

identiFINDER R200

Spectroscopic Personal Radiation Detector



*detection
monitoring
identification*

radiation

identiFINDER R200 is a rugged, pager-sized Spectroscopic Personal Radiation Detector (SPRD). The R200 provides full ANSI N42.32 Personal Radiation Detector (PRD) compliance and features next-generation solid state detector read-out technology that delivers ANSI N42.48 SPRD compliance with nuclide identification. The clear user interface and simple data presentation common to all identiFINDER products allow it to quickly integrate with existing operational protocols and reduce the training burden.

The ability to identify specific gamma sources enables front-line responders to perform immediate detection and response during a radiological event. FLIR's new SiPM technology in combination with Cesium Iodide (CsI) detector provides high-fidelity identification ($\leq 7.5\%$ resolution) so front-line officers can quickly determine whether a radiation source is a true threat or benign source from medical patients, normally occurring radiation, or industrial use. The identiFINDER R200 uses this next-generation solid state detector read-out technology to advance a radiological event from "alarm and wait" to "identify and take action."

At less than one pound, the identiFINDER R200 is lightweight and rugged enough to wear it on a belt without burdening the user. It is 1.5 meter drop-tested and IP67-rated so operators can wear it with confidence during routine traffic stops or high visibility events and in mass transit or critical infrastructure entry control points. It has a long-lasting internal rechargeable battery with additional external battery compartment for extended field situations. The identiFINDER R200 performs automatic calibration and stabilization and doesn't require any user maintenance.

The identiFINDER R-series of products share a field-proven, common user interface and simple data presentation. With over 20,000 identiFINDER products deployed globally, the familiar interactions with the identiFINDER R200 allow it to quickly integrate with existing operational protocols while also reducing the training burden. Using the latest advancements in Bluetooth® and web server technologies, the OneTouch Reachback™ feature enables officers to send immediate notifications to other responders before arriving on-scene providing large-scale situational awareness.

BENEFITS

Radioisotope Identification

Enables immediate front-line detection and response during a radiological event

- ANSI N42.32 PRD compliant
- ANSI N42.48 SPRD compliant, with nuclide identification
- SiPM technology with CsI detectors provide $< 7.5\%$ resolution
- Field-proven template matching algorithms

Pager Sized & Rugged

Belt-wearable for daily passive radiation monitoring

- 1.5 meter drop tested, IP67-rated
- No user maintenance
- Automatically calibrated and stabilized

Shared Common User Interface

Familiar interface aligns with typical operating procedures

- Simple three-button interface
- Clear, easy-to-read results
- Web-based software for easy data retrieval

SPECIFICATIONS

Technology

Technology	Spectroscopic personal radiation detector (SPRD)
Gamma (CsI)	(18mm) ³ Cesium Iodide (CsI) with Silicon Photomultiplier (SiPM)
Energy Range (Gamma)	25 keV - 3 MeV
Gamma Spectrum	1024 channels; 3 MeV
Dose Rate / Accuracy (Cs-137)	≤100 nSv/h – 250 μSv/h (≤10μRem/h – 25 mRem/h); ±20%
Typical Resolution	≤7.5 % FWHM at 662 keV
Service Interval	Recommended five year factory maintenance interval; annual dose rate calibration interval

Sampling & Analysis

Sample Introduction	Absorption of EM gamma emissions
Threats	Detects gamma radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
Standards Compliance	ANSI N42.32 PRD standard fully compliant ANSI N42.48 SPRD standard fully compliant, including nuclide identification
Sampling & Analysis	From a few seconds to minutes

System Interface

Display & Alerts	Memory LCD black and white display
Communication	USB 2.0; mini-B socket; Bluetooth® ≤10m range (removable)
Data Storage	30MB internal memory; up to 5000 spectra
Training Requirements	<10 mins for operator; 1 day for advanced user
GPS (removable)	66-channel MediaTek MT3329 receiver; sensitivity ≥165 dBm
Software	On-board webserver software

Power

Input Voltage	100-240 VAC (wall and car adapters and USB cable supplied)
Battery Specs	Internal single cell Li-ion; operational battery life ≥36h; replaceable back-up CR123A with ≥18h operational battery life; recharge time ≤6h when using AC or USB power source
Cold Start Time	<2 mins from cold start

Environmental

Operating Temp	-4 to 122 °F (-20 to 50 °C)
Operating Humidity	93% RH @ 35 °C (non-condensing)
Storage Temp	14 to 95 °F (-10 to 35 °C)
Enclosure & Protection	Plastic injection with rubber overmold; protection rating IP67 according to IEC 60529

Physical Features

Dimensions (L x W x H)	5.7 x 2.2 x 1.9 in (14.5 x 5.6 x 4.8 cm)
Weight	≤0.88 lb (0.4 kg)



Belt-wearable for easy access



Easy-to-read interface for quick threat detection



Dose Rate Mode



Radioisotope identification

