

# Model 44-11

## High-Energy Gamma Detector



Ludlum Measurements, Inc.



Part Number: 47-1541  
Three views shown of Model 44-11



### Introduction

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

The detectors are compatible with general purpose survey meters, ratemeters, and scalers 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

**SUGGESTED INSTRUMENTS:** SCA, MCA

**ENERGY RESPONSE:** energy dependent

**OPERATING VOLTAGE:** typically 500 to 1200 volts maximum

**SCINTILLATOR:** 5.1 x 5.1 cm (2 x 2 in.) (Dia x L) thick NaI(Tl) crystal

**SENSITIVITY:** typically 900 cpm/ $\mu$ R/hr ( $^{137}$ Cs gamma)

**BACKGROUND:** 9750 cpm

**PHOTOMULTIPLIER TUBE:** 5.1 cm (2 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:** 6.4 x 26.7 cm (2.5 x 10.5 in.) (Dia x L)

**WEIGHT:** 0.6 kg (1.4 lb)



**Above:**  
Optionally available Sample Holder  
for low background sample counting.  
Model 180-9 Part Number 47-1591

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