



P-type HPGe Over-Square shape Detectors GCDX-OS

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



DESCRIPTION

The GCDX-OS HPGe detectors feature an optimized over-square crystal geometry, distinguishing them from standard GCDX models while maintaining their extended low-energy detection capability down to 3 keV. Their thin-contact structure and beryllium/carbon fiber input window integrated into the detector’s vacuum-sealed end cap ensure efficient transmission and registration of low-energy photons. These detectors deliver superior resolution in the 100–662 keV range, critical for precise analysis of low-energy radionuclides. The over-square crystal design (larger diameter-to-height ratio) enhances efficiency for compact samples (vials, Petri dishes, etc.) and boosts relative intensity in the 1.5–2 MeV range, despite maintaining a crystal volume comparable to GCD/GCDX detectors.

FEATURES

- Relative efficiency: 10% - 60%
- Extended energy range: 3 keV - 10 MeV
- Input window: Beryllium or Carbon-fiber
- Built-in or Remote Preamplifier types are available depending on application
- Low instrument background
- Excellent peak symmetry and high resolution
- Variety of cryostat geometries

COMPLETE SET

- HPGe coaxial detector (p-type)
- SHP Preamplifier with cooling input stage
- Cryostat
- Cooling system (Monolith/Nicole/LN2)
- Cable set

ADD-ONS

- Multi Channel Analyzer MCA
- Analysis Software GammaPRO
- Advanced software package MCC-MT
- Lead Shield
- Liquid nitrogen storage and filling system
- Etc.

| Model | Efficiency, % | Sensitive area, mm2 | 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 | 6500 | 30 | 500 | 750 | 2.00 |

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Gamma-rays