

## Model 9DP-1 Ion Chamber Survey Meter

### Features

- Special Design for Measuring Pulsed Fields
- Low Pressure Chamber is Non Hazmat
- 0–500 mSv/h Range
- Sunlight Readable Colour Display
- Auto Zeroing & Ranging
- Rechargeable Batteries
- Alarming Capability
- Rate, Integrate & Peak Hold Readouts
- Data Logging
- USB Connectivity
- Free Firmware Updates through Internet

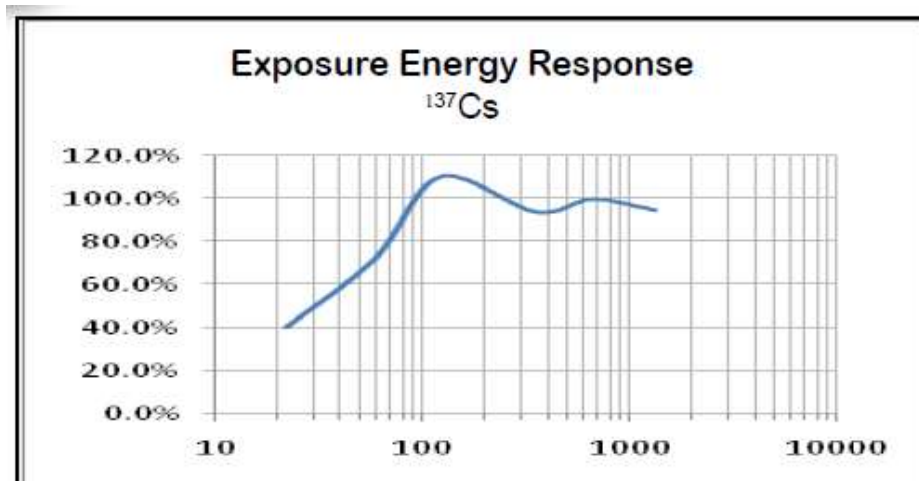
### INTRODUCTION

The Ludlum Model 9DP-1 ion chamber meter is specially designed for radiography work where pulsed fields are being measured. This instrument correctly integrates 50 nanosecond pulses (and wider) that other systems typically miss or measure inaccurately. This instrument measures both exposure and exposure rate and can simultaneously display the exposure rate, integrated value, and highest rate seen by the instrument. The integrated value can be reset (if desired) using one of the four convenient front-panel mounted buttons. The buttons also control instrument power, function selection, setting the speaker volume and acknowledging alarms.

The detector chamber is only pressurized to 25 psi, thus avoiding all (USA) HAZMAT concerns for shipping and handling. The stunning 256-color, bit-mapped display provides an optimized presentation of the data and is accompanied with icons informing the user of the active functions and instrument status. Alarms are manifested using colour changes on the display and an acknowledgeable audio output. The instrument is powered using NiMH type rechargeable batteries that deliver up to 30 hours operation between charges. Measurements can be logged to an industry standard, USB thumb drive plugged into the instrument USB port. Data are written in csv format for convenient retrieval by a PC spreadsheet or database program.

The Model 9DP-1 is part of Ludlum's new Dimension series of meters employing state-of-the-art technologies that deliver tremendous capability, user friendliness, and convenient PC connectivity. The built-in USB port facilitates password-protected access to parameter settings via direct connection to a USB keyboard thus foregoing any need to install PC application software or dealing with operating system compatibility issues. Ludlum also offers an optional Dimension PC Windows™ interface program that enables total control over the instrument and performs calibration.





## SPECIFICATIONS

**RADIATION DETECTED:** gamma & X-rays above 25 keV; beta above 1 MeV, correctly integrates pulsed fields with 50 nanosecond pulse widths

**OPERATING RANGES:**

- with Sv/h units: 0–500 μSv/h, 0–5 mSv/h, 0–50 mSv/h, 0–500 mSv/h

**CHAMBER VOLUME:** 220 cc (13.4 in<sup>3</sup>) volume pressurized to 1.7 atmospheres (25 psi)

**ACCURACY:** +/-10%

**RESPONSE TIME:** 5 seconds in lowest range, 2 seconds in all other ranges, when measuring from 10% to 90% of final value

**MEASUREMENT READOUTS:** simultaneous display of rate and either the integrated reading or highest rate (peak hold)

**INCLUDED FUNCTIONS:** integrated reading, peak reading, range lock (0-50 R/h) for reading pulsed fields

**DATA LOGGING:** Data is stored to detachable USB thumb drive in CSV format for easy retrieval by PC spreadsheet/database programs. Data points include real-time clock generated date and time with rate, integrated reading, and instrument status. Logging time intervals are set by PC interface program or standard USB keyboard.

**LCD DISPLAY:** 8.9 cm (3.5 in.) diagonal, 240 H x 320 W pixels, TFT active matrix, 262,000 colors, 220 cd/m<sup>2</sup>

**USER CONTROLS:** 4 pushbuttons: instrument on/off, peak rate/integrate mode, audio on/off, alarm acknowledge/meter reset/clearing integrated dose or peak rate

**AUTOMATIC FUNCTIONS:** auto ranging, auto zeroing, auto LCD backlighting

**AUDIO OUTPUTS:** built-in unimorph speaker, > 60 dB at 0.6 meters (2 ft.) An optional audio jack can be installed for connecting to an external headset (not supplied).

**ALARMS:** two levels of radiation alarms available, each are user programmable throughout entire readout range and set through a PC interface program. Other alarms include low battery and various detector failures.

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

**POWER:** eight rechargeable "AA" NiMH batteries, supplied with wall charger for direct connection to instrument

**BATTERY LIFE:** 12 to 30 hours between charges, depending upon use of backlighting

**USB INTERFACE:** single USB port, may be connected directly to a USB keyboard to facilitate password-protected parameter changes, accepts USB thumbdrive for storing logged data, optional interface kit facilitates connection to a PC for parameter editing and calibration

**CONSTRUCTION:** durable moulded plastic with internal metal support

**SIZE:** 21.9 x 11.6 x 24.5 cm (H x W x L)

**WEIGHT:** 1.5 kg including batteries

## Also Available

Model 9DP Ion Chamber Survey Meter PN: 48-3742

Dimension Interface Package: PN: 4293-763

Audio Jack Output: PN: 4293-891

Alkaline Battery Pack: PN: 4543-028

Carrying Case: PN: 2310330

