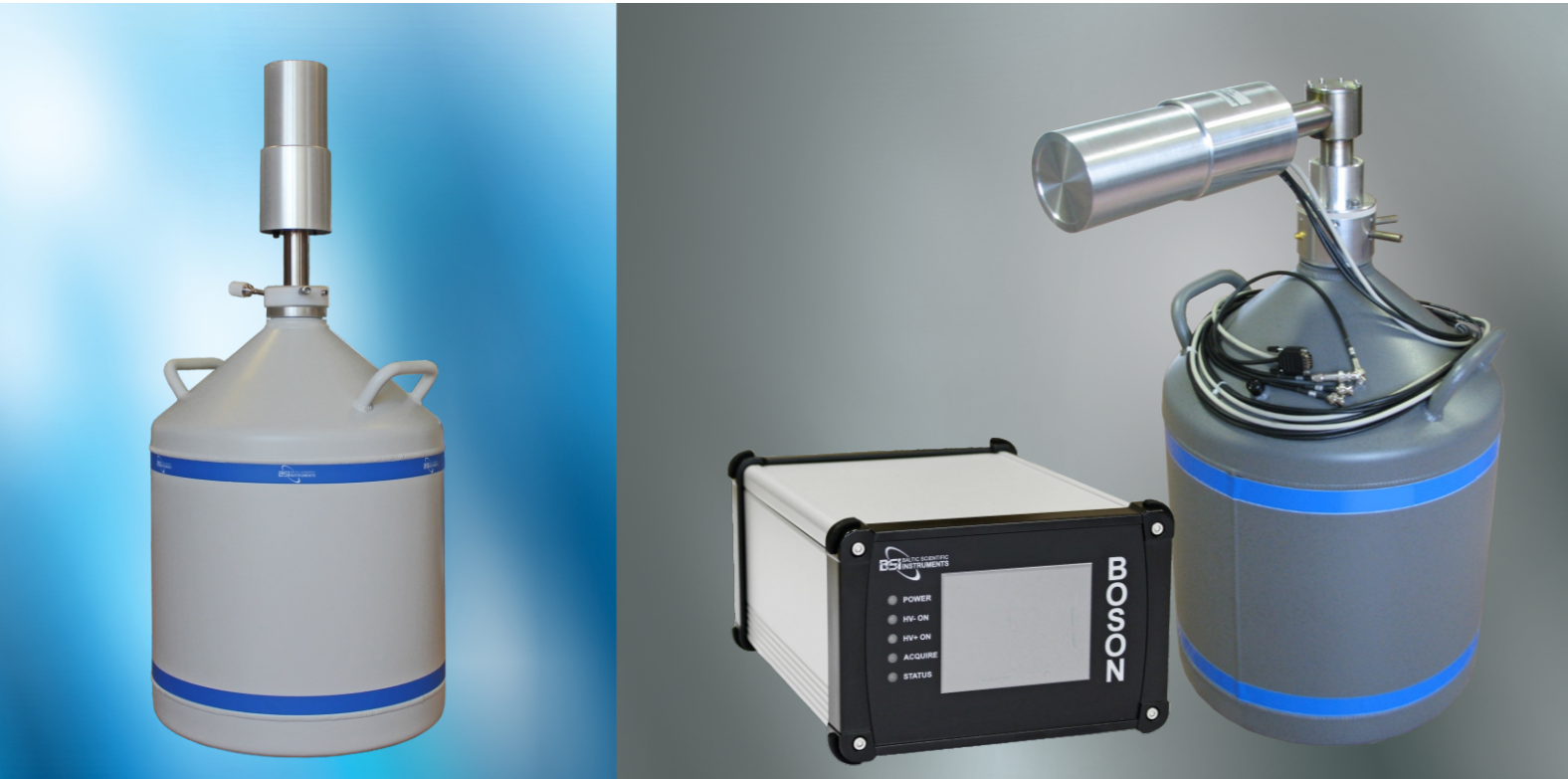


Specification



P-type HPGe Over-Square shape Detectors (with extended energy range) GCDX-OS

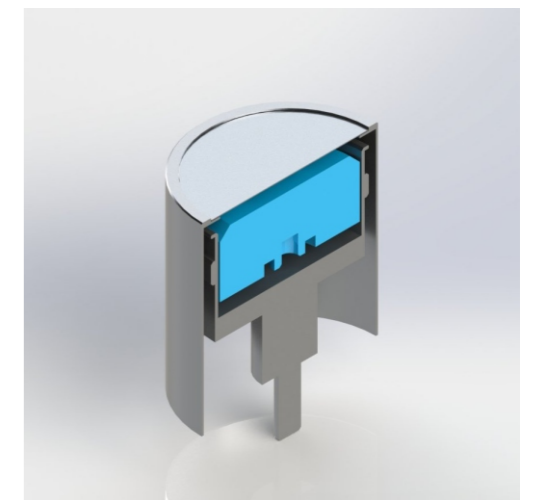
Model	Relative Efficiency, %	Sensitive area, mm ²	Thickness, mm	Energy resolution		
				at 5.9 keV (eV)	at 122 keV (eV)	at 1.33 MeV (keV)
OS-06350	6	1590	15	350	650	1.75
OS-07390	7.5	2000	15	390	650	1.80
OS-10350	9	2000	20	350	650	1.90
OS-12375	12	2000	35	375	680	1.90
OS-13400	13	2800	20	400	700	1.90
OS-18400	18	2800	25	400	700	1.90
OS-20450	20	3800	20	450	750	1.90
OS-26450	26	3800	25	450	750	1.90
OS-34450	34	3800	30	450	750	1.90
OS-37500	37	5000	25	500	750	2.00
OS-48500	48	5000	30	500	750	2.00
OS-60500	60*	6000	30	500	750	2.00

* Detectors with other relative efficiencies are available.

Energy range:
3 keV - 10 MeV with Be input window
5 keV - 10 MeV with carbon fiber input window

Advantages

- HPGe detectors with extended energy range GCDX-OS are different from GCDX by its shape. It is still allowing to go lower in energy range down to 3 keV and thin contact structure of the HPGe detector guarantee low energy photon transition to the HPGe crystal and its registration.
- Input window made of Beryllium or Carbon fiber of the detector is integrated into the end cap of the detector by using high-tech vacuum-tight materials.
- GCDX-OS HPGe detectors are showing way better performance, such as resolution improvement, if you consider energy range from 100 keV to 662 keV. This is vitally important for those applications where radionuclides with lower energies are required to measure and analyze.
