



Innovator In Spectroscopy Equipment

PD2318



- Hp(0.07)
- Hp(10)
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PERSONAL DOSIMETER MODEL PD2318

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CATALOG



DOSIMETERS



FREE DOWNLOAD

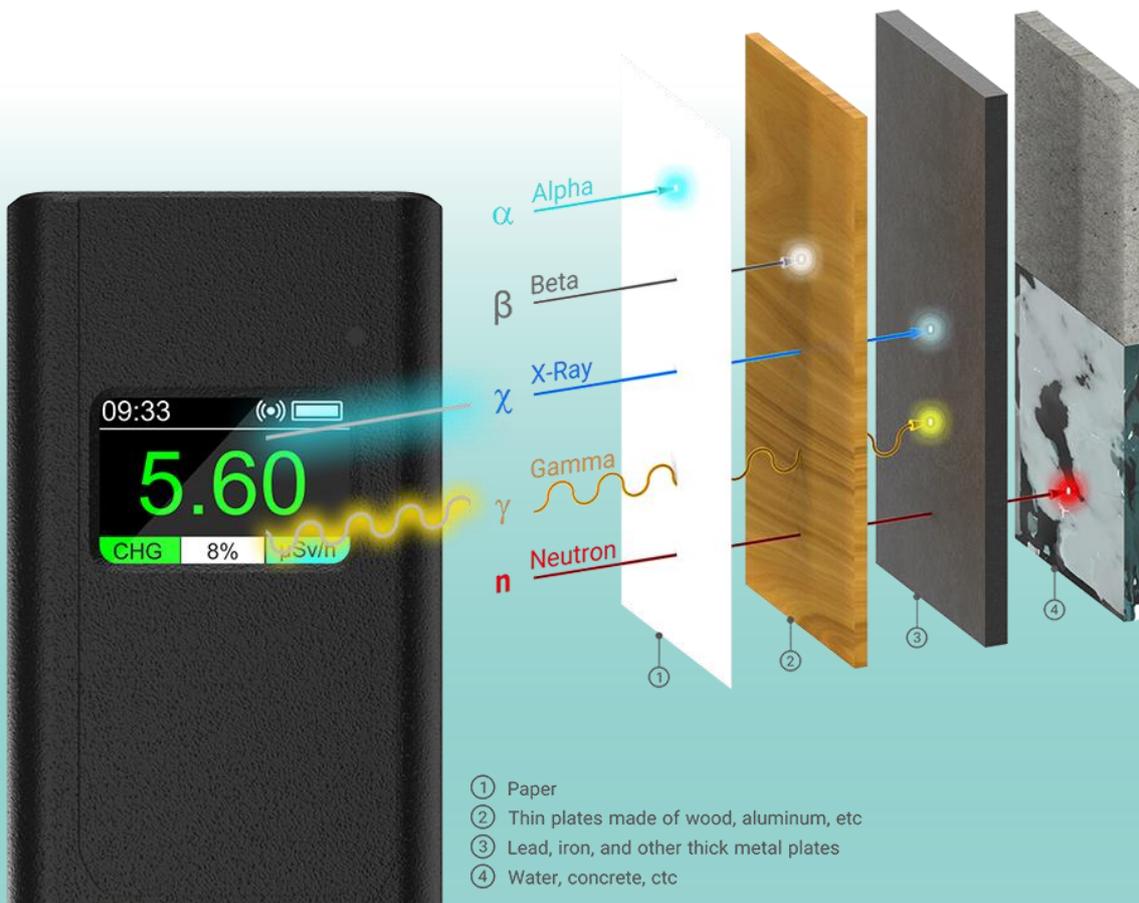
PERSONAL DOSIMETER

MODEL PD2318

Features

- Parameters self-check
- Full color LCD display
- 3 color Alarm indicator
- Monitor counts/time (rate)
- High immunity to interference
- Silicon pin photo diode detector
- Background radiation monitoring
- Compact design with Low weight
- Easy to use and low maintenance
- Cost effective Semiconductor Sensor
- Optional charging and data transfer unit
- Automatic power down mode and sleep mode
- Capable of detecting Gamma & X-Ray radiation
- Measurement in wide range energies and dose rates
- Light and sound alarm
- Beta or gamma radiation source Detection
- High sensitivity and wide measurement range
- Dose range from 0.1uSv/h to 10mSv/h @¹³⁷Cs
- Measurement count from 0.01cpm to 300kcpm
- High Resistance to impacts and vibration, dust moisture and electromagnetic interference
- High Data Security Based on Data Reader and Charging Unit

Extreme sensitivity and uniform response to Beta, Gamma & X-Ray radiation



Description

The PD2318 from Control Farayand Pasargad (CFP) is a highly sensitive radiation dosimeter designed for various environmental conditions based on silicon semiconductor pin photo diode detector. The PD2318 has two versions. The first version is capable of detecting gamma & x-rays radiations while the second version detects beta, gamma and x-ray radiations.

PD2318 is equipped with a unified charging and data unit. The data and charging unit comes in two versions. The first version comes with five docks and the second version supports one dock. Additionally, the first version includes large display which makes it a complete data reader and charging unit but for the second version the data is presented on a PC connected to the unit. A windows program can collect information, visualize graphs in various types and store them for further processing.

