

Model 44-17

Low Energy Gamma Detector

Radiation Detection for a Safer World



Ludlum Measurements, Inc.



Part Number: 47-1547

Specifications

INDICATED USE: ^{125}I and low energy gamma survey

SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters, and scalars

DETECTOR TYPE: scintillator, 5.1 cm (2 in.) diameter x 2 mm thick NaI(Tl) crystal

ENTRY WINDOW: 43 mg/cm²

WINDOW AREA: 17.8 cm² (2.8 in²) active and open

SENSITIVITY: 2500 cpm/ $\mu\text{R/hr}$ (^{125}I)

BACKGROUND (10 $\mu\text{R/hr}$): < 1500 cpm

EFFICIENCY (4 π): 38% for ^{125}I (based on ^{129}I efficiency of 22%)

RECOMMENDED ENERGY RANGE: 10–200 keV

ENERGY RESPONSE: energy dependent

PHOTOMULTIPLIER TUBE: 5.1 cm (2.0 in.) diameter

OPERATING VOLTAGE: typically 500–1200 volts

CONSTRUCTION: aluminum housing with beige powder coat finish

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

CONNECTOR: series "C" (others available)

SIZE: 6.7 x 22.9 cm (2.6 x 9 in.) (Dia x L)

WEIGHT: 0.7 kg (1.5 lb)

Available Option

Model 180-7 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 180-7 (Part Number 47-1582)