RPL Dosemeter for Individual Monitoring

Personal Dosimetry System

Institut de Radioprotection de Sûreté Nucléaire (IRSN) is providing Dose Monitoring Service in Europe using our products. Our accumulated Know-how is available through the French Institute.
Chiyoda Technol also helps you to consult your needs and provides Individual Dosimetry System.
Please contact us.

IRSN
INSTITUT DE RADIOPROTECTION ET DE SÛRETÉ NUCLÉAIRE

Chiyoda collaborates with the French Institut de Radioprotection et de Sureté Nucléaire (IRSN) to globally proliferate our RPL technology.

RPL Dosemeter is the flagship among our products, resulting from our long years' research and experience.
Chiyoda Technol has been engaging in Individual dose monitoring business since 1954. At present, we operate the service with a total number of 4 million units in Japan.

Technical Benefits

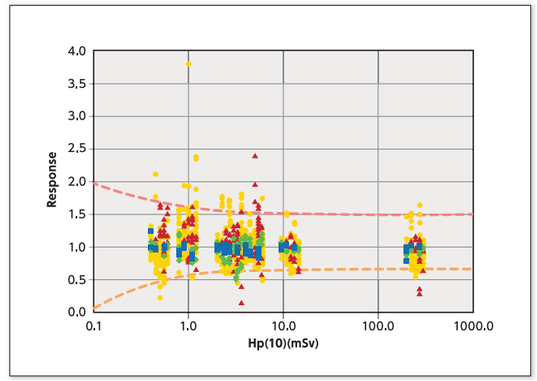
- Proven European-scale performance recognized by the major European laboratories that choose the institute's dosemeter (see intercomparison results)
- Recording threshold: 0.05 mSv
- Less than one percent of fading over a period of 12 months

Specifications

	Detected energy range (A)	Dose range (B)
Photon (X,y)	From 10 keV to 10 MeV	From 0.05 mSv to 10 Sv
Beta	From 100 keV to 3 MeV	From 0.05 mSv to 10 Sv

(A) These values are not operating limits but correspond to the minimum and maximum energies available in the reference facilities that conducted the tests.
(B) In laboratory conditions, the detection limit is a few µSv only.

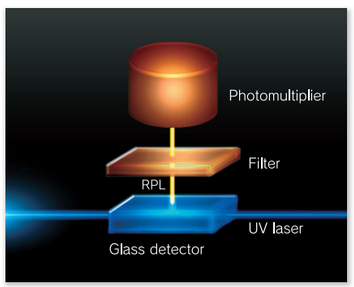
EURADOS INTERCOMPARISON 2010
RPL (in blue) is one of the rare technologies to pass all the tests with non-compliance. Ref: EURADOS Report 2015-1



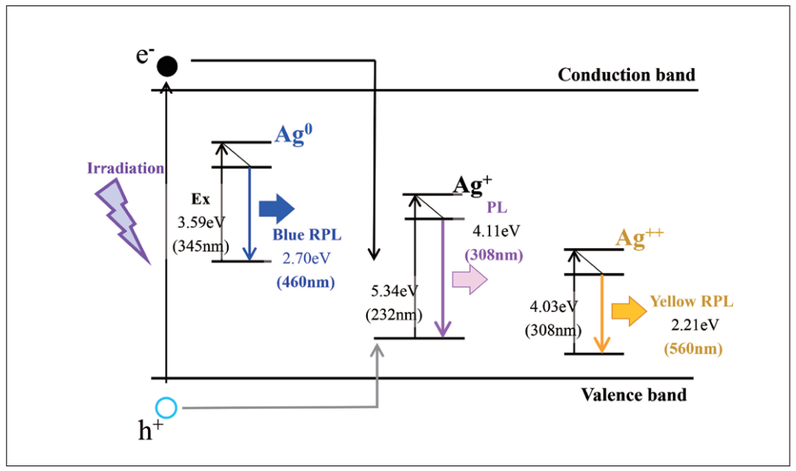
Reader (FGD-660)

Automatic Reader FGD-660

RPL is the only dosemeter with non-destructive reading center that is able to routinely take 50 measurement points per dosemeter which can be read repeatedly without fading. We associated it with RPL Dosimetry Reader (FGD-660), the read-out system for glass detector, using solid-state (UV) laser that is capable to drive continuous pulses to the ultra violet excitation source.



RPL emission model of Ag^+-doped phosphate glass.



The composition of luminescence of silver doped glass has been clarified by recent research. Please refer to:
Y. Miyamoto et al. Radiophotoluminsecence from silver-doped phosphate glass, Radiation Measurement 46: 1480-1483, 2011

(2021.12)