

Specifications

Connectable Detectors	α/β detector, β detector, γ detector. Radiation types are automatically identified when detector is connected.	Data Saving	Instantaneous value at any time or at preset intervals 144000 data (in case of 100-day measurement at 60-second intervals) 100 folders can be created at max
Display	Black and white LCD (with backlight and touch panel)	Output	USB2.0, Mass storage class
Display Mode	Detailed, simplified, time-series, scaler, preset list and user settings	Remote Control	By external PC
Displayed Contents	Measurement value (digital and bar graph), measurement unit, radiation type, time, time constant, battery level, peak hold value and overload, etc.	Power	Primary battery: 8 AA alkaline batteries Secondary battery: 8 AA NiMH batteries USB supply (USB2.0)
Units	s^{-1} , min^{-1} , Bq/cm^2 , Sv/h , Gy/h , R/h , rem/h / counts (Scaler)	Battery Life	Connecting ADB-1121 or ADC-1121 Primary battery: 100 hours or longer (by new batteries at 20°C) Secondary battery: 70 hours or longer (by full-charged batteries at 20°C) Connecting ADP-1111 Primary battery: 30 hours or longer (by new batteries at 20°C) Secondary battery: 12 hours or longer (by full-charged batteries at 20°C)
Response	Time constant (3 stages), standard deviation (1% to 20%)	Environmental Requirements	-20°C to +50°C, lower than 90% RH, non-condensing
Operation	Power switch, HOME switch, RESET switch, touch panel	Protection Class	IP65 (when connected to detector)
Sound	Alarm, measurement count	Dimensions	Approx. 98 mm (W)×191 mm (D)×85 mm (H) (excluding handle and protrusions)
Alarm	Settings: α , β and γ can be individually set Display: alarm, sound simultaneously with LED flashing	Weight	Approx. 740g (including batteries, and excluding detector and cable)
Alarm Clear	AUTO: Automatic clear when the value is under preset HOLD: Alarming until RESET switch is pressed		
Scaler Mode	Preset time: 1 to 9999 sec (999,999 counts at max by selecting 0) Repeat time: 5 times at max		
Earphone	Earphone adapter socket for Micro USB is required		

Standard Configuration: Main unit (TDC-9111), Detector connection cable (1.3m), 8 AA alkaline batteries, Instruction manual

Optional Items: α/β detector (ADC-1121), β detector (ADB-1121), γ detector (ADP-1111), Shoulder belt, Detector extension cable (5 m and 10 m)

Optional Detectors (Sold separately from TDC-9111)

■ α/β Detector (ADC-1121)



■ β Detector (ADB-1121)



■ γ Detector (ADP-1111)



Radiation Detected	Alpha, Beta (and Gamma)
Detector	ZnS(Ag) Scintillator + Plastic Scintillator
Detection area	100cm ²
Instrument Efficiency	α : 35%/2 π ±25%, and more than 30%/2 π (30%/2 π to 43.7%/2 π) by ²⁴¹ Am β : 40%/2 π ±25% (30%/2 π to 50%/2 π) by ²² Cl *0.5cm between detector and source
Cross Talk	$\beta \rightarrow \alpha$: less than 0.1%, $\alpha \rightarrow \beta$: less than 5%
Counting Rate Range	α : 0 to 10 ks ⁻¹ , 0 to 100 kmin ⁻¹ β : 0 to 10 ks ⁻¹ , 0 to 300 kmin ⁻¹ (Reading in Bq/cm ² on TDC-9111)
Others	Switches to change time constant and save data, and LED lights
Weight	Approx. 320 g (excluding cable and protection cover)

Standard Configuration: α/β detector, Instruction manual and Calibration certificate

Radiation Detected	Beta (and Gamma)
Detector	RUGGED SCINTI (Two in one, plastic scintillator + film)
Detection area	19.6 cm ² (φ5cm)
Instrument Efficiency	45%/2 π ±25% (33.8%/2 π to 56.2%/2 π) by ⁹⁰ Y *0.5 cm between detector and source
Counting Rate Range	0 to 10 ks ⁻¹ , 0 to 300 kmin ⁻¹ (Reading in Bq/cm ² on TDC-9111)
Others	Switches to change time constant and save data, and LED light
Weight	Approx. 270 g (excluding cable)

Standard Configuration: β detector, Instruction manual and Calibration certificate

Radiation Detected	Gamma (and X-ray)
Detector	NaI(Tl) scintillator
Detector size	φ25.4 mm × 25.4 mm
Relative Intrinsic Error	Within ±15%
Linearity	The response is within 0.85 to 1.22 (1 in 1 $\mu\text{Sv/h}$, IEC 60846-1:2009)
Energy	Dose rate: 50keV to 3MeV (The energy exceeding 3 MeV is compensated as 3 MeV) Counting rate: 50keV or more
Measurement Range	0 to 30.0k s ⁻¹ , 0 to 1.80M min ⁻¹ Background to 30.0 $\mu\text{Sv/h}$, or 30.0 $\mu\text{Gy/h}$ Background to 3.00 mR/h, or 3.00 mrem/h
Others	Switches to change time constant and save data, and LED light
Weight	Approx. 340 g (excluding cable)

Standard Configuration: γ detector, Instruction manual and Calibration certificate

LUCREST

TDC-9111



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*Specifications and appearance may be subject to change for improvement without notice.

