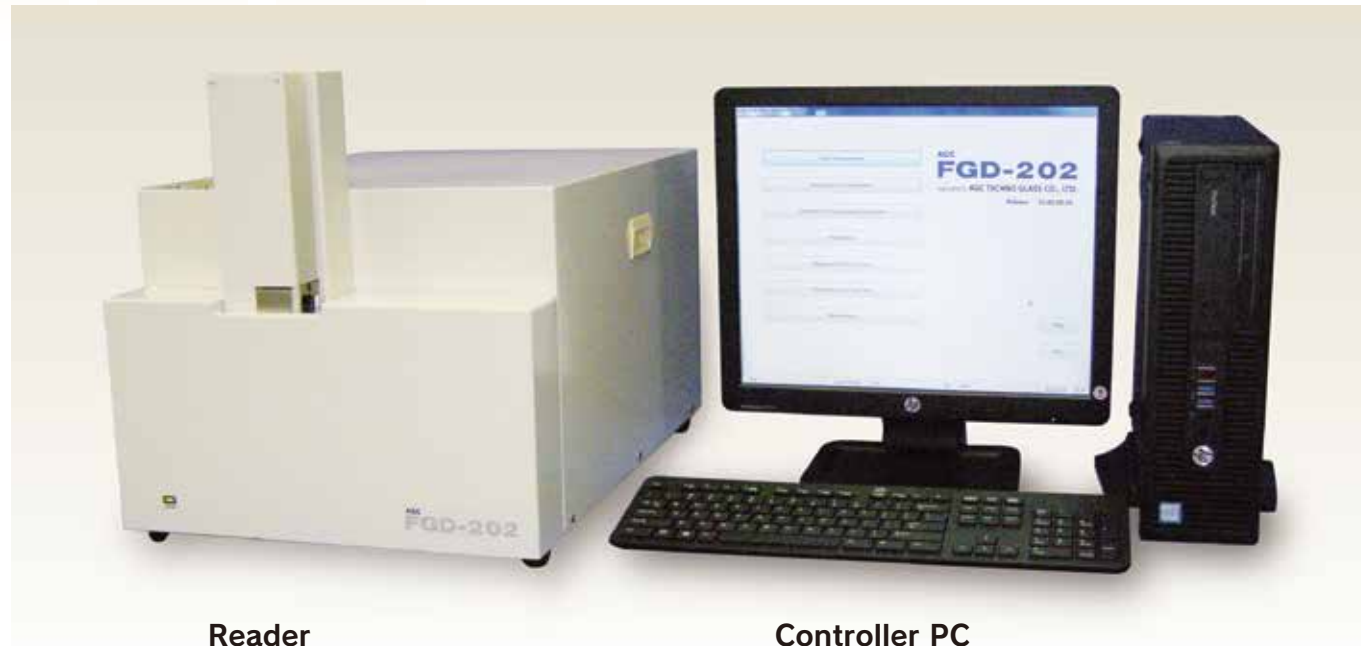


# RPL Environmental Dosimetry System



Detector

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.



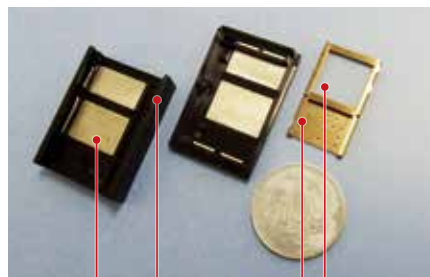
Reader

Controller PC

## Components

- Detector
- Reader
- Controller PC

## Structure of SC-1 Detector



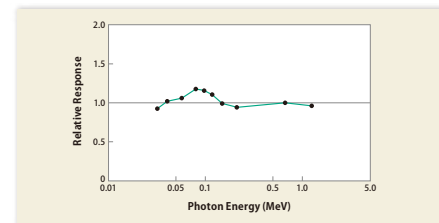
Capsule  
Sn filter  
Glass element  
Glass ID

## Advantages

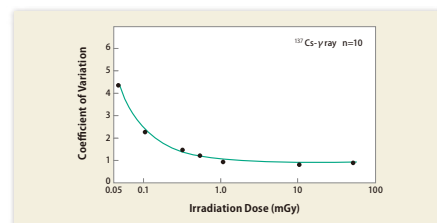
- The wide surface of our RPL glass provides accurate measurements of low to high dose ranges.
- Repeated readouts enhance measurement accuracy.
- Sensitivity variation in the glass element is minor, ensuring reliability.
- Homogeneous composition of PRL glass ensures stable dosimetry.
- RPL glass is 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
- Personal dose monitoring\*

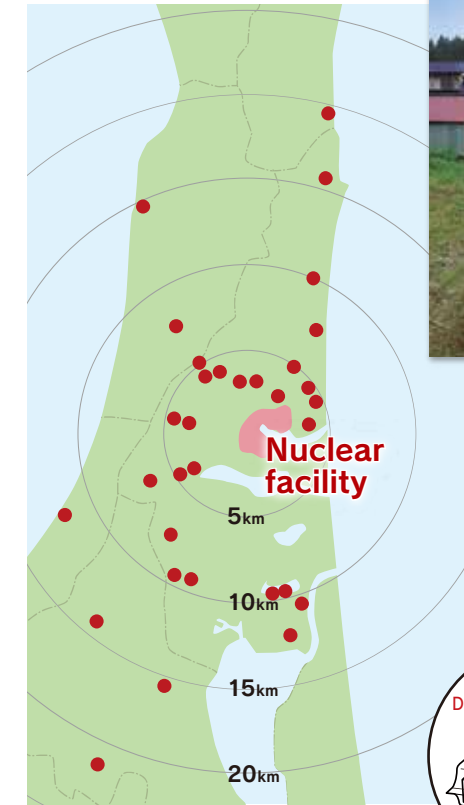
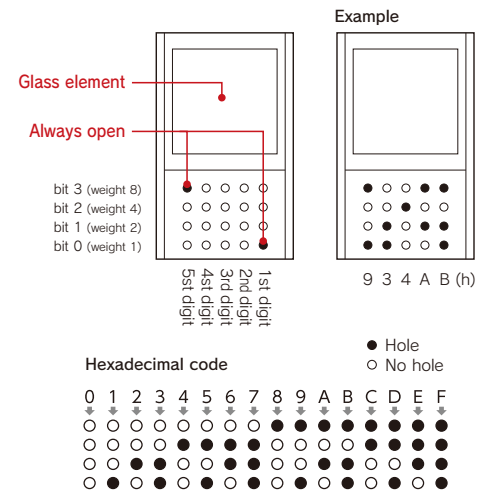
## Users

- Nuclear facilities
- Radiology department
- Personnel\*

\* Another calibration is required.

## 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 "holecode".

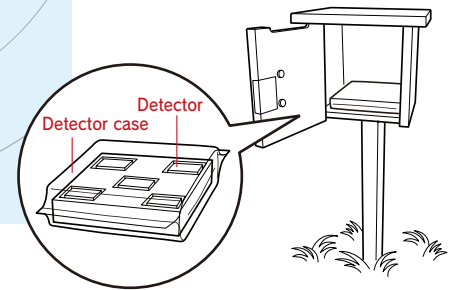


● Monitoring point  
Source: Aomori Prefectural Government



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.

SC-1 post



## 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)
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 g	

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