

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



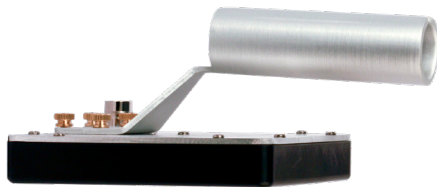
Ludlum Measurements, Inc.



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 (4 π): 5% for ¹⁴C; 22% for ⁹⁰Sr/⁹⁰Y; 19% for ⁹⁹Tc; 32% for ³²P; 15% for ²³⁹Pu; 0.2% for ¹²⁵I

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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Note: specifications subject to change without notification. We are not responsible for errors or omissions.

June 2016