- Over-square shape HPGe crystals of the GCDX-OS detectors provide better efficiency while measuring relatively compact samples like bottles, vials, petri dishes, etc.
- Increase of efficiency is observed due to the fact that HPGe crystal is having similar volume to GCD and GCDX detector but larger diameter in relationship to its height. Therefore, relative intensity and efficiency are higher in energy range 1.5-2 MeV.



Over-Square shape HPGe crystal

Application

Detection of Gamma-rays in nuclear energetics and environmental control, in industry and scientific research, in medicine and other applications.

Complete set (standard)

- HPGe coaxial detector
- Preamplifier with cooled input stage
- Dewar vessel
- Cable set
- Documentation

Accessories (optional)

- Multichannel Analyzer (Digital or Analog-Digital)
- Analytical Software packages:
 - quantitative and qualitative analysis
 - γ -spectra modeling & efficiency registration calculation for complex geometry objects
 - extended radionuclide library
- Liquid nitrogen storage and filling system
- Liquid nitrogen sensor and monitor
- Cable set extension

Features

- 10% - 100% and higher efficiency HPGe coaxial detectors are available
- **Extended energy range 3 keV - 10 MeV**
- Input window materials: Aluminum, Beryllium or Carbon-fiber
- Built-in or Remote Preamplifier types are available depending on application
- Low instrument background
- High energy rate up to 200000 MeV/s
- Excellent peak symmetry & high resolution
- HV supply protection if detector is warm
- High count rate indicator
- Variable cryostat design modifications

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