

GammaRAE II R Radiation Detector & Dosimeter

Manufacturer : RAE Systems Inc, USA

COSEM takes pride in being chosen as the sole distributor for RAE systems products for Singapore which includes the GammaRAE II R Radiation Detector and Dosimeter.

The GammaRAE II R is two instruments in one: it has the rapid response of a detector and the accurate dose measurement of a dosimeter. It is designed specifically to meet the needs of first responders.

The GammaRAE II R contains two separate sensors. The Cesium iodide (CsI) scintillator provides a fast, two-second response to radiological threats, while the energy-compensated PIN diode provides high dose rate range coverage and accurate dose measurements.

The GammaRAE II R also alerts the wearer with a loud audible alarm and bright flashing LEDs, and a built-in vibration alarm. For stealth operations, users can disable each alarm individually. The Immersible (IP67) design makes for reliable operation in wet environments and easy decontamination.

The GammaRAE II R accumulates accurate total dose. Stored dose data can be cumulative or reset for each use period. Its certification also permits operation in potentially flammable/explosive environments.



Specifications:

SENSOR

Radiation	3cc CsI (TI) with Photodiode (Low channel)
Sensors	Energy-Compensated PIN Diode (High channel)
Energy Range	0.06 to 3.0 MeV
Dose Equivalent Rate (DER) Range for 137Cs	1 μ R/h to 600 R/h (0.01 μ Sv/h to 6 Sv/h)
Accuracy of DER	\pm 20%
Dosage Range	1 μ R to 999.9 R (0.01 μ Sv to 9.9 Sv)
Background Reference	Background level reference automatic on start-up (Search Mode only), plus user-initiated as needed
Calibration	None required. Periodic functional test recommended using 1 μ Ci and 16 μ Ci 137Cs check sources. Factory calibration available if needed.

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ALARMS

Time to Alarm	<2 seconds
Alarms	<ul style="list-style-type: none"> • Loud audible buzzer (85+ dB @ 30 cm) • Built-in vibration alarm • Highly visible LED lights on both sides of LCD graphic display
Alarm Settings	Search Mode: Alarm threshold based on variations in local background level
dose rate	Safety Mode: User-programmable low and high alarm thresholds based on

DATALOGGING AND COMMUNICATION

Datalog Size	30,000 data points (20 days at 60-second intervals)
Datalog Modes	Continuous: Logs data at all times Event-Driven: Starts logging data on alarm
Datalog Interval	User programmable, 1 to 3,600 seconds
Communication	Built-in Bluetooth® radio interfaces with computer for datalog download and configuration changes

POWER

Battery	2 AA alkaline batteries
Operating Period	Up to 900 hours

OPERATING ENVIRONMENT

Temperature	-20° C to 50° C (-4° F to 122° F)
Temperature Alarm	Temperatures above 50° C (122° F) will cause a high-temperature error message
Humidity	0% to 95% (non-condensing)
Shock Resistance	Passes drop test from 1.5 m (59")
IP Rating	IP67 (immersible)
Intrinsic Safety	Certified to meet Class I, Div. I, Groups A, B, C, D, T4 ATEX II IG EEx ia IIC T4

PHYSICAL CHARACTERISTICS

Display	Graphic LCD with 1.2" x 0.75" (30.5 mm x 19 mm) viewable area can be flipped for view by user; Radiation intensity displayed in cps or dosage rate in divisions of R/h or Sv/h
Direct Readout	Dose rate, peak, min, total dose, battery status, time, temperature
Ergonomics	Nonslip rubber housing with grippable ridges securely fits hand or glove
Keypad	2 operation/program buttons
Size	4.92" x 2.68" x 1.38" (125 mm x 68 mm x 35 mm)
Weight	9.5 oz (270 g)
Attachments	Rugged metal belt clip and wrist strap

*Specifications are subject to change