

LIQUID NITROGEN COOLED DETECTOR FOR GAMMA AND X-RAYS SPECTROSCOPY

HPGe Planar Detectors

MAIN FEATURES

- Built-in or Remote Preamplifier types are available depending on application
- Option to choose a preamplifier type with a resistive or opto-electronic feedback high energy rate up to 15000 MeV/sec
- Ability to increase energy rate to 20000 MeV/s radiation detection in any spatial orientation made possible by modifications to the portable cryostat during manufacturing
- Energy range from 3 keV to 1500 keV
- Input window materials: Aluminium, Beryllium or Carbon-fiber
- Excellent peak symmetry and high resolution
- HV supply protection if detector is warm
- High count rate indicator
- Variable cryostat design modifications
- Can be transported and stored without cooling

DESCRIPTION

Gamma and X-ray **HPGe Spectrometer** is intended for the conversion of gamma and X-ray quantum energy to signals proportional to their energy level. This is accomplished using amplitude electric signals and their amplification for further registration with a nuclear physics apparatus.



It is also intended for use as the gamma and X-ray detection component of radiological monitoring equipment for environmental objects in nuclear energetics, industrial production, agriculture, medicine, etc.

The **HPGe Planar Detectors** complete set is composed by the following components:

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

ACCESSORIES

In addition to standard supply, the following accessories are available upon request:

- Hexagon Multichannel Analyzer
- Analytical Software packages:
 - quantitative and qualitative analysis
 - Gamma spectra modeling and efficiency registration calculation for complex geometry objects
 - extended radionuclide library
- Liquid nitrogen storage and filling system
- Liquid nitrogen sensor and monitor
- Cable set extension



Model	Diameter, mm	Detector Sensitive Area, Area [mm ²]	Detector Sensitive Area, Thickness [mm]	Energy Resolution at 5.9 keV [eV]	Energy Resolution at 122 keV [eV]
GPD – 05 145	5	20	6	145	465
GPD – 08 155	8	50	6	155	485
GPD – 12 165	12	100	7	165	490
GPD – 12 160	12	100	10	160	490
GPD – 16 180	16	200	11	180	495
GPD – 25 300	25	500	13	300	545
GPD – 36 360	36	1000	13	360	585
GPD – 36 300	36	1000	15	300	560
GPD – 45 400	45	1590	14	400	600
GPD – 50 400	50	2000	15	400	600
GPD – 50 600	50	2000	20	600	750
GPD – 50 460	50	2000	35	460	680
GPD – 60 500	60	2800	25	400/500	700
GPD – 70 560	70	3800	25	560	750
GPD – 70 600	70	3800	30	600	780
GPD – 80 620	80	5000	30	620	800
GPD – 80 720	80	5000	30	480	720
GPD – 90 500	90	6500	30	500 ± 30	750

* Plenty of cryostat geometries are available



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