

Model 44-88 Alpha-Beta-Gamma Detector



Introduction

The Model 44-88 GM (Geiger-Mueller) detector responds to alpha, beta, and gamma radiation. It energy-dependent, over-responding by a factor of 6 in the 60 keV to 100 keV range when normalized to ^{137}Cs . The GM tube is user-accessible for repair should it be required. The Model 44-88 detector will operate with any of the Ludlum Measurement instruments that provide 900 V and an input sensitivity of approximately 30 mV or higher.

Specifications

Part Number: 47-2356

INDICATED USE: alpha, beta, gamma survey; sample counting

DETECTOR TYPE: pancake-type, halogen-quenched GM

WINDOW: 1.7 + 0.3 mg/cm² mica

WINDOW AREA: 15 cm² (2.3 in²) active; 12 cm² (1.9 in²) open

EFFICIENCY (4 π): ^{14}C - 5%; $^{90}\text{Sr}/^{90}\text{Y}$ - 22%; ^{99}Tc - 19%; ^{32}P - 32%; ^{239}Pu - 15%

SENSITIVITY (^{137}Cs gamma): 3300 cpm/mR/hr

ENERGY RESPONSE: energy dependent

BACKGROUND: 60 cpm

DEAD TIME: typically 80 microseconds

OPERATING VOLTAGE: 900 volts

CONSTRUCTION: aluminum housing, beige powder-coat, with 79% open stainless steel screen

SIZE: 5.9 x 7 cm (2.3 x 2.8 in.) (Dia x L)

WEIGHT: 0.2 kg (0.5 lb)