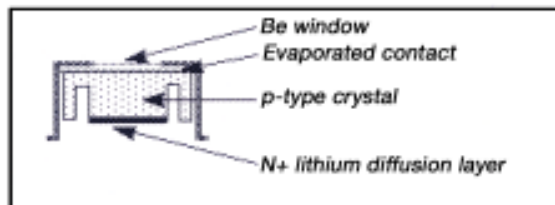


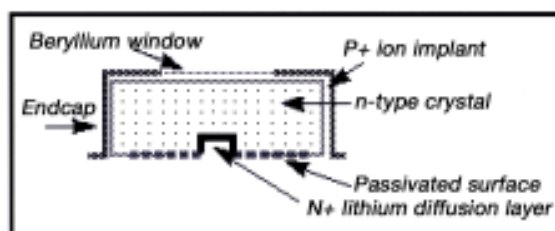


PGT IGP and NIGP Series

High Purity Germanium Planar Detectors



IGP Series HPGe Planar Detector



NIGP Series HPGe Planar Detector

PGT P-type germanium planar detectors have high efficiency in the lower energy ranges, making them the ideal detectors for transuranic materials and mixed gamma and X-ray samples. The combination of the thin entrance layer and beryllium window allows detection down to ~3 keV.

The IGP detectors are available in sizes from 25mm² to 100mm² to meet your needs for small-area counting at low to intermediate energies, with premium energy resolution.

Detectors with active areas larger than 500mm² have the standard resistive feedback preamplifier with an energy rate product limit (ECRPL) greater than 12,000 MeV/sec. Detectors with active areas <500mm² are furnished with an optical feedback preamplifier (ECRPL of 200 GeV/sec) or a Transistor Reset preamplifier (ECRPL of 800 GeV/sec).

Features:

- Vertical dipstick cryostat
- 30 liter dewar
- Aluminum endcap and beryllium window
- RG-11B/C resistive feedback preamplifier standard for detectors >500mm² active area
- PO-14B pulsed optical feedback preamplifier standard for detectors <500mm² active area
- 12-ft. bias, signal and power cables
- Unlimited temperature cycling without loss of resolution

Options:

- A variety of cryostat configurations available, including low-background designs
- Portable and mechanically cooled systems
- Transistor reset preamplifier for high count rates
- Ultra-low microphonic QUIET-ONE mounting

PGT N-type semi-planar germanium detectors offer the optimum in low noise and high resolution at low to intermediate energies. NIGP detectors have active areas of 200-3800 mm².

The capacitance of these detectors, with a wrap-around P+ contact and a small center N+ contact, is much less than that of a true planar of similar size, resulting in lower noise and improved resolution compared to any other detector geometry at energies of 3 keV to 1 MeV. Minimal dead layers and active contacts around the sides of the detector provide improved count rate performance and peak-to-background ratios. NIGP detectors are ideal for lung monitoring and body-burden assessments.

IGP Series Detectors

Model No	Area (mm ²)	Diameter (mm)	Depletion (mm)	eV FWHM @ 5.9 keV PO RG	eV FWHM @122 keV PO RG	Be Window (mils)
IGP25145	25	5.6	5.0	145 165	480 485	1.0
IGP25175	25	5.6	5.0	175 200	495 505	1.0
IGP55165	55	8.0	5.0	165 180	490 495	1.0
IGP55190	55	8.0	5.0	190 210	540 550	1.0
IGP105185	100	11.3	5.0	185 195	490 495	5.0
IGP107175	100	11.3	7.0	175 190	495 495	5.0
IGP110175	100	11.3	10.0	175 185	495 495	5.0

NIGP Series Detectors

Model No	Area (mm ²)	Diameter (mm)	Depletion (mm)	eV FWHM @ 5.9 keV PO RG	eV FWHM @122 keV PO RG	Be Window (mils)
NIGP205200	200	16.0	5.0	200 210	495 500	5.0
NIGP207195	200	16.0	7.0	195 215	495 500	5.0
NIGP210190	200	16.0	10.0	190 200	490 495	5.0
NIGP213190	200	16.0	13.0	190 200	490 495	5.0
NIGP505330	500	25.2	5.0	330 345	550 560	5.0
NIGP507315	500	25.2	7.0	315 330	545 555	5.0
NIGP510305	500	25.2	10.0	305 320	540 550	5.0
NIGP513305	500	25.2	13.0	305 320	540 550	5.0
NIGP1005400	1000	35.7	5.0	NA 400	NA 610	15.0
NIGP1010380	1000	35.7	10.0	NA 380	NA 595	15.0
NIGP1013360	1000	35.7	13.0	NA 360	NA 585	15.0
NIGP1510420	1500	43.8	10.0	NA 420	NA 650	20.0
NIGP1513400	1500	43.8	13.0	NA 400	NA 620	20.0
NIGP1516400	1500	43.8	16.0	NA 400	NA 620	20.0
NIGP20010470	2000	50.5	10.0	NA 470	NA 650	20.0
NIGP20013450	2000	50.5	13.0	NA 450	NA 650	20.0
NIGP20016420	2000	50.5	16.0	NA 420	NA 625	20.0
NIGP20020370	2000	50.5	20.0	NA 370	NA 625	20.0
NIGP27030425	2700	58.6	30.0	NA 425	NA 700	20.0
NIGP38030450	3800	69.6	30.0	NA 450	NA 950	30.0

For other sizes & resolutions, please call PGT

Typical Applications:

- Sediment analysis, Pb-210
- Lung monitoring
- Beam-Line X-ray spectroscopy
- XRF analysis
- Special materials / safeguards
- Actinide analysis

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