

# Model 44-7

## Alpha Beta Gamma Detector



Ludlum Measurements, Inc.



### Specifications

Part Number: 47-1536

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

**DETECTOR TYPE:** end window, halogen-quenched GM

**WINDOW:**  $2.0 \pm 0.3$  mg/cm<sup>2</sup> mica

**WINDOW AREA:** 6 cm<sup>2</sup> (0.93 in<sup>2</sup>) active; 5 cm<sup>2</sup> (0.78 in<sup>2</sup>) open

**EFFICIENCY (4 $\pi$ ):** 2% for <sup>14</sup>C; 10% for <sup>90</sup>Sr/<sup>90</sup>Y; 7% for <sup>99</sup>Tc; 7% for <sup>239</sup>Pu; 0.1% for <sup>125</sup>I

**SENSITIVITY (<sup>137</sup>Cs gamma):** typically 2100 cpm/mR/hr

**ENERGY RESPONSE:** energy dependent

**BACKGROUND:** 40 cpm

**DEAD TIME:** typically 200 microseconds

**OPERATING VOLTAGE:** 900 volts

**CONNECTOR:** series "C" (others available)

**TEMPERATURE RANGE:** -15 to 50 °C (5 to 122 °F); may be certified to operate from -40 to 65 °C (-40 to 150 °F)

**CONSTRUCTION:** anodized aluminum housing

**SIZE:** 4.6 x 14.7 cm (1.8 x 5.8 in.) (Dia x L)

**WEIGHT:** 0.5 kg (1 lb)

### Available Option

**Model 180-4 Sample Holder** provides repeatable geometry for counting wipes, filter paper, or slides. The sample may be placed in any one of five distances from detector to sample: 0.32 cm (0.125 in.), 0.64 cm (0.25 in.), 1.3 cm (0.5 in.), 2.5 cm (1 in.), and 5.1 cm (2 in.). Anodized aluminum frame and sample tray. Model 180-4 (Part Number 47-1667)

**Sample Planchets:** 5.1 cm (2 in.) diameter sample planchets are available in minimum quantities of 500 from Ludlum Measurements. The planchets are manufactured in either aluminum (Model L-7525-371) or stainless steel (Model L-7525-371-01).