

## 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 $\mu$ R/h to 600 R/h (0.01 $\mu$ Sv/h to 6 Sv/h)
Accuracy of DER	$\pm$ 20%
Dosage Range	1 $\mu$ R to 999.9 R (0.01 $\mu$ 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 $\mu$ Ci and 16 $\mu$ 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"> <li>• Loud audible buzzer (85+ dB @ 30 cm)</li> <li>• Built-in vibration alarm</li> <li>• Highly visible LED lights on both sides of LCD graphic display</li> </ul>
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*