

Model 44-98

Beta & Low Energy Gamma Detector

Radiation Detection for a Safer World



Ludlum Measurements, Inc.



Part Number: 47-2465

Specifications

INDICATED USE: beta, low-energy gamma survey

COMPATIBLE INSTRUMENTS: Ludlum Models 12, 16, 18, 2221, 2241, 2350-1, scalers, & alarm ratemeters

CONNECTOR: series "C" (others available)

DETECTOR: scintillator, 2.5 cm (1 in.) diameter x 1 mm thick bismuth germinate (BGO) crystal

PHOTOMULTIPLIER TUBE: 3.8 cm (1.5 in.) diameter, 10 stage, magnetically shielded

WINDOW: 1.2 mg/cm²

INPUT SENSITIVITY: typically 5 to 10 mV

EFFICIENCY (4 π): 15% for ¹²⁵I; 3% for ¹⁴C

WINDOW AREA: 5 cm² (0.78 in²) active and open

BACKGROUND (in 10 μ R/hr field): 650 cpm

ENERGY RESPONSE: energy dependent

OPERATING VOLTAGE: typically 500 to 1200 volts

CONSTRUCTION: aluminum housing with beige powder coat

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

SIZE: 4.8 x 18.7 cm (1.9 x 7.4 in.) (Dia x L)

WEIGHT: 0.3 kg (0.6 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