



# Specification

Parameter	Value
HPGe detector relative efficiency	30 %*
Energy resolution**	
at 122 keV	< 950 eV
at 1.33 MeV	< 1900 eV
Peak to Compton ratio	52 : 1
Energy range of detector operation	40 keV – 3 MeV
Peak shape	
FWTM/FWHM	< 1.9
FW.02M/FWHM	< 2.65
Endcap window material	Al / Be / Carbon fiber
Cooling time of the detector, hours	< 13
Autonomous operation time, hours	> 24
Orientation in space	Any
AC Power supply	240 V; 50/60 Hz
Power consumption, max	250 W
Power consumption, nominal	170 W
Range of the operating temperatures, °C	-10 ... +40

\* Detectors with higher efficiency are available  
 \*\* Energy resolution for a source at 1000 counts/s measured in accordance with ANSI/IEEE Std. 325-1996, using spectrum analyzer MS Hybrid, at shaping time 6  $\mu$ s.



## MONOLITH HPGe Detectors with Stirling-cycle refrigerator

### Complete set (standard)

Detection unit Monolith consist from the following integrated components:

- HPGe detector (GCD/GPD/GWD/GCDX)
- Preamplifier with cooling input stage
- Autonomous cooling system for the detector based on electrical machinery cooler EMC
- Controller for controlling the operation of EMC
- Fans (2-4) for EMC cooling

### 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 model;
- 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.

### Accessories (optional)

- Multichannel Analyzer (standalone or in-built)
- Analytical Software packages:
  - quantitative and qualitative analysis
  - $\gamma$ -spectra modeling & efficiency registration calculation for complex geometry objects
  - extended radionuclide library
- Collimator set
- Lead shield with supporting table
- Hand-cart or tripod

Baltic Scientific Instruments  
 Ganibu Dambis 26  
 Riga, LV - 1005  
 Latvia

Phone: (+371) 67383947  
 Fax: (+371) 67382620  
 Email: sales@bsi.lv  
 www.bsi.lv

No LN<sub>2</sub> required



Available for installation in Lead shield for low-background measurements and on a mobile cart

