

Model 44-21

Beta & Low Energy Gamma Detector



Ludlum Measurements, Inc.



Specifications

Part Number: 47-1560

INDICATED USE: beta, low-energy gamma survey

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

CONNECTOR: series "C" (others available)

DETECTOR: scintillator, 2.54 cm (1 in.) diameter x 1 mm thick NaI adhered to a 0.03 cm (0.01 in.) thick plastic scintillator

WINDOW: 3.4 mg/cm²

WINDOW AREA: 5.1 cm² active and open

EFFICIENCY (4 π): 38% for ¹²⁵I; 19% for ¹²⁹I; 4% for ¹⁴C; 28% for ³²P

BACKGROUND (10 μ R/hr): 450 cpm

ENERGY RESPONSE: energy dependent

NON-UNIFORMITY: less than 10%

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

OPERATING VOLTAGE: typically 500 to 1200 volts

CONSTRUCTION: anodized 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: 5.1 x 18.5 cm (2 x 7.3 in.) (Dia x L)

WEIGHT: 0.5 kg (1.0 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

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

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