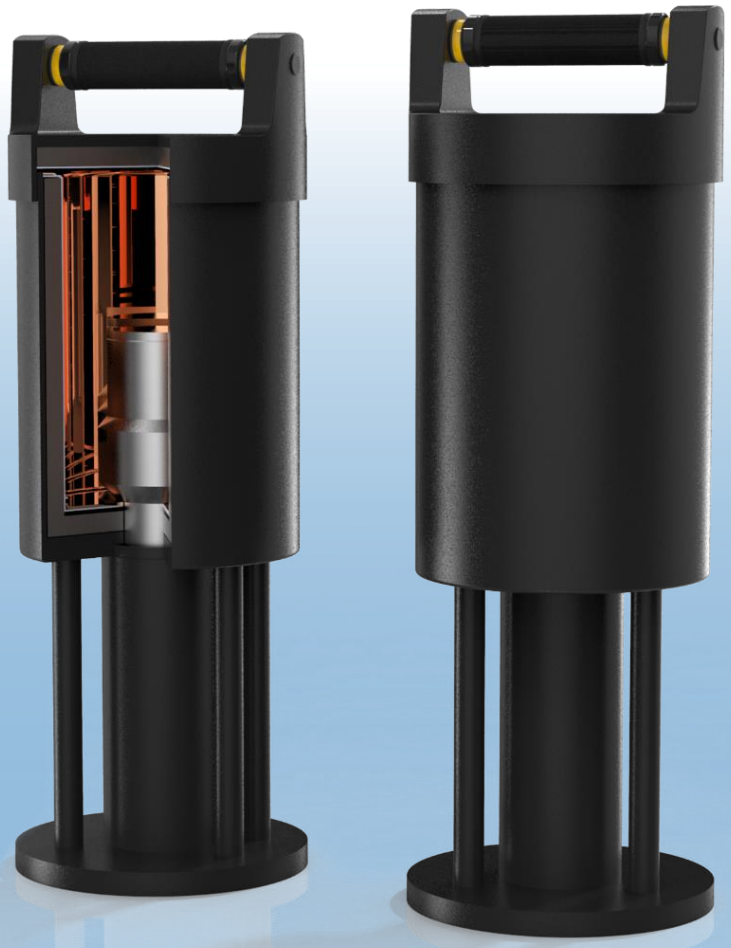
LAB GAMMA BETA SPECTROSCOPT SYSTEM
MODEL LGBS2715-2”

Features

- Efficient scintillator probes (2” NaI(Tl) + 0.25mm PVT)
- Planchet with up to 52mm diameter and 6.5mm height
- Closed measuring chamber with scintillation detector
- 4 Different energy ranges (adjustable digital gain)
- 2 Bank spectrum presentation (2x2048 channels)
- Supports all data extraction and reanalysis data
- Simultaneous and separate measurement
- Time gained by multiple measurement
- High sensitivity and uniform response
- Low limits of detection and decision
- Documentation of measured values
- Wide temperature range

HIGH RESOLUTION AND ACCURATE GAMMA AND BETA SPECTROSCOPY BASED ON CUSTOMIZED SHIELD DESIGN



Description

LGBS2715-2" is a well-shielded gamma-beta activity measurement system offering both simultaneous and separate measurement of gamma and beta activities in the sample. The system can be utilized in various applications including environmental analysis, food samples and nuclear medicine. The device is equipped with a 2" NaI(Tl) detector and 0.25mm plastic scintillator (PVT) which leads to impressively high spectrum resolution. The holder considered for the sample comes with two versions. In the first version, the shield compromises 3 layers including copper, tin and lead from interior to exterior, respectively. The second version is similar while tin layer has been excluded. 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. Using modern digital signal processing algorithms, the usbBase 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 LGBS2715-2" is operated via PC software. This allows very intuitive user guidance. Pulse height spectra can be depicted graphically and evaluated. Several service functions are available including background measurement, energy calibration and spectrum recording.

Specifications

Inputs/outputs
Inputs
USB
Outputs
USB
Performance
False beta to true gamma
1:10000 (In true gamma window)
False gamma to true beta
1:2000 (in true beta window)
Shield Properties
Martials and Thickness
Copper, Tin, Lead (version 1) – 2mm,1mm,13mm respectively Copper, Lead (version 2) – 2mm,13mm respectively
Cavity
219mm x 148mm (Depth x Diameter)
Background Measurement (Background is measured with closed shield opening)
Gamma
60CPS (with shield)
Beta
<0.1CPS
Detector
Gamma Detector
NaI(Tl), 2"
Beta detector
PVT, 0.25mm
PMT
14-pin 10-stage PMTs
Data Acquisition and Analysis
OS Requirement
Windows 7 or higher versions
Software
CFP-DMCA 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
2 simultaneous cumulative spectrums
ADC
Channels
12bit in 4096CH @120Mhz FRQ
Conversion time
200nsec with
8.3nsec time interval
Digital Signal Processing
12-bit and 80 MHz ADC
Software selectable coarse gain: (x1 to 150x) in 15 step
Software selectable fine gain: (0 - 2x) in 65536 step
Integration time filter for the energy calculation with software adjustable rise time in the range 0 to 0.819ms @80Mhz in 0-65536 step
Trigger threshold software adjustment (0 to 100% scale) in 1024 step
Software fine tuning of the Pole-Zero cancellation
Software gain stabilization
Pile-up rejection and Live Time correction
Baseline restorer with programmable averaging

