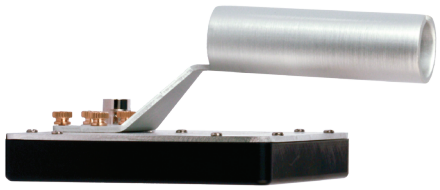
Model 44-89 and Model 44-94
Alpha Beta Gamma Detectors

Model 44-89 Square Layout of GMs
Part Number: 47-2357

Model 44-94 Diamond Layout of GMs
Part Number 47-2390



Representative profile and top views.

Introduction

The GM pancake-type detector used in the Model 44-89 and Model 44-94 is arguably the most popular radiation detector in use throughout the world. These detectors are sensitive to alpha, beta, and gamma radiation. The convenient shape and size of these instruments provides easy handling for surveying or personal monitoring.

Each model has four detectors clustered in a different arrangement on the instrument face. Performance specifications are identical with these two instruments but the different layouts of the four GM detectors give the user the opportunity to choose the optimal arrangement for the intended application. The detectors operate between 850 to 1000 volts, and are compatible with any Ludlum instrument capable of supplying 900 Vdc and an input sensitivity of approximately 80 mV or higher.

Specifications

INDICATED USE: alpha, beta, gamma survey
SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters, and scalers
DETECTOR: 4 pancake-type, halogen quenched GMs
SENSITIVITY: typically 13200 cpm/mR/hr
BACKGROUND: 240 cpm
WINDOW: 1.7 ± 0.3 mg/cm² mica with stainless steel protective screen (79% open)
WINDOW AREA: 62 cm² (9.6 in²) active; 50 cm² (7.8 in²) open
EFFICIENCY (4π): 5% for ^{14}C; 22% for $^{90}Sr/^{90}Y$; 19% for ^{99}Tc; 32% for ^{32}P; 15% for ^{239}Pu; 0.2% for ^{125}I
ENERGY RESPONSE: energy dependent
OPERATING VOLTAGE: 900 volts
CONSTRUCTION: aluminum housing and black ABS plastic with stainless steel protective screen
SIZE: Model 44-89: 2.3 x 12.9 x 12.9 cm (0.9 x 5.1 x 5.1 in.) (H x W x L)
Model 44-94: 2.3 x 11.4 x 15.5 cm (0.9 x 4.5 x 6.1 in.) (H x W x L)
WEIGHT:
Model 44-89: 0.9 kg (1.9 lb)
Model 44-94: 0.9 kg (1.9 lb)

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