

Model 44-1 Beta Detector



Ludlum Measurements, Inc.



Part Number: 47-1531

Specifications

INDICATED USE: beta survey

SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters and scalers

CONNECTOR: series "C" (others available)

DETECTOR TYPE: 4.3 x 0.03 cm (1.7 x 0.01 in.) (Dia x Thickness) plastic scintillator

EFFICIENCY (4 π): 7% for ¹⁴C

WINDOW: 1.2 mg/cm² aluminized polyester

WINDOW AREA: 9.7 cm² (1.5 in²) active and open

BACKGROUND (10 μ R/hr): typically 100 cpm

ENERGY RESPONSE: N/A

NON-UNIFORMITY: less than 10%

PHOTOMULTIPLIER TUBE: 3.8 cm (1.5 in.) diameter

OPERATING VOLTAGE: typically 500–1200 volts

CONSTRUCTION: aluminum housing with beige powder coat

TEMPERATURE RANGE: -20 to 50 °C (-4 to 122 °F)

SIZE: 5.1 X 18.5 cm (2 x 7.3 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

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