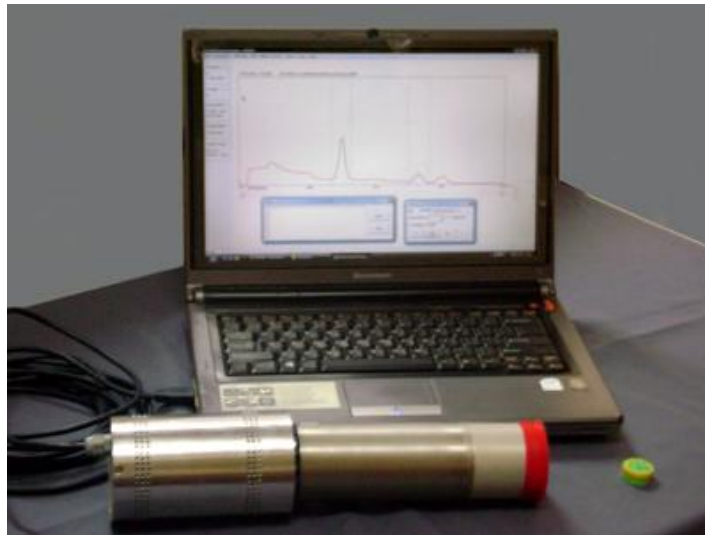


Model GSpec – USB Based Gamma Spectroscopy System

(Complete system with 1K MCA, High Voltage Supply, Spectroscopy Amplifier, Preamplifier)



Model GSpec is a versatile compact USB based 1024 channel Multichannel Analyzer based Gamma Spectroscopy system. GSpec is designed and manufactured indigenously by Para Electronics Mfg. Division of Electronic Enterprises (I) Pvt Ltd for 14 pin NaI(Tl) Scintillation Detector based Gamma Spectroscopy.

GSpec is powered by USB interface and includes preamplifier, spectroscopy amplifier, high voltage power supply for the detector and 1024 channel 48 MHz Wilkinson ADC with SiLab microcontroller for USB interface with PC for spectrum acquisition and data processing.

Data acquisition software is loaded on PC / Laptop and provides spectrum acquisition and display, spectrum analysis software for Energy calibration, ROI selection, area calculation, peak search, peak information, spectrum smoothing and spectrum data storage on PC hard disk.

High voltage supply necessary to operate scintillation detector is software programmable from 0 to 1200 volts in 256 steps. Spectroscopy amplifier gain is settable through PC. The whole setup has a resolution of around 7% or better with NaI(Tl) detector. It is suitable for applications where low resolution of nuclides is acceptable.

GSpec is ideally suited for Nuclear Spectroscopy experiments carried out at Universities, Environmental Survey Labs and Health Physics Units of Nuclear Power Plants and Chemical Control Labs.

**Input Signal Configuration :**

14 Pin base for standard NaI(Tl) Scintillation detectors
Built in Voltage Divider Network
Preamplifier for NaI(Tl) detector

High Voltage Power Supply :

0 to +1200 V dc, 0.5 mA
256 steps software programmable
Ripple < 30 mv

Spectroscopy Amplifier :

1 μ sec semi Gaussian shaping with internal PZ adjustment
Gain Setting settable through PC
Output : 0 to 5 V unipolar semi Gaussian, connected internally to ADC input

ADC :

1K Channel Willkinson type
48 MHz clock frequency
Conversion time - 20 μ sec for FS input
ADC control through Silab F340 micro controller via USB interface
USB cable length upto 5 meters
Differential Non Linearity less than 2 %

Power Supply : From USB Port of PC

Data Acquisition and Processing Software :

Acquisition and display of Gamma Spectrum
Energy Calibration, ROI selection, Area Calculation,
Peak search and peak information
Spectrum Stabilization & Smoothing of spectrum
Data Storage on PC hard disk

Mechanical :

Dimensions : 76mm Dia x 125mm Height, Cylindrical steel housing with 14 pin Socket
Weight : Approximately 1 Kg

Optional :

NaI(Tl) Detector, Lead Shield suitable for detector

Due to continuous R&D, specifications are likely to change without notice

For further details contact :

Electronic Enterprises (I) Pvt. Ltd.
Para Electronics Manufacturing Division



306, Nimesh Industrial Estate
Vidyalaya Marg, Mulund (East)
Mumbai 400 081
Phone : 022-2563 5600/ 2741
Fax : 022-2563 7835
Website : www.eeipl.in
Email: pemd@eeipl.in

Mumbai
022-25639904
eemulund@eeipl.in

Kolkata
033-25770551
eeecal@eeipl.in

BRANCHES
Hyderabad
040-23243352
eehyd@eeipl.in

Delhi
011-27240436
eedelhi@eeipl.in

Bangalore
080-23380451
eebng@eeipl.in

Kota
0744-2501113
eekota@eeipl.in