

Model 43-2-2 Alpha/ Beta Detector



Ludlum Measurements, Inc.



Part Number: 47-2003

Two views of same detector to show color-coded label indicating use (alpha/beta) and the end window

Specifications

INDICATED USE: alpha beta survey

SUGGESTED INSTRUMENTS: Ludlum Model 2224-1, Model 2360

CONNECTOR: series "C" (others available)

DETECTOR TYPE: ZnS(Ag) adhered to 0.25 (0.010 in.) thick plastic scintillation material

EFFICIENCY (4 π): 25% of ²³⁹Pu; 20% of ⁹⁰Sr/⁹⁰Y; 5% of ¹⁴C

WINDOW: 1.2 mg/cm²

WINDOW AREA: 9.7 cm² (1.5 in²) active and open

BACKGROUND:

alpha: 3 cpm or less

beta: typically 50 cpm or less

CROSS TALK:

alpha to beta: less than 10%

beta to alpha: less than 1%

NON-UNIFORMITY: < 10%

PHOTOMULTIPLIER TUBE: 3.8 cm (1.5 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: 5.1 X 18.5 cm (2 x 7.3 in.) (Dia x L)

WEIGHT: 0.5 kg (1 lb)