



MONOLITH HPGe Detectors with Stirling-cycle refrigerator

Complete set (standard)

Detection unit Monolith consist from the following integrated components:

- HPGe detector (any BSI type)
- Preamplifier with cooling input stage
- Long-lasting Stirling cooler with low power consumption
- Controller for the Stirling cooler
- Protective housing

Accessories (optional)

- Multichannel Analyzer
- Analytical Software packages:
 - quantitative and qualitative analysis
 - γ -spectra modeling & efficiency registration calculation for complex geometry objects
 - extended radionuclide library
- Collimator set
- Lead shield with supporting table
- Hand-cart or tripod

Features

- 10% - 160% efficiency HPGe p-type coaxial detectors are available;
- Energy range from 40 keV to 10 MeV for GCD model;
- Energy range from 3 keV to 10 MeV for GCDX/GCDX-OS models;
- High efficiency of radiation detection;
- High energy rate up to 200000 MeV/sec;
- Excellent peak symmetry;
- Detection of radiation in any spatial orientation depending on cryostat modification;
- Low background and Ultra - low background materials are available.

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Specification

Parameter	Value
HPGe detector relative efficiency	30 %*
Energy resolution**	
at 122 keV	< 1000 eV
at 1.33 MeV	< 2000 eV
Peak to Compton ratio	52 : 1
Energy range of detector operation	3*** keV – 3 MeV
Peak shape	
FWTM/FWHM	< 2
FW.02M/FWHM	< 3
Endcap window material	Al / Be / Carbon fibre
Cooling time of the detector, hours	8-10
Autonomous operation time, hours	24/7
Orientation in space	At any angle
AC Power supply	230 V, 50/60 Hz
Power consumption, max	< 250 W
Power consumption, nominal	< 120 W
Range of the operating temperatures, °C	0 ... +40

* Other detector types are available.

** Energy resolution measured in accordance with ANSI/IEEE Std. 325-1996, using spectrum analyzer MCA527.

*** Depending on detector type and input window.



No LN₂
required

