thermoscientific

Find. Identify. Respond.

RadEye PRD and SPRD Personal Radiation Detectors

ThermoFisher SCIENTIFIC

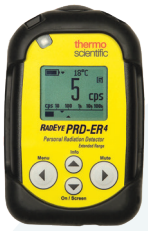
We have you covered.

RadEye PRD 4

- Novice users where radiation identification is not your primary mission
- Front line agents who can be notified of radiation threat

RadEye PRD4

| Interdiction
| Basic screening only
| Who: Radiation is not your primary duty



RadEye PRD-ER4

| Interdiction and Safety
| Basic screening only
| High detection sensitivity over high dose range
| First responders who have turn-back above 25R/h (250uSv/h)

RadEye SPRD

- Advanced users or specialists, where radiation detection and identification is part of mission
- Hazmat or CBRNe Teams

RadEye SPRD

| Interdiction
| Operate in challenging environments
| Require identification of radiation type

RadEye SPRD-ER

| Interdiction
| Operate in challenging environments
| Require identification of radiation type
| High range dose rate monitoring up to 1000R/h is required

Easy information. Smarter decisions.

- Large display with improved screen resolution and brightness
- No retraining or relearning for infrequent users
- Get results automatically, without the need to press buttons
- Quickly guides you through next steps after an alarm
- Simple 4 button design
- Comprehensive data neatly organized and presented on screen
- Bluetooth™ - integration with iOS™ and Android™ devices
- RadResponder iOS and Android phone apps compliant
- Easy-to-use configuration tool for small and large organizations
- No license required field test adapter for performance and measurement verification

Proven, flexible and rugged.

Thermo Scientific™ RadEye™ personal radiation detectors (PRDs) are vital to interdiction and response missions where both innocent and threat sources must be quickly and easily detected, identified, and located in real time. RadEye PRDs and SPRDs offer highly sensitive and rugged radiation measurement that incorporates high performance radiation detection and identification with a flexible technology platform that can be configured to meet the demands of law enforcement, first responders, and other agencies.

Operational Flexibility

RadEye PRDs enable users to make informed decisions at the scene that improve adjudication times, lower the number of nuisance alarms, increase reachback data quality, and reduce the time allocated to non-threat events.

- Combines detection and identification technologies in a single instrument
- Detects, identifies, and categorizes Artificial or Natural sources of radiation, i.e., Natural, Medical, or Investigative
- Sensitive CsI detectors are configurable to specific needs or CONOPS

Reducing Nuisance Alarms

RadEye PRDs are equipped with Natural Background Rejection (NBR), a proprietary technology used to eliminate fluctuating natural background levels while measuring radiation.

- Distinguishes artificial radiation from naturally occurring radioactive material (NORM)
- Reduces the number of false alarms by 80% without the need to increase alarm thresholds
- Detects low levels of artificial radiation such as hidden or shielded sources
- Alarms when energy imbalances are detected even if the total radiation level does not elevate

Configurability

RadEye PRDs feature easy-to-use tools for configuration and setup for any size operation. These tools improve consistency, simplify user training, and improve flexibility across multiple agencies and departments.

- Radeye.exe software simplifies the configuration and setup of new PRDs
- Predefined parameters can be stored in a configuration file and written to PRDs to support different CONOPs and deployments

Neutron Indication

RadEye PRDs feature neutron indication capability to quickly indicate and distinguish neutron sources from other less relevant radioisotopes.

- Adjudicate alarms in the field before escalating an alarm to secondary screening and reachback response teams.

Field Optimization and Dose Rate Calibration

The RadEye PRD family leverages patented Lutetium test adapters to perform optimization and performance verification tests.

- Non-radioactive base material does not require a license to possess.
- Test adapter ensures accuracy at the point of use, reducing nuisance alarms and ensuring accurate dose rate measurements

Sourceless Gain Stabilization

RadEye PRDs include a patent pending source-less routine for ID stabilization and outstanding neutron sensitivity that does not require integrated source material. Detector alignment and stabilization is essential to maintain detector performance and accuracy for artificial alarms, categorizations, and identifications for reduced nuisance alarms and more effective CONOPS/ Missions.

