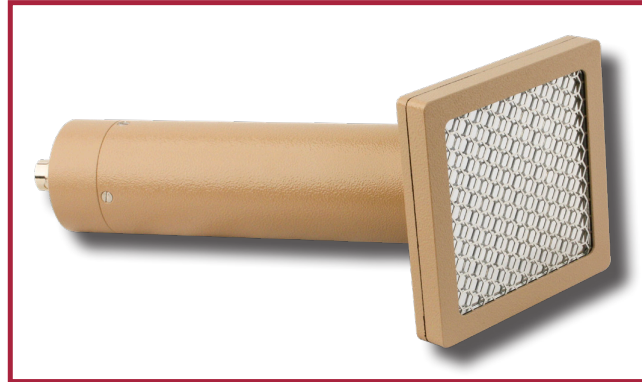


Model 43-65

Alpha Scintillator Detector



Ludlum Measurements, Inc.



(two views shown)

Introduction

The Model 43-65 Alpha Scintillator is a detector designed for alpha radiation survey when used with a general purpose survey meter, ratemeter, or scaler instrument. It uses a zinc sulfide scintillation crystal doped with silver [ZnS(Ag)] 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: 47-1441

INDICATED USE: alpha survey

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

CONNECTOR: series "C" (others available)

SCINTILLATOR: ZnS(Ag)

EFFICIENCY (4π): 17% for ²³⁹Pu; 17% for ²³⁰Th

WINDOW: 2 layers of 0.4 mg/cm² aluminized polyester (1.2 mg/cm² recommended for outdoor use)

WINDOW AREA: 63 cm² (9.8 in²) active, 50 cm² (7.8 in²) open

BACKGROUND: 3 cpm or less

NON-UNIFORMITY: less than 10%

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: 0.6 kg (1.2 lb)



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

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