

**DIGITAL POCKET DOSIMETER- I**

TYPE: PD 714

**Technical Data**



**FEATURES:**

- High sensitivity Si-diode based design**
- Serves as an excellent pocket dosimeter.
- Compact, elegant light weight design.
- Measures both **cumulative dose** in the range of 1  $\mu$ Sv to 999.9 mSv and **doserate** in the range of 00.01 mSv/h to 999.9 mSv/h.
- Battery life of more than 500 hrs.
- IR non-contact serial communication port for PC connectivity.
- Tolerant to mobile phone interference & also meets EMC requirements of ANSI N42.32 – 2003.

**Digital Pocket Dosimeter Type PD714** uses a high sensitive Si- diode as the radiation detector. This is designed to fit into pocket & has a spring loaded clip. This serves as personal radiation Dosimeter to cater to the needs of radiation workers in Nuclear installations, Reprocessing plants, Radiochemical plants etc. It also finds use in medical, industrial, other applications where radioactive isotopes are used for a variety of applications. It is also recommended as a personal dosimeter in Radiotherapy departments, nuclear medicine centres, cyctron & PET-CT centres.

It measures integrated radiation dose in the range of 1 $\mu$ Sv to 999.9mSv and doserate in the range of 00.01mSv/h to 999.9 mSv/h. The user interface to the instrument is through the LCD display and a single push button switch. Its design is based on nano watt technology resulting in a battery life of better than 500 Hrs of continuous use.

**Additional options:**

- i. Docking station for PD714
- ii. Dose records data management software DS715.

**Radiation detected:** Gamma / X-ray

**Detector:** Si diode

**Display:** 4 digit 7 segment LCD display

**Energy dependence:**  
+/- 25% in the range of 60 keV to 1.33 MeV

**Range changeover:** Automatic

**Dose:** 1  $\mu$ Sv to 999.9 mSv

**Dose rate:** 00.01 mSv/hr to 999.9mSv/hr

**Over range :**100% over range compliant.

**SPECIFICATIONS**

**PC Connectivity :** Optical port for communication with PC for configuration, Calibration & data transfer.

**Batteries:**  
3V Li-coin cell Type CR2354 size - 23.4mm x 5.4 battery to provide a life of approximately 500 Hrs.

**Battery status:**  
Low battery indication onLCD

**Electronics:** PIC microcontroller based design.

- Control:**
- i. A single push button for
    - a) Powering the unit ON
    - b) Viewing dose / doserate
  - ii. IR interface with PC

a. Setting / Reading ID of dosimeter in stored in memory

b. Setting / Reading issued /not issued status stored in memory.

- c. Reading current dose reading
- d. Resetting dose reading
- e. Powering OFF the dosimeter

**EMI/EMC compliance:** Shall not be affected by RF over frequency of 20 MHz to 1000 MHz at an intensity of 10V/m as per ANSI N42.32 - 2003. Tolerant to mobile phone interference.

**Dimensions:**  
30(W) x 125(L) x 14(D) mm, excluding clip

**Weight:** Approximately 60 gm.

## IR DOCKING STATION (DS715) & DOSE RECORDS DATA MANAGEMENT SOFTWARE (DRMS)

### Technical Data



### FEATURES

#### Hardware:

- Communication with dosimeters over IR port.
- Connects to PC through USB port.

#### Software:

- Automatic cumulative dose & ID readout or resetting of dose, into data base depending upon issued status.
- Power OFF controlled through IR port.
- Data storage automatically after each readout.
- Dose records data base gives weekly, monthly, & yearly cumulative dose of individuals.

DS715 under the control of the PC communication software primarily facilitates automatic readout of **Cumulative Dose** along with the **Unique ID apart** from configuration/calibration of the dosimeter. This Docking station DS715 is designed to for dosimeter PD714 which communicates with the Dosimeter through IR port and on the PC side it gets connected through the USB port. Docking station derives power through the USB port.

**Dose records data management software (DRMS)** is designed to read **stored total dose** from the dosimeter automatically once the dosimeter is placed in the docking station. It also facilitates assigning Unique ID for individual dosimeters, Calibration of the dosimeters for Cumulative Dose. The Application software routes data to Dosimeter through USB cable to/from docking station which in turn routes the data through IR port to the Dosimeter. Once the data is retrieved into PC, it gets recorded in a MS Access database. Users can retrieve and analyze data - ID-wise, Day-wise, Month-wise, Week-wise. Instrument power OFF is controlled through IR port by the software.