ORTEC

Safeguards planar HPGe-detektor

Planar HPGe gamma detector

Safeguards planar HPGe-detektor – planar HPGe gamma detector from ORTEC. Detector type: Planar HPGe.



Detector type
Planar HPGe [1]

Energy resolution at 122 keV
Warranted FWHM for SGD-16550P4: 550 eV at 1 kcps, 6 µs; 615 eV at 50 kcps, 1 µs [3]

Specifications

DETECTOR		
Detector type	Planar HPGe	[1]
Crystal thickness	5–15 mm by model	[2]
Aluminium window thickness	1 mm	[3]
PERFORMANCE		
Energy resolution at 122 keV	Warranted FWHM for SGD-16550P4: 550 eV at 1 kcps, 6 µs; 615 eV at 50 kcps, 1 µs	[3]
ELECTRONICS & SIGNAL		
Preamplifier	Resistive feedback with no-ring output	[1]
MECHANICAL		
Crystal diameter	6–36 mm by model	[2]
Endcap	Aluminium	[1]
Endcap diameter	70 mm	[3]
ORDERING & ACCESSORIES		
Models	SGD-16550P4 and SGDGLP series	[2]
Cryostat configurations	PopTop or Streamline	[2]
Bias control	SMART-1 (-SMN), optional	[1]
Cooling and accessories	Cryostat and dewar or other cooling device required for operation; not included with the detector. A cryostat must be ordered with a Streamline detector.	[2]

Models

Model	Active diameter	Crystal thickness	Energy resolution at 122 keV	Energy resolution at 122 keV, high count rate
SGD-16550	16 mm [2]	15 mm [2]	≤ 550 eV FWHM; at 1 kcps and 6 µs shaping time [3]	≤ 615 eV FWHM; at 50 kcps and 1 µs shaping time [3]
SGDGLP-06480	6 mm [2]	5 mm [2]	≤ 480 eV FWHM; at 1 kcps and 6 µs shaping time [3]	–
SGDGLP-10485	10 mm [2]	7 mm [2]	≤ 485 eV FWHM; at 1 kcps and 6 µs shaping time [3]	–
SGDGLP-16525	16 mm [2]	10 mm [2]	≤ 525 eV FWHM; at 1 kcps and 6 µs shaping time [3]	–
SGDGLP-25545	25 mm [2]	13 mm [2]	≤ 545 eV FWHM; at 1 kcps and 6 µs shaping time [3]	–
SGDGLP-32570	32 mm [2]	13 mm [2]	≤ 570 eV FWHM; at 1 kcps and 6 µs shaping time [3]	–
SGDGLP-36585	36 mm [2]	13 mm [2]	≤ 585 eV FWHM; at 1 kcps and 6 µs shaping time [3]	–

Model	Ordering configurations
SGD-16550	SGD-16550P4 (PopTop) / SGD-16550 (Streamline) [2]
SGDGLP-06480	SGDGLP-06480P4 (PopTop) / SGDGLP-06480 (Streamline) [2]
SGDGLP-10485	SGDGLP-10485P4 (PopTop) / SGDGLP-10485 (Streamline) [2]
SGDGLP-16525	SGDGLP-16525P4 (PopTop) / SGDGLP-16525 (Streamline) [2]
SGDGLP-25545	SGDGLP-25545P4 (PopTop) / SGDGLP-25545 (Streamline) [2]
SGDGLP-32570	SGDGLP-32570P4 (PopTop) / SGDGLP-32570 (Streamline) [2]
SGDGLP-36585	SGDGLP-36585P4 (PopTop) / SGDGLP-36585 (Streamline) [2]

Sources

[1] High Performance High Purity Germanium (HPGe) Planar Radiation Detectors for Safeguards and Non-Destructive Assay
RTEC (AMETEK) · product-page · Page heading; More Information; Options · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/radiation-detectors/high-pu…

[2] High-Performance Germanium Planar Detectors for Safeguards and Non-Destructive Assay – Product Configuration Guide
RTEC (AMETEK) · datasheet · p. 11, 'Ordering Information'; p. 2, Configuration Guidelines; p. 11, ordering notes · checked 2026-10-16
https://edge.sitecorecloud.io/ametekinc1236b-ametekb19a-productiondcfa-1d17/media/Project/Ametek/ortec-onlin…

[3] ORTEC Product Guide
RTEC (AMETEK) · catalog · PDF p. 26 (printed p. 23), SGD Planar Safeguards Detectors; PDF p. 26 (printed p. 23), 'SGD Planar Safeguards D etectors' (Endcap Diameter mm); PDF p. 26 (printed p. 23), 'SGD Planar Safeguards Detectors' (Al Window mm) · checked 2026-10-16
https://web.archive.org/web/20230405035438/https://www.ortec-online.com/-/media/ametekortec/product-guide/pr…

Every value is taken from the manufacturer’s own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer’s published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.