

Model 43-93 Alpha/Beta Detector



Ludlum Measurements, Inc.



Specifications

Part Number: 47-2556

INDICATED USE: alpha beta survey

SUGGESTED INSTRUMENTS: Ludlum Model 2224-1, Model 2360, Model 2929, Model 3030E

DETECTOR TYPE: ZnS(Ag) adhered to 0.03 cm (0.01 in.) thick plastic scintillation material

EFFICIENCY (4 π): 20% of ²³⁹Pu; 15% of ⁹⁹Tc; 20% of ⁹⁰Sr/⁹⁰Y

WINDOW: 1.2 mg/cm² metalized polyester

REMOVABLE PROTECTIVE SCREEN: 0.79 mm (0.03 in.) thick, 6.5 mm (0.26 in.) square openings, 88% open

SCREEN OUTER DIMENSIONS: 16.8 x 9.2 cm (6.6 x 3.6 in.) (L x W)

WINDOW AREA:

Open: 88 cm² (13.6 in²) open

Active: 100 cm² (15.5 in²) active

NON-UNIFORMITY: less than 10%

BACKGROUND: alpha: 3 cpm or less; beta; 300 cpm or less

CROSS TALK:

Alpha to beta: < 10%

Beta to alpha: < 1%

PHOTOMULTIPLIER TUBE: 2.9 cm (1.12 in.) diameter

OPERATING VOLTAGE: typically 500–1200 volts

CONSTRUCTION: aluminum with beige powder coating

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

CONNECTOR: series "C", unless specified otherwise

OVERALL SIZE: 6.4 x 9.5 x 31 cm (2.5 x 3.8 x 12.3 in.) (H x W x L)

WEIGHT: 0.5 kg (1.0 lb)

Optional Protective Screens

PN: 7393-208: 0.79 mm (0.031 in.) thick, 4.8 mm (0.19 in.) hex openings, 83.5% open

PN: 7393-209: 0.79 mm (0.031 in.) thick, 4.0 mm (0.16 in.) square openings, 81% open

PN: 7393-138: 0.51 mm (0.020 in.) thick, 6.5 mm (0.26 in.) square openings, 88% open

PN: 2393-345: 0.79 mm (0.031 in.) thick, fine stainless steel mesh openings, 88% open

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

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