

# DOSERAЕ 2

## Personal Radiation Dosage Monitoring

### Electronic Dosimeter for Personal Radiation Dosage Monitoring

DoseRAE 2 is a compact, direct-reading and alarming electronic personal radiation detector. It uses a diode and a scintillation crystal to detect X- and gamma radiation, and provides real-time monitoring of personal dose and dose rate.

The real-time radiation dose rate monitoring allows immediate reaction in case of radiation occurrences and thus reduces the radiation exposure. By measuring dose equivalent and dose equivalent rate, this detector provides the functions of a dosimeter too. It also measures radiation exposure and exposure rate, which is appropriate for controlling the exposure of emergency responders to photon radiation.

**Dosimeter Meets Detector:** Contains two separate sensors, CsI/photodiode and PIN diode. The energy-compensated PIN diode provides high-dose-rate range coverage and accurate dose measurements, while the CsI (Cesium Iodide) scintillator provides fast response to low-level radiation.

**Datalogging and Analysis:** DoseRAE 2 offers continuous datalogging with a large, 3,000-point datalog capacity. With associated software, the datalog

can be downloaded via USB to a computer. This software is used for data display, analysis and record management.

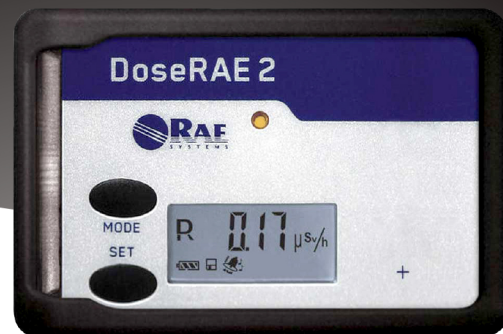
**Alarm Types:** Integrated loud audible, bright LEDs, and vibration alarms.

**Total Dose Data:** Accurately accumulates real-time dose data.

**National Standard Compliance:** DoseRAE 2 was designed in compliance with IEEE ANSI N42.20 standard, and the performance was tested at Oak Ridge National Laboratory, Tennessee, U.S.A.

DoseRAE 2 Comes with:

- DoseRAE 2 electronic personal dosimeter with clip
- Charging and PC communication cradle
- USB communication cable
- Protective silicone boot
- CD with (1) ProRAE Dosimeter instrument configuration and data management software and (2) User's Guide
- Protective pouch with alligator clip
- Calibration and test certificate
- Warranty/registration card



### KEY FEATURES

- Stand-alone electronic dosimeter with LCD display
- Multiple units with reader and software can be used as a dosimetry system
- Continuous digital dose rate readout in rem/h, Sv/h and R/h
- Continuously accumulated total dose readout in rem, Sv and R
- Prominent visible, audible, and vibration alarms
- Long calibration life
- Two operation keys, simple intuitive programming

### APPLICATIONS

Nuclear power plants
Environmental survey
Fire Departments
Hazardous Material Response Teams
Police
EMS
Military
Hospitals



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### SPECIFICATIONS

Specifications subject to change without notice

<b>Gamma Sensors</b>	<p>CsI (TI) + photodiode (low environment radiation)</p> <p>Energy-compensated PIN diode (level of radiation protection)</p>	<b>Datalog Size</b>	More than 3000 data points
<b>Dose Rate Range</b>	0.01 $\mu$ Sv/h to 10 Sv/h (1 $\mu$ R/h to 1140 R/h)	<b>Datalog Interval</b>	User programmable, from 30 to 3,600 seconds
<b>Accuracy of Dose Rate</b>	<p><math>\pm 20\%</math> (from 10 <math>\mu</math>Sv/h to 10 Sv/h or from 1.14 mR/h to 1140 R/h )</p> <p><math>\pm 30\%</math> (from 0.01 <math>\mu</math>Sv/h to 10 <math>\mu</math>Sv/h or 1 <math>\mu</math>R/h to 1.14 mR/h)</p>	<b>Communication</b>	USB interfaces with computer for data-log download
<b>Dose Range</b>	0 $\mu$ Sv to 10 Sv (0 $\mu$ R to 1140 R)	<b>Alarms</b>	<p>Loud audible buzzer (85+dB @ 30 cm/12")</p> <p>Highly visible LED lights</p> <p>Built-in vibration alarm</p>
<b>Dose Accuracy</b>	$\pm 15\%$	<b>Alarm Settings</b>	<p>Dose alarm (adjustable from 1.0 <math>\mu</math>Sv to 10 Sv or 114<math>\mu</math>R to 1140 R)</p> <p>Dose rate alarm (adjustable from 1.0 <math>\mu</math>Sv/h to 10 Sv/h or 114 <math>\mu</math>R/h to 1140 R/h)</p>
<b>Energy Range</b>	20 keV to 6 MeV for X- and gamma radiations	<b>Temperature</b>	-20° C to 50° C (-4° F to 122° F)
<b>Size</b>	3.3" x 2.2" x 0.4" (85 x 55 x 9.6 mm) without clip	<b>Humidity</b>	0% to 95% (non-condensing)
<b>Weight</b>	1.8 oz. (50g) with battery and clip	<b>IP rating</b>	IP-54
<b>Battery</b>	LIR2450 Rechargeable batteries	<b>Shock Resistance</b>	Passes drop test from 1.5 m (59")
<b>Operating Hours</b>	Up to 200 hours after each charge (one week continuous use)		



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