

Model 44-215 Beta Detector with Angled Head



Ludlum Measurements, Inc.



(two views shown)

Introduction

The Model 44-215 beta scintillation detector, based on the familiar Model 44-1, features a larger window area attached to an ergonomically angled and more comfortably sized handle. The Model 44-215 design thereby provides additional benefit for the operator as well as achieving improved results. This detector may be used with any of the Ludlum instruments or equivalent instruments with a voltage range of 500–1200 volts and input sensitivity of 2–50 mV.

Specifications

Part Number: 47-4143

INDICATED USE: beta survey

SUGGESTED INSTRUMENTS: general purpose survey meters, ratemeters and scalars

CONNECTOR: series "C" (others available)

DETECTOR TYPE: 5.1 x 0.03 cm (2.0 x 0.01 in.) (dia x thickness) plastic scintillator

EFFICIENCY (4 π): 10% for ¹⁴C; 33% for ⁹⁹Tc; 33% for ³⁶Cl

WINDOW: 1.2 mg/cm² aluminized polyester

WINDOW AREA: 20 cm² active; 16.65 cm² open

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

ENERGY RESPONSE: N/A

DETECTOR UNIFORMITY: within 10% of average reading

PHOTOMULTIPLIER TUBE: 2.9 cm (1.125 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: 7.3 x 21.6 cm (2.88 x 8.5 in.) (Dia x L)

WEIGHT: 0.27 kg (0.6 lb)

Options:

Model 180-30: anodized aluminum frame and sample tray (no collimator) (P/N 47-4177)

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) Minimum order quantity of 500

Aluminum (P/N 7525-371) Minimum order quantity of 500