*For proper use of the system, be sure to read the operating manual prior to placing it into service.



We strive to provide quality products and services for our customers.
We operate with regard for the environment.

We have been leading the development of radiation measurement technology in various fields since we first commercialized our own product in 1954.

Introduction

Radiation survey meter for multiple detector

"LUCREST", a combination of "lux" and "crest," embodies our continuous faith and ambition for transforming "unseen anxiety" into "visible relief."

α / β , β and γ detectors are compatible with one main unit. Display automatically changes along with which you connect to it. Detectors can be selected according to your individual needs.

Features

- Designed for high operation performance
- Lightweight magnesium alloy main unit
- Touch panel
- Easy operation
- Data saving and time-constant changing are operated just by switches on detector
- Time-series data displayed
- Data output by USB

Appearances

With α / β detector connected



With β detector connected

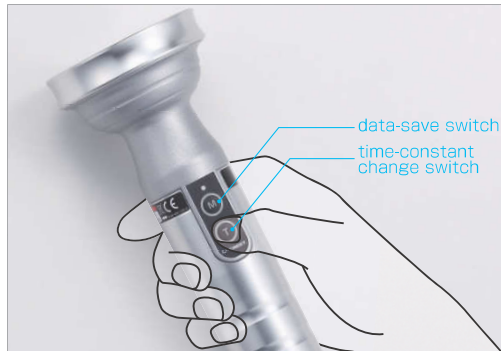


With γ detector connected



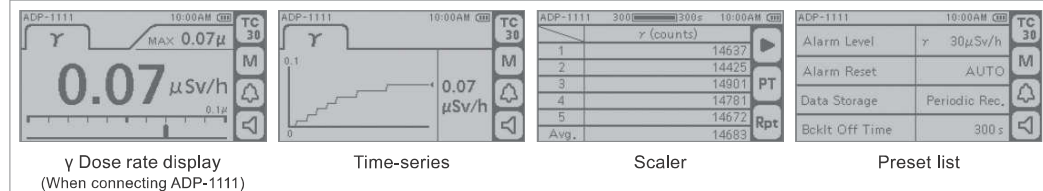
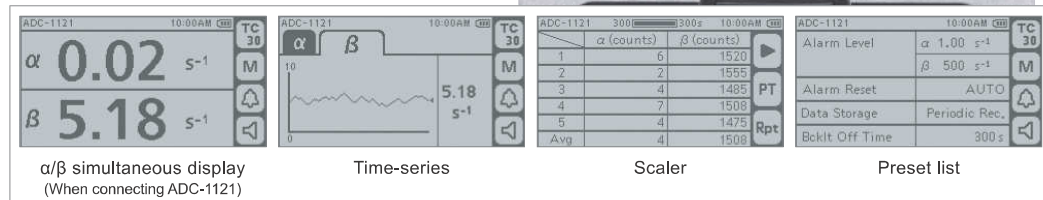
Switches on Detector

You can operate survey meter just by one hand. The detectors have time-constant change and data-save switches right on it.

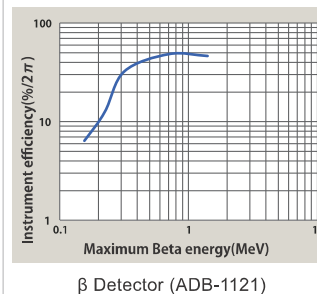


Display

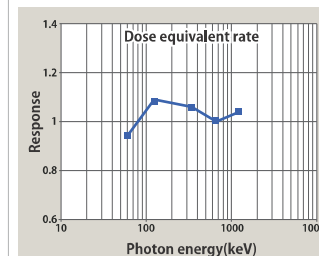
- Optimized LCD for easy reading both indoors and outdoors
- Intuitive touch panel operation
- Easy understanding of measurement fluctuation on bar-graph meter
- Various functions including time-series and scaler mode



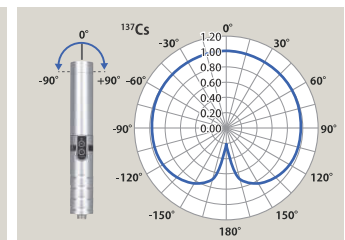
Instrument Efficiency for Beta



Energy Dependence for Gamma



Angular Response for Gamma



γ Detector (ADP-1111)