

GM-10 Detector

The GM-10 detector is designed for efficient surface monitoring of alpha, beta and gamma radiation contamination on skin, clothing, shoes, laboratory bench tops, floors, equipment etc. It is an ideal detector for maintaining the highest safety standards in laboratory environments, nuclear medicine, molecular biology, radiochemistry, transport of nuclear materials and storage facilities.



A low voltage interface connects the [RAM DA 2000](#) monitor with the probe. The GM-10 uses a pancake GM detector with a thin mica window. This is encased in a rugged, splash proof housing for protection against shock, vibration and humidity. The probe also contains a high voltage power supply, pulse shaper, GM saturation indicator, detector identifier and malfunction detection circuitry. This configuration minimizes noise, improving sensitivity and stability.

Specifications

GM Type:	Pancake LND 73118 or equivalent
Window:	Mica 1.5 - 2.0 mg/cm ² protected by a fine stainless steel wire mesh
Sensitivity (¹³⁷Cs):	Approximately 350cpm/μSv/hr (3500cpm/mR/hr)
Accuracy:	±15% of reading
Count Rate Range:	0 - 42kcps
Output Signals:	TTL pulses. Detector status: ID, OK, malfunction, GM saturation
Temperature Range:	Operation: -10°C to +50°C (15°F - 122°F) Storage: -20°C to +60°C (-5°F - 140°F)
Humidity Range:	40% to 95% RH (non condensing)
Dimensions:	260mm (10.2") length, 70mm (2.8") width, 75mm (2.9") height
Weight:	370g (0.8lbs)
Casing:	Aluminum, splash proof

Performance (surface sensitivity - in contact) Beta Emitting Isotopes				
Isotope	E _{max} (keV)	2p Effic (%)	Sensitivity cpm/Bq/cm ²	MDL* Bq/cm ²
¹⁴ C	156	3	15	5
³⁵ S	167	8	40	2
¹⁴⁷ Pm	224	15	75	1
⁹⁹ Tc	290	20	100	0.8
⁹⁰ Sr + ⁹⁰ Y	580 + 2280	50	500	0.2

⁶⁷GA	900	48	235	0.35
¹²³I	1000	55	280	0.3
³⁶Cl	714	45	210	0.4
²¹⁰Pb	1160	50	250	0.3
³²P	1710	70	330	0.3
⁵¹CR	325	0.2	1	75
^{99m}Tc	140	5.3	25	3
¹²⁵I	35	0.5	2.4	32
¹³¹I	610	40	190	0.4
²³⁰Th	4600	14	65	1.1
²⁴¹Am	5400	14	65	1.1

*MDL - Minimum detectable level calculations are based on background readings of 1 cps and a confidence level of 99%

Ordering Information

GM-10 - 2" Pancake BAK-1170

Note: Specifications subject to change without notice.