

Model 44-20

High-Energy Gamma Detector



Ludlum Measurements, Inc.



Three views shown of Model 44-20



Introduction

The Ludlum Model 44-20 and Model 44-20-1 Gamma Scintillator detectors use a Teledyne Integral Detector assembly containing a 7.6 cm (3 inch) diameter x 7.6 cm (3 inch) thick NaI (TI) crystal optically coupled to a photomultiplier tube (PMT). (*compare to Model 44-11 with 5.1 cm [2 inch] crystal*)

The detectors are compatible with general purpose survey meters, ratemeters, and scalars for high-energy gamma detection of approximately 60 keV to 2 MeV range. They provide high sensitivity for surveying and pulse height discrimination for single channel or multi-channel applications.

Specifications

Part Number: 47-1104

ENERGY RESPONSE: energy dependent

OPERATING VOLTAGE: typically 500 to 1200 volts maximum

SCINTILLATOR: 7.6 x 7.6 cm (3 x 3 in.) (Dia x L) thick NaI(Tl) crystal

SENSITIVITY: typically 2300 cpm/ μ R/hr (^{137}Cs gamma)

PHOTOMULTIPLIER TUBE: 7.6 cm (3 in.) diameter, end window with 10 stage dynode chain at approximately 60 megohms

CONNECTORS: standard series "C" for normal mode; other types available upon request. For signal splitter option: BNC for signal output and MHV for high voltage output

CONSTRUCTION: integral-line detector with aluminum cap and stainless steel body

HOUSING CONSTRUCTION: 0.05 cm (0.02 in.) thick aluminum

SIZE: 8.3 x 3.3 cm (3.3 x 11.2 in.) (Dia x L)

WEIGHT: 1.7 kg (3.7 lb)

Gamma Scintillators Also Available:

Model 44-20-1: 8.6 x 28.2 cm (3.4 x 11.1 in.) (Dia x L); 2 kg (4.5 lb) Part Number 47-3129

Model 44-20-3: higher resolution crystal 8.3 x 28.4 cm (3.3 x 1.2 in.) (Dia x L); 1.8 kg (4 lb) Part number 47-3952

June 2017

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

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