Application

- Nuclear medicine
- In-vitro test
- Radio-immunoassay and analysis of environmental samples
- Food samples inspection

Electrical and Mechanical

Power required	
USB port - DC – 5V- 200mA (1W)	
Physical	
Dimensions	562.4mmx200mm (Height x Diameter)
Weight	36.00kg (3 Layers) 34.75kg (2 Layers)
Storage temperature	0°C to 50°C
Operating temperature	10°C to 45°C.

Software

DMCA software containing fast access toolbar, menu bar, and different panels including new gamma histogram, new beta histogram, 3D separation, gamma trace, beta 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.

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

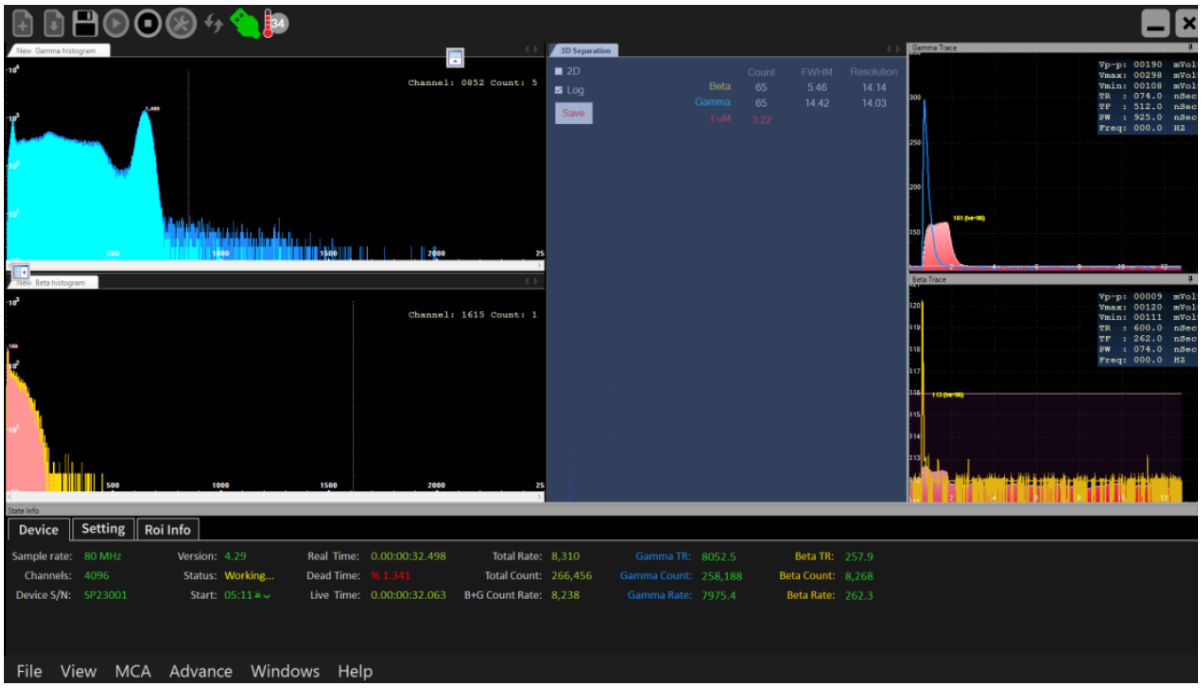
3D separation panel indicates the separated version of all pulses based on their shape in 3d dimensions.

Gamma trace panel shows the gamma pulses sensed by detector.

Beta trace panel shows the beta 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.



Software main window

Ordering info

Standard package includes

Part #	Image	Description
LGBS2715-2" main		Includes the main body of device (Detection system, linear stage, integrated display)
ACCE2715001-2"		CD User guide (1 Pack)

Optional accessories and services

Part #	Image	Description
ACCE2715002-2"		installation
ACCE2715003-2"		Training
ACCE2715004-2"		Hard case with foam insert
ACCE2715005-2"		Plastic planchet 2"
ACCE2715006-2"		Aluminum planchet 2"

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