- Auto adjust feature works as a background task during normal operation using cosmic background events
- Performs a continuous fine adjustment of the detector amplification in order to correct any eventual long-term drift of the detector performance

Accessories

Chargers

Single unit - desktop or vehicle

Multiple unit

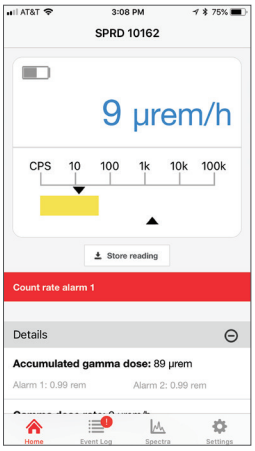
Vehicle charger

Bluetooth™ Adaptor and mobile app.

Faster response to alarms without exposing operation

Download a copy of our apps today. Available for iOS and Android operating systems.

- Free app for your Apple® or Android™ device
- Easily install the Bluetooth adaptor to your Thermo Scientific™ RadEye™ without tools
- Real time alarm indications on every connected smartphone
- See data on your phone in real time
- Receive alarms and rate data on your connected smart watch
- See detailed radiological and system information on your mobile device including count rate, dose rate, and alarms.



Alarm activated on RadEye App

A wide range of kits are available for our RadEye products. Talk to your local sales representative to learn more about our kits.

RadEye PRD4 kit

Lu test kit adaptor for performance checking, cable and docking stating for detailed analysis of data on a PC.

Holster options

Extending pole

thermo scientific

Product Specifications		RadEye PRD4	RadEye PRD-ER4	RadEye SPRD	RadEye SPRD-ER
Part number		425067126	425067127	4250827	4250825
Radiation detected and analyzed		Gamma and X-rays plus neutrons via prompt gamma			
		1ea. Low Dose Rate Detector	1ea. Low Dose Rate Detector and 1ea. High Dose Rate Detector	1ea. Low Dose Rate Detector	1ea. Low Dose Rate Detector and 1ea. High Dose Rate Detector
Low dose rate detector					
Material		CsI(Tl)			
Sensitivity (662 keV)		200 cps per µSv/h			
Energy range		58 keV – 6 MeV: for dose and dose rate measurement			
		20 keV – 6 MeV: for count rate (pager function)		20keV – 3 MeV	
Dose rate range		10 nSv/h - 250 µSv/h (1 µR/h - 25 mR/h)			
NBR (Natural Background Rejection)		Enhanced NBR Algorithms			
Neutron detection and verification		Using prompt gamma analysis algorithm			
Continuous gain stabilization		Sourceless detector performance algorithm			
Typical ID time (@ 1µSv/h (100µR/h))		N/A	N/A	<3 minutes	
Fast gain verification and adjustment		Lutetium test adapter (< 10 nCi Lu-176)			
High dose rate detector					
Material			Patented scintillator		Patented scintillator
Sensitivity (662 keV)			25 cps per mSv/h (0.25 cps per mR/h)		25 cps per mSv/h (0.25 cps per mR/h)
Energy range			20keV – 3 MeV		20keV – 3 MeV
Dose rate range			≤1000 R/h (<10 Sv/h), (The high dose rate range meets the requirements of IEC 60846-1 (2009) and ANSI N42.33-2006)		≤1000 R/h (<10 Sv/h), (The high dose rate range meets the requirements of IEC 60846-1 (2009) and ANSI N42.33-2006)
General specifications					
Battery type		2 x AAA alkaline or rechargeable NiMH			
Battery Life		>170h (alkaline) or >100h (rechargeable NiMH)			
Alarm notification		Display, LED, sounder, Vibe			
Gain stabalization		Source-less, algorithm running continuously			
Weight including batteries and rubber sleeve		179g			
Water/dust rating		IP 65			
Drop tested		1.5 m on concrete (with rubber sleeve)			
Operating temperature		-4°F to 122°F (-20°C to 50°C)			
Dimensions		4.1 x 2.6 x 1.6 inches (with rubber protective sleeve)			
Wireless communications		Bluetooth 4.0 (Option)			
Wired communications		USB to IR			
Field calibration		Lutetium Adapter - no license required (Option)			
Standards compliance	Low dose rate range	• ANSI N42.32 • IEC 60846-1		• ANSI N42.48 SPRD • IEC 60846-1	
	High dose rate range		• ANSI N42.33 • IEC 60846-1		• ANSI N42.33 • IEC 60846-1

Find out more at **thermofisher.com/sprd**

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