

# Mini SURVEY METER TA100U

MADE IN JAPAN

Equipped with spectrum analysis for gamma ray and CdTe semiconductor detector

$\mu\text{Sv/h}$

TA100U is a handheld small dosimeter which shows gamma ray nuclide by spectrum (graph) in addition to displaying general dose rate ( $\mu\text{Sv/h}$ ). Data can be transmitted to PC via USB.

- **Range of dose rate** 0.01  $\mu\text{Sv/h}$  – 10 mSv/h
- **Detector** CdTe 10 x 10 x 1 mm
- **Energy response** Within  $\pm 15\%$  (Energy compensation)
- **Energy range** 20 keV - 1.5 MeV
- **Energy resolution** 3% ( $^{137}\text{Cs}$ , 662keV, Typ.)
- **Throughput** 50,000+ cps
- **Sensitivity** 800cpm ( $\mu\text{Sv/h}$ )
- **Function** Identifies dose rate, cumulative dose, spectrum and nuclide

## Overview

We adopted CdTe (Cadmium Telluride) semiconductor, which has larger atomic number (48, 52) than silicon semiconductor has, has high energy radiation absorption ability and can operate at room temperature. Energy resolution of CdTe is 3% ( $^{137}\text{Cs}$ , 662 keV gamma ray), which is very excellent. In spectrum mode, CdTe can identify nuclide and discriminate between  $^{134}\text{Cs}$  and  $^{137}\text{Cs}$ . With up-to-date electronic circuit, energy compensation is achieved. Accurate dose rate is displayed in wide range of 0.01  $\mu\text{Sv/h}$  to 10 mSv/h. TA100U has built-in lithium-ion battery and is capable of 15 hours of continuous operation.

Its screen is small but very eye-friendly as organic EL display is adopted. Data can be transmitted to PC via USB.

## Specifications

Range of dose rate	0.01 $\mu\text{Sv/h}$ - 10 mSv/h
Detector	CdTe 10 x 10 x 1 mm
Energy response	Within $\pm 15\%$ (Energy compensation)
Energy range	20 keV to 1.5 MeV
Energy resolution	3% ( $^{137}\text{Cs}$ , 662 keV, Typ.)
Throughput	50,000 cps and more
Sensitivity	800 cpm ( $\mu\text{Sv/h}$ )
Dose rate time constant	AUTO, 3 sec, 10 sec, 30 sec, 60 sec, 90 sec
Dose rate energy compensation	512 stages
Alarm function	Alarm by threshold of dose rate
Energy spectrum	512 channels
Nuclide identification function	11 nuclides such as $^{134}\text{Cs}$ , $^{137}\text{Cs}$ , $^{131}\text{I}$ , $^{57}\text{Co}$ , and $^{60}\text{Co}$
Indicator	Organic EL display 128 x 64 dots
Built-in power	Lithium ion polymer charging battery, 2000mAh
Operating time	About 15 hours in a row
External dimensions	Main unit : 67 (W) x 115 (H) x 28 (D) (Unit : mm)
Weight	About 180g
Environmental condition	Operating temperature: 0 - 40°C, No dew condensation



Spectrum mode  
(Measurement example:  $^{134}\text{Cs}$  and  $^{137}\text{Cs}$  of soil)



Dose rate mode  
(Time constant: AUTO, Dose rate and cumulative dose)



Main unit and accessories

\*Images is for illustration purpose.

\*Please note that contents may change without prior notice.

# TechnoAP

Design and fabrication of electronic circuit associated with measurement control and radiation measurement

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