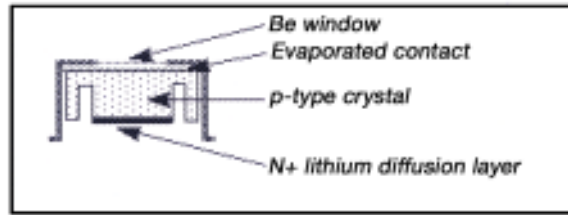
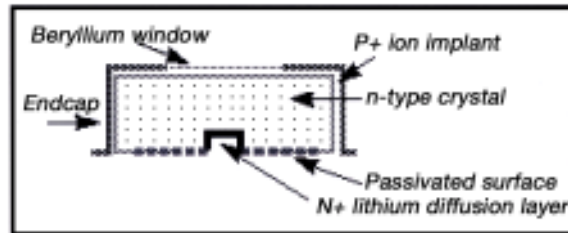


# PGT IGP and NIGP Series

## 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 25mm<sup>2</sup> to 100mm<sup>2</sup> to meet your needs for small-area counting at low to intermediate energies, with premium energy resolution.

Detectors with active areas larger than 500mm<sup>2</sup> have the standard resistive feedback preamplifier with an energy rate product limit (ECRPL) greater than 12,000 MeV/sec. Detectors with active areas <500mm<sup>2</sup> 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 >500mm<sup>2</sup> active area
- PO-14B pulsed optical feedback preamplifier standard for detectors <500mm<sup>2</sup> 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 mm<sup>2</sup>.

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 <sup>2</sup> )	Diameter (mm)	Depletion (mm)	eV FWHM @ 5.9 keV		eV FWHM @ 122 keV		Be Window (mils)
				PO	RG	PO	RG	
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 <sup>2</sup> )	Diameter (mm)	Depletion (mm)	eV FWHM @ 5.9 keV		eV FWHM @ 122 keV		Be Window (mils)
				PO	RG	PO	RG	
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

#### For More Information Contact:

Princeton Gamma-Tech, Inc.  
 1026 Rt. 518  
 Rocky Hill, NJ 08553  
 Tel: (609) 924-7310  
 Fax: (609) 924-1729  
 Web Site: [www.pgt.com](http://www.pgt.com)  
 e-mail: [nuclearsales@pgt.com](mailto:nuclearsales@pgt.com)