The display implemented on the device can present various information for the user in a real-time manner. This display includes several menus. In the main menu, the count rate or alternatively dose rate is displayed. Beside the device present the connection to dock status, measurement coefficient of variation and data unit in this menu. The other menu is acquiring time where the user can select a time to save the measurement. In the configuration menu where alarm setting and unit for measurement can be set. The device alarm threshold can be easily set and then the device will generate audio alarm when the measurements exceed the threshold (second version only). The final menu is status menu in which the user can view the total incident dose to the device, battery and storage status. Based on the aforementioned features, PD2318 is a suitable choice for any personal healthcare system which support a unified data reading procedure and charging.



Specifications

UNIT:2318		
TYPE	Personal Dosimeter	
Version	X & GAMMA	BETA, GAMMA & X
Input(s)		
Port	USB for charging	
	USB remote read and write	
Push Button	Press to turn on, Short press to select function, Half-log long press to select mode, Long press (more than 3 sec) to turn off	
Output(s)		
	No output signal	
Control(s)/Communication		
USB	Set and read all data	
Power KEY Push Button	Press to turn on, Short press to select function, Half-log long press to select mode, Long press (more than 3 sec) to turn off	
Indicator(s)		
LED battery status	Green color (full), Red Color (charging)	
LED alarm & sign	Green (LOW) – Yellow (MID) – RED (HI)	
Buzzer	Not included	Available
Display		
Type	Full color OLED	
Size	64x96 pixels , 0.95 inch	
Performance		
Detector	Semiconductor (Silicon pin photo diode detector)	
Radiation measured	Gamma and X-ray	Beta, Gamma and X-ray
Gamma energy range	120keV-3MeV	60keV-3MeV
Beta energy range	Not detect	> 170keV
Gamma dose range	0.1-10000 μ Sv/h @ ¹³⁷ Cs	
Beta dose range	Not detect	1 μ Sv/h-0.1Sv/h @ ⁹⁰ Sr
Accuracy	+/- 10% @ ¹³⁷ Cs	+/- 10% @ ¹³⁷ Cs & ⁹⁰ Sr
Continuous run time	Normal conditions \geq 1000 h Economy mode \geq 5000 h	
Data Acquisition and Analysis		
Software	PD2318 (SOFTWARE)	
Battery		
Type	Li-ion	
Batter life	Over 300 times	
Work time	8 Hours full load	
	24 Hours intelligent mode	
Charging and data unit (OPTIONAL)		
Display	Version1: IPS Full color, 10.1", 1280x800 Pixels Version2: No display available	
Number of docks	Version1: 5 dock & Version2: 1 dock	
Communication	USB, Network	

Application

- Security control
- Nuclear industry
- Accelerator sites
- Scientific research
- Measuring background radiation
- Roentgenology and radiotherapy
- Individual radiation and protection
- Nuclear medicine (x-rays, CT scans, etc.)
- Research activities in radioecology and radiology
- Counts/Interval vs. distance and shielding studies
- Health physics (for contamination monitoring on Surfaces, clothing and objects etc.)
- Radiation protective measures in case of nuclear disasters



Electrical, Mechanical and Environmental

Unit:PD2318	
Type	Personal dosimeter (portable)
Version type	X & GAMMA BETA, GAMMA & X
Electrical	
Power required	0.3W
Physical	
Dimensions	135mm x 35mm x 17mm
Weight	98 gr
Mechanical	
	Unit: mm
Environmental	
Storage temperature	10°C to 40°C
Operating temperature	0°C...+50°C
Relative humidity	10 to 80%
Protection class	IP40



Software and user interface

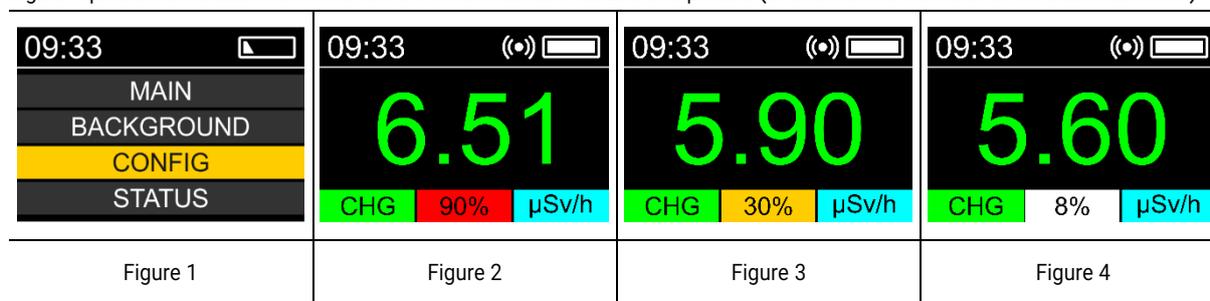
PD2318 dosimeter can be used standalone using the companion 0.95 inch display or with one of the data reading and charger units, whether 1-dock or 5-dock versions. In the following we see the most important window in the device GUI.

Figure 1 shows the name of various menus in the GUI.

Figure 2 present a measurement with high CV which makes it unreliable (In