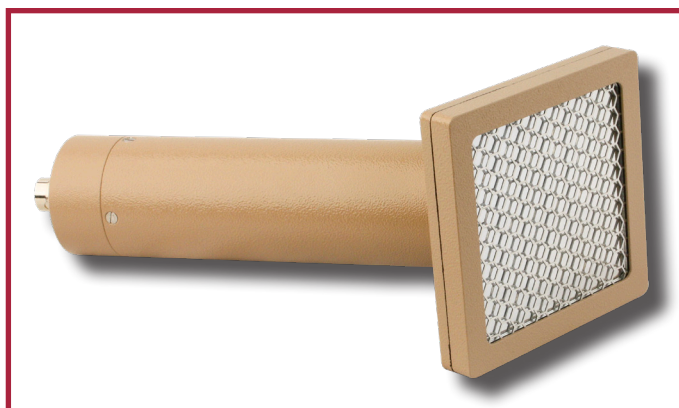


# Model 43-65-1 Beta Scintillator Detector



Ludlum Measurements, Inc.



(two views shown)

## Introduction

The Model 43-65-1 Beta Scintillator is a detector designed for beta radiation survey when used with a general purpose survey meter, ratemeter, or scaler instrument. It uses a 0.03 cm (0.01 in.) thick plastic scintillation material and a 3.8 cm (1.5 in.) diameter magnetically shielded photomultiplier tube.

The detector housing is constructed of aluminum alloy with beige powder coat for durability and easy maintenance. The detector window is protected by a 79% open, 20-gage stainless steel 0.64 cm (0.25 in.) hex screen. The detector will malfunction if the window is pierced or otherwise compromised. A plastic protective cover is provided to help protect the detector face when the instrument is not in use. In addition, the windows are replaceable in event of damage thereby increasing the working life of the detector.

## Specifications

Part Number: 47-2061

**INDICATED USE:** beta survey

**SUGGESTED INSTRUMENTS:** general purpose survey meters, ratemeters, and scalers

**CONNECTOR:** series "C" (others available)

**SCINTILLATOR:** plastic

**EFFICIENCY (4 $\pi$ ):** 15% for  $^{99}\text{Tc}$ ; 20% for  $^{90}\text{Sr}/^{90}\text{Y}$ ; and 1% for  $^{14}\text{C}$

**WINDOW:** 2 layers of 0.4 mg/cm<sup>2</sup> aluminized polyester (an extra layer is recommended for outdoor use)

**WINDOW AREA:** 63 cm<sup>2</sup> (9.8 in<sup>2</sup>) active, 50 cm<sup>2</sup> (7.8 in<sup>2</sup>) open

**BACKGROUND:** 200 cpm or less

**DETECTOR UNIFORMITY:** within 10% of average reading

**TUBE:** 3.8 cm (1.5 in.) diameter magnetically shielded photomultiplier

**OPERATING VOLTAGE:** typically 500–1200 volts

**CONSTRUCTION:** aluminum with beige powder coat

**SIZE:** 10.2 x 10.2 x 24.8 cm (4 x 4 x 9.8 in.) (H x W x L)

**WEIGHT:** 0.5 kg (1.2 lb)



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

May 2024