

# Model 44-3

## Low Energy Gamma Detector



Ludlum Measurements, Inc.



### Specifications

Part Number: 47-1533

**INDICATED USE:**  $^{125}\text{I}$  and low energy gamma survey

**SUGGESTED INSTRUMENTS:** general purpose survey meters, ratemeters, and scalers

**DETECTOR TYPE:** scintillator, 2.5 cm (1 in.) diameter x 1 mm thick NaI(Tl) crystal

**ENTRY WINDOW:** 18.4 mg/cm<sup>2</sup>

**WINDOW AREA:** 5 cm<sup>2</sup> (0.8 in<sup>2</sup>) active and open

**SENSITIVITY:** 675 cpm/ $\mu\text{R/hr}$  ( $^{125}\text{I}$ )

**BACKGROUND (10  $\mu\text{R/hr}$ ):** less than 250 cpm

**EFFICIENCY (4 $\pi$ ):** 33.5% for  $^{125}\text{I}$  (based on  $^{129}\text{I}$  efficiency of 18%)

**RECOMMENDED ENERGY RANGE:** 10 to 60 keV

**ENERGY RESPONSE:** energy dependent

**PHOTOMULTIPLIER TUBE:** 3.8 cm (1.5 in.) diameter

**OPERATING VOLTAGE:** typically 500 to 1200 volts

**CONSTRUCTION:** aluminum housing with beige powder coat finish

**TEMPERATURE RANGE:** -20 to 50 °C (-4 to 122 °F); may be certified to operate from -40 to 65 °C (-40 to 150 °F)

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

**SIZE:** 5.1 X 17.8 cm (2 x 7 in.) (Dia x L)

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

**Options:** Model 180-1, Model 180-1L, and Model 180-24 Sample Holders provide repeatable geometry for counting wipes, filter paper, or slides at user-selectable spacings of 0.32, 0.64, 1.3, 2.5, and 5.1 cm (0.125, 0.25, 0.5, 1, and 2 in.) from the detector.

**Model 180-1:** anodized aluminum frame, sample tray, and collimator (P/N 47-1675)

**Model 180-1L:** as above, but with 0.64 cm (0.25 in.) painted lead collimator (P/N 47-2988)

**Model 180-24:** anodized aluminum frame and sample tray (no collimator) (P/N 47-2631)

**Planchets:** 5.1 cm x 3.2 mm (2.0 x 0.125 in.) (Dia x thickness) in stainless steel or aluminum

Stainless Steel (P/N 7525-371-01); Aluminum (P/N 7525-371) Minimum order quantity of 500

**Model L-4002-227:** lead shielding/collimator for 5.1 cm (2 in.) OD detectors (P/N 4002-227)

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

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