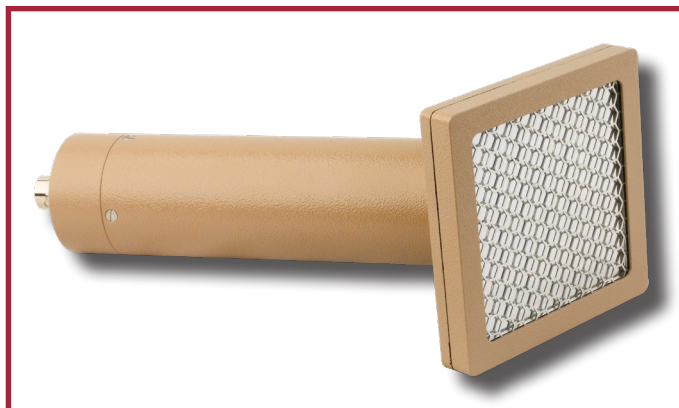


# Model 43-65 Alpha Scintillator Detector



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 scalers

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

**SCINTILLATOR:** ZnS(Ag)

**EFFICIENCY (4 $\pi$ ):** 17% for <sup>239</sup>Pu; 17% for <sup>230</sup>Th

**WINDOW:** 2 layers of 0.4 mg/cm<sup>2</sup> aluminized polyester (1.2 mg/cm<sup>2</sup> 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:** 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)



Ludlum Measurements, Inc. P.O. Box 810, Sweetwater, Texas 79556

Web: <http://www.ludlums.com> Tel: 800-622-0828 / 325-235-5494 / Fax: 325-235-4672 / Email: [sales@ludlums.com](mailto:sales@ludlums.com)

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

Mar 2016