



GammaRAE II

Personal Radiation Detector

An intrinsically safe, rapid detector of gamma radiation sources

GammaRAE II is the first personal radiation detector to provide rapid detection of gamma radiation sources even in potentially flammable environments. Certified intrinsically safe and water-immersible for chemical decontamination purposes, the GammaRAE II can be safely used in more environments than any other personal radiation detector.

Fast Response

The sensitive Cesium Iodide (CsI) scintillator of the GammaRAE II provides a fast, two-second response to radiological threats.

Loud Alarm

GammaRAE II alerts the wearer with a loud audible buzzer, big, bright flashing LEDs, and a built-in vibration alarm. For stealth operations, users can disable each alarm alert individually.

Water Resistant

Immersible (IP67) design makes for reliable operation in wet environments and easy decontamination.

Dose Accumulation

The GammaRAE II accumulates approximate total dose. Total dose data stored can be cumulative or cleared and reset for each use period.

Intrinsic Safety (IS)

IS certification permits operation in potentially flammable/explosive environments.

Key Features

- Sensitive CsI scintillator for excellent search capability and fast response
- Prominent visible, audible and vibration alarms
- Immersible in water for easy decontamination
- Top-mounted, invertable display
- Continuous digital readout in microRem/hour ($\mu\text{R/h}$) or in microSievert/hour ($\mu\text{Sv/h}$) and counts per second (cps)
- Two operation keys, simple intuitive programming
- Long calibration life
- Two AA Alkaline batteries last up to 800 hours
- Large, 60,000-point datalog capacity, downloaded via cable-free Bluetooth® connection

Applications

- Alerts first responders to radioactive threats
- Customs & border patrols
- Law enforcement
- Security officers in nuclear power facilities, banks, government laboratories, medical facilities
- Military
- Government agencies
- HazMat teams
- Fire departments



Now!

IP67 Rated

Water Resistant



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ATEX



GammaRAE II

Specifications*

Detector Specifications

SENSOR	
Radiation Detector	3cc CsI(Tl) with Photodiode
Energy Range	0.06 to 3.0 MeV
Dose Equivalent Rate (DER) Range for ^{137}Cs	1 to 4,000 $\mu\text{R/h}$ (0.01 to 40 $\mu\text{Sv/h}$)
Accuracy of DER	$\pm 20\%$
Dose Range	1 μR to 999 R (0.01 μSv to 9.9 Sv)
Background Reference	Background level reference automatic on start-up, plus user-initiated as needed (Search Mode only)
User Calibration	None required. Periodic functional test recommended 1 μCi ^{137}Cs check source. Factory calibration available if needed.
ALARMS	
Time to Alarm	≤ 2 seconds
Alarm Alerts	• Loud audible buzzer (>85 dB @ 30 cm) • Built-in vibration alarm • Highly visible LED lights on both sides of LCD graphic display • Can be separately enabled or disabled
Alarm Modes	Search Mode: Alarm thresholds based on variations in local background level Safety Mode: User-programmable low and high alarm thresholds based on dose rate
DATALOGGING AND COMMUNICATION	
Datalog Size	60,000 data points (41 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
Battery Runtime	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 1G 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 dose rate in $\mu\text{R/h}$ or $\mu\text{Sv/h}$
Direct Readout	Dose rate, peak rate, minimum rate, total gamma dose, battery status, current time and date, current time since start-up, internal temperature
Ergonomics	Nonslip rubber housing with grippable ridges securely fits hand or glove
Key Pad	2 operation/program buttons
Size	4.92" x 2.68" x 1.38" (125 mm x 68 mm x 35 mm)
Weight	9 oz (240 g)
Attachments	Rugged metal belt clip and wrist strap

*Specifications are subject to change.

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Detector Kit includes:

- GammaRAE II personal radiation detector
- Belt clip
- 2 AA alkaline batteries
- Wrist strap
- User's Guide
- Calibration certificate
- ProRAE Studio Radiation software



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