



Detector

# RPL Environmental Dosimetry System

Our environmental monitoring system features a wide RPL glass surface to support an extensive range of radiation levels of gamma rays, X-rays, and synchrotron radiation.



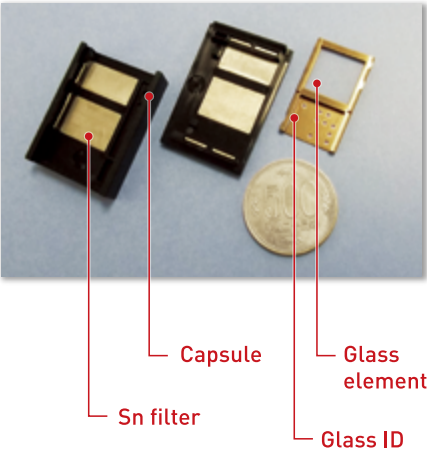
Reader (FGD-202)

Controller PC

Components

- Glass dosimeter element (detector)
- Reader
- Controller PC

Structure of SC-1 Detector

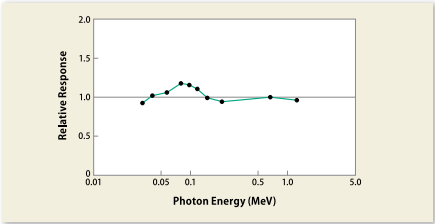


Advantages

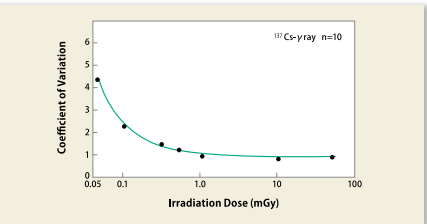
- The wide surface of our RPL glass provides accurate measurements of low to high dose ranges.
- Repeated readouts enhance measurement accuracy.
- Sensitivity variation in the glass element is minor, ensuring reliability.
- Homogeneous composition of PRL glass ensures stable dosimetry.
- RPL glass is resistant to dust and sunlight, providing minimum fading.
- Automated readout process facilitates operation.

Performance

■ Energy Dependency



■ Sensitivity Variation



Applications

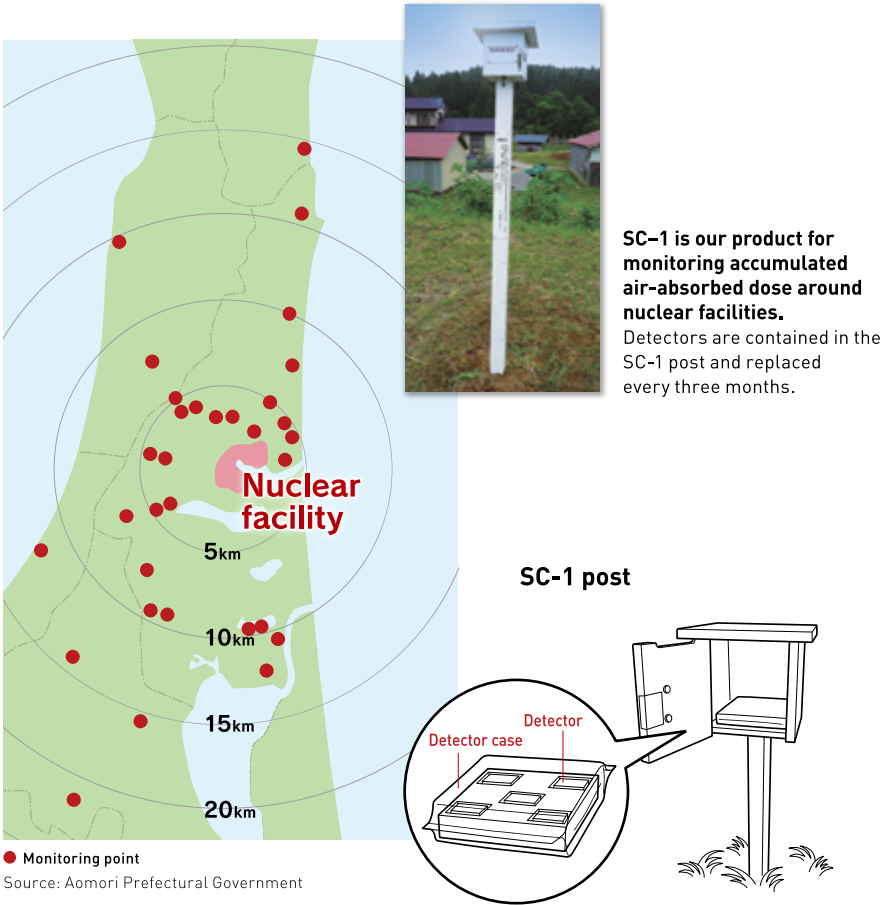
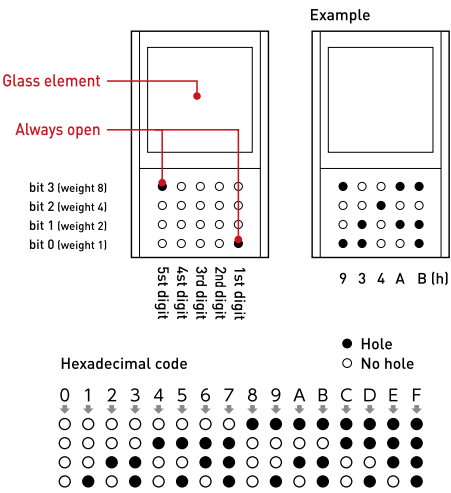
- Gamma-ray monitoring around nuclear power plants.
- Environmental monitoring for healthcare X-ray, radioisotope, or other facilities.
- Air-absorbed dose monitoring on the border of controlled areas

Users

- Nuclear facilities
- Radiology department
- Research institute etc.

Diagram of detector ID control code system

The card number of SC-1 is expressed by a hexadecimal number. A glass card has the hole where the card number was expressed by a binary number. This is called "holecord".



SC-1 is our product for monitoring accumulated air-absorbed dose around nuclear facilities. Detectors are contained in the SC-1 post and replaced every three months.

Specifications

Dosimeter element	Model	SC-1	
	Measuring Range	Photon : 30 keV to 3 MeV 10 μGy to 10 Gy (10 μSv to 10 Sv)	
	Sensitivity Variation	Cv 4.5% or less (Cs-γ 200μGy)	
	Energy Dependency	Within±20 % (32 keV to 1.25 MeV)	
	Dimension	30×40×9 mm	
	Weight	Approx. 15 g	
	Reader	Model FGD-201 / FGD-202 (* with energy estimation system)	
Reader	Indication Range	1 μGy to 10 Gy (1 μSv to 10 Sv)	
	Reading Reproducibility	Cv	5% or less (Cs-γ 0.1 mGy)
			2% or less (Cs-γ 1 mGy)
			1% or less (Cs-γ 10 mGy)
	ID Reading	Automatic	Capsule ID : 8 digits (barcode)
			Card No. : 20 bits (holecode)
	Readout Time	10 seconds or less / 1 detector	
	Continuous Reading	20 dosimeters	
	Calibration	Dose calibration using standard irradiated glass	
		Automatic correction by internal calibration glass	
	Data Storage Capacity	50,000 data	
	Indicated Items	Dosimeter I D, Element I D, Date and Time, Initial reading, Cumulative [period] value, Parameters, Error messages	
	Dimension (Main Unit)	400(W)×570(D)×415(H) mm	
	Weight (Main Unit)	Approx. 35 kg	

Note: Specifications are subject to change without notice for improvement.