

# Model 2401-P DOSE

## Pocket Size Multi-Purpose Count Ratemeter



Ludlum Measurements, Inc.

### Features

- Self-contained Survey Instrument
- Integrated GM Pancake Probe
- Simple to Use
- Low Cost
- Rugged
- Case Included

### Introduction

The Model 2401-P DOSE is a general purpose, self-contained, pocket-sized radiation detection meter designed around the venerable GM pancake detector. A simple switch allows the user to choose among the three decade ranges. Another switch selects between QUIET, NORMAL, BAT CHECK, or OFF. The detector is conveniently packaged inside the instrument, and has a protective screen window.

An L-shaped stainless steel handle provides a secure and comfortable grip when using the Model 2401-P DOSE as a survey meter. Loosening the knob permits the handle to pivot, allowing the instrument to be easily housed in the included carrying or storage case. This instrument is available with several meter face options for measuring contamination and exposure rate.



(Front view, and back views, with filter open and closed, of a Model 2401-P DOSE)

### Specifications

Part Number: 48-3884

**DETECTOR:** 15.51 cm<sup>2</sup> (2.4 in<sup>2</sup>) pancake GM

**SENSITIVITY:** typically 3300 cpm/mR/hr (<sup>137</sup>Cs gamma)

**EFFICIENCY:** 5% for <sup>14</sup>C; 22% for <sup>90</sup>Sr/<sup>90</sup>Y; 19% for <sup>99</sup>Tc; < 1% for <sup>99m</sup>Tc, 32% for <sup>32</sup>P; 15% for <sup>239</sup>Pu

**ENERGY RESPONSE:** for dose equivalent - energy compensated for gamma and x-ray, otherwise energy dependent

**RESPONSE TIME:** typically 11 seconds from 10% to 90% of final reading

**METER DIAL:** See Meter Faces table.

**MULTIPLIERS:** x1, x10, and x100

**AUDIO:** click-per-event, may be turned off by moving selector to QUIET position

**ALARM:** no

**POWER:** 9-volt battery

**BATTERY LIFE:** typically 250 hours with alkaline battery at normal background levels

**CASE SIZE:** 19 x 12.8 x 7.9 cm (7.5 x 5.1 x 3.1 in.) (L x W x H)

**CASE WEIGHT:** 0.3 kg (10.4 oz.), empty

### Meter Faces

Specify the part number for the desired meter face at time of order.

FUNCTION & RANGE	METER FACE PART NUMBER
<b>DOSE RATE</b>	
0–1.5 mSv/h	202-999
<b>COUNTRATE</b>	
0–10 cps / 0–1.9 μSv/h	202-872
<b>DOSE RATE / COUNTRATE</b>	
0–6.6 kcpm / 0–20 μSv/h	202-1038

### Additional Specifications

**CONSTRUCTION:** drawn and cast aluminum with membrane panel

**SIZE:** 4.6 x 8.4 x 13.5 cm (1.8 x 3.3 x 5.3 in.) (H x W x L)

**WEIGHT:** 0.4 kg (0.9 lb), including battery

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

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

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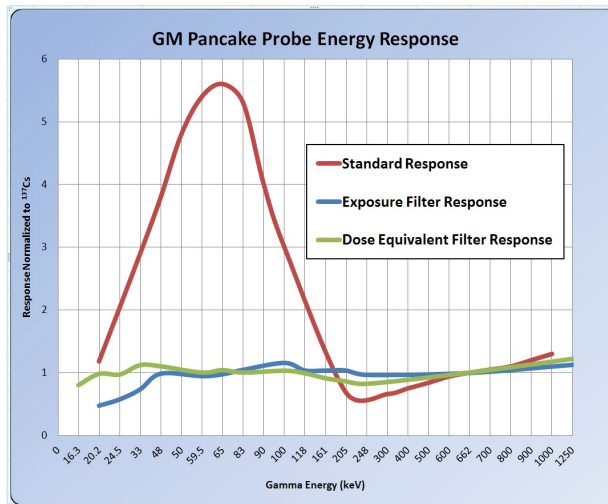
Ludlum Measurements, Inc.

### Sliding Dose Equivalent Filter Model 4397-226 for the Model 2401-P DOSE

As most know, the venerable GM pancake has a significant over-response at lower energies between approximately 20 to 160 keV. Any exposure or dose measurements taken with an unfiltered GM pancake detector would thus have unacceptable errors at these lower energies. To counteract this tendency, Ludlum Measurements developed a sliding filter for the Model 2401-P DOSE GM pancake detector that flattens the response to within 20% referenced to <sup>137</sup>Cs (662 keV) over an energy range of 20 keV to 1.2 MeV for ambient equivalent dose measurements.

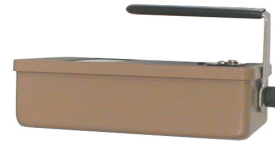


Sliding Dose Equivalent Filter shown closed (above) and open (right).



### L-Handle for Model 2401-Series Ratemeters: Model L-4397-165

Convenient L-shaped handle provides a secure and comfortable grip for the Model 2401-Series ratemeters. Loosening the attachment knob permits the handle to pivot 90 degrees to allow the instrument to be stored compactly, for example, in the Model L-2311119 case shown below.



### Protective Case for Model 2401-Series: Model L-2311119

\*\*Included with Model 2401-P Dose and Model 2401-P Exp instruments.\*\*

This rugged, foam-padded, water resistant, crush- and dust-resistant case provides lightweight and secure storage for the Model 2401-Series of instruments. Features include high-visibility yellow color, stainless steel hardware, and easy-open latch. Lanyard included.

Size: 19 x 12.8 x 7.9 cm (7.5 x 5.1 x 3.1 in.) (L x W x H)  
Weight: 0.3 kg (10.4 oz.)



### Soft-Sided Case for Model 2401-Series - Model L-2310517

Zippered nylon case offers protection when carrying or storing the Model 2401-Series of ratemeters.

Belt loops keep instrument easily accessible.



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