

Partially Depleted Silicon Surface Barrier Detectors

Main Application: High-resolution charge-particle spectroscopy.

Supplied with B Mount unless otherwise specified.

Active Area (mm ²)	Guaranteed Maximum Resolution (keV)**		Minimum Depletion Depth 1000 µm	Guaranteed Maximum Resolution (keV)**		Minimum Depletion Depth 1500 µm§	Guaranteed Maximum Resolution (keV)**		Minimum Depletion Depth 2000 µm§
	α	β	Model No.	α	β	Model No.	α	β	Model No.
25	13	6	A-013-025-1000	14	9	A-014-025-1500	16	11	A-016-025-2000
	14	6	A-014-025-1000	16	11	A-016-025-1500			
50	14	7	A-014-050-1000	16	11	A-016-050-1500	17	12	A-017-050-2000
	15	8	A-015-050-1000	18	13	A-018-050-1500			
100	14	7	A-014-100-1000	17	12	A-017-100-1500	18	13	A-018-100-2000
	15	8	A-015-100-1000	19	14	A-019-100-1500			
150	15	9	A-015-150-1000	18	13	A-018-150-1500	19	14	A-019-150-2000
	16	10	A-016-150-1000	20	15	A-020-150-1500			
300	17	13	A-017-300-1000	20	15	A-020-300-1500	22	17	A-022-300-2000
	18	14	A-018-300-1000	23	18	A-023-300-1500			
450	18	13	A-018-450-1000	21	16	A-021-450-1500			
	19	14	A-019-450-1000	26	21	A-026-450-1500			

** First three digits of Model No. indicate total system resolution FWHM for ²⁴¹Am, 5.486-MeV alphas, using standard ORTEC electronics and 0.5-µs shaping time constants. Beta resolution approximated by pulse generator width FWHM.

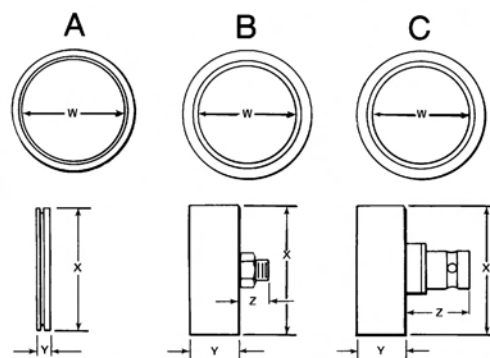
§ Requires special order.

Rectangular Detectors

Partially depleted and totally depleted rectangular detectors are available on special request.

Special Configurations

Special configuration charged-particle detectors are available on special request.



Mounting Arrangements

A This is a "ring mount"; i.e., the silicon wafer is offered on its ring without output connectors. This infrequently used arrangement is available on special request.

B Microdot connector on the rear of the can.

C BNC connector on the rear of the can.

Dimensions are given in millimeters.

For detectors 1500 or 2000 µm deep, add 1.5 mm to the Y dimension.

Detector Size (mm ²)	W (Nominal)	Type A Mount		Type B Rear Microdot			Type C Rear BNC		
		X	Y	X	Y	Z	X	Y	Z
025	5.6	15.2	3.7	16.7	12.3	7.1	16.7	12.3	15.9
050	8.0	15.2	3.7	16.7	12.3	7.1	16.7	12.3	15.9
100	11.3	22.0	3.7	23.6	12.3	7.1	23.6	12.3	15.9
150	13.8	22.0	3.7	23.6	12.3	7.1	23.6	12.3	15.9
300	19.5	27.1	3.7	28.6	12.3	7.1	28.6	12.3	15.9
450	23.9	30.5	3.7	32.0	12.3	7.1	32.0	12.3	15.9
Tol.	±0.5	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3

Specifications subject to change
040810