

Pen Dosimeters



The advanced PEN direct reading dosimeters are rugged, precision instruments. They are higher quality and have greater reliability than other dosimeters of this type. They measure and directly read, at any time, accumulated dose (quantity of gamma and x-ray exposure). PEN dosimeters are designed to satisfy military specifications for the RADIAC METER IM-264/PD and ANSI N 13.5 and N322 requirements. A sturdy metal clip attaches the dosimeter to a pocket or any object to monitor total radiation exposure. They are hermetically sealed and immersion proof.

Exposure Range (gamma and x-rays)

PEN200mR Scale increments of 10mR

PEN500mR Scale increments of 20mR

PEN2R increments of 100 mR

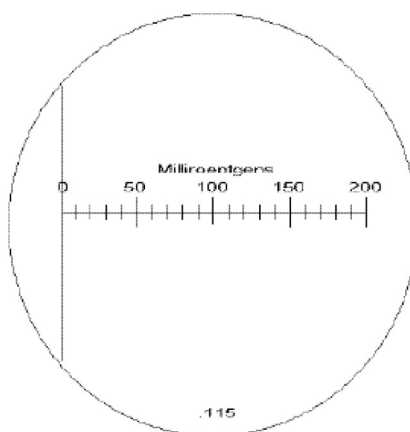
PEN5R increments of 200mR

PEN20R increments of 1R

PEN2mSv increments of .1mSv

PEN5mSv increments of .2mSv

National Stock Numbers Available



Energy Dependence

$\pm 10\%$ maximum change in sensitivity for x and gamma ray energies from 16 keV to 8 MeV.

Electrical Leakage

In the absence of radiation, the dosimeters leakage or self discharge is less than 0.5% of full scale in 24 hours at 50°C. At 20°C dosimeters will read background radiation. After gross over exposure totaling up to 2000 R the leakage is less than 5% of full scale in 48 hours at 20°C. Thereafter, the leakage will decrease to original values.



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Charging Voltage

Dosimeters are capable of being charged to “zero” with 140 to 195 volts.

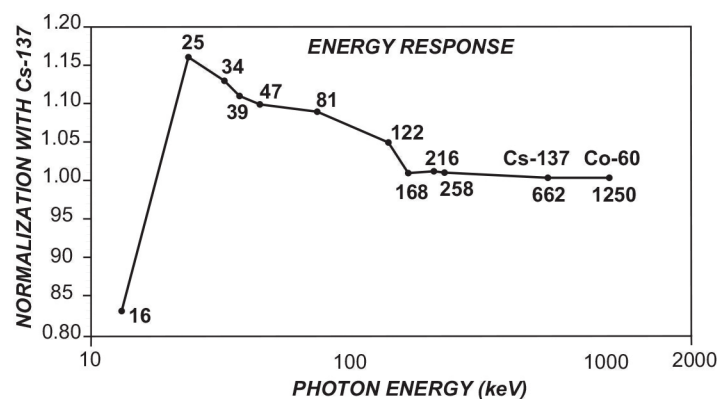
Operational Characteristics

A maximum change in sensitivity of $\pm 10\%$ may occur under any probable combination of the following:

- A) Temperature range below -20°C (-4°F) or above $+50^{\circ}\text{C}$ (122°F)
 - B) Greater than 50,000 foot altitude for one month
 - C) Relative humidity greater than 95%
- Highly resistant to shock and vibration.

Accuracy

$\pm 10\%$ of true dose for Cs^{137} or Co^{60} gamma.



Rate Response

Dosimeters are dose rate independent.

Enclosure Material

Barrel - carbon fiber-filled, high-strength, electrically-conducting plastic with metal clip.

Weight

Approx. 19 grams (0.7 oz.)

Size

PEN- 200, 500, 2mSv, 5mSv

Length: 11 cm (4.5 inches)

Diameter: 1.5 cm (0.6 inches)

PEN- 2, 5, 20

Length: 11.5 cm (4.5 inches)

Diameter: 1.5 cm (0.6 inches)

Options

Protective sapphire lens

Limited Warranty

2 year limited warranty.



The Radiation Alert® Dosimeter Charger (Shown Above) can recharge Pen Dosimeters without batteries



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