

- Alpha and beta continuous air monitoring (counting in adverse environment)
- Rugged and reliable
- Ion-implanted front contact
- Protective polymer front-contact coating
- Low bias voltage
- Advanced surface passivation for total device stability

Continuous air monitoring (CAM) instrumentation is used for counting, or rough-spectroscopy, of alpha particles from filters used with continuous air monitors. ULTRA CAM detectors set a new standard for silicon detectors for this purpose.

Since CAM instruments must work in air, exterior light, and under uncontrolled ambient conditions, the entrance contact of the ULTRA CAM detectors is coated with both an aluminum evaporation and a thin polymer film for protection against adverse environmental conditions, such as high humidity.

ULTRA CAM detectors have active areas ranging from 300 to 2000 mm². They operate at low voltage (+15 to 24 volts). This means that a separate HV supply is not required; the NIM +24 volt supply can be used for application of bias.

The alpha resolution that can be achieved is determined solely by the distance the alpha particles travel in air before reaching the detector. A U-CAM-450 in vacuum yielded an energy resolution on 5.47 MeV alphas of 35 keV FWHM.

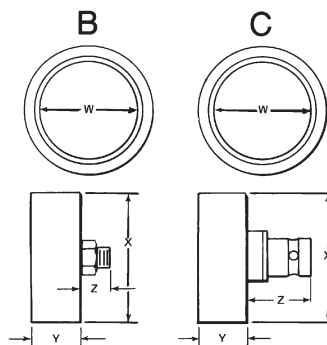
Mounting Arrangements

B Microdot connector on the rear of the can.

C BNC connector on the rear of the can.

W, X, Y, and Z dimensions are given in millimeters.

Detector Size (mm ²)	W (Nominal)	Type B Rear Microdot			Type C Rear BNC		
		X	Y	Z	X	Y	Z
300	19.5	28.6	12.3	7.1	28.6	12.3	15.9
450	23.9	32.0	12.3	7.1	32.0	12.3	15.9
600	27.6	36.1	12.3	7.1	36.1	12.3	15.9
900	33.9	45.2	12.3	7.1	45.2	12.3	15.9
1200	40.0	48.8	12.3	7.1	48.8	12.3	15.9
2000	51.0	65.5	12.3	7.1	65.5	12.3	15.9
Tol.	±0.5	±0.3	±0.3	±0.3	±0.3	±0.3	±0.3



Ordering Information

Supplied with B Mount unless otherwise specified.

Active Area (mm ²)	Minimum Depletion Depth 100 μm* Model No.
300	U-CAM-300
450	U-CAM-450
600	U-CAM-600
900	U-CAM-900
1200	U-CAM-1200
2000	U-CAM-2000

* Deeper detectors available on special order.

Specifications subject to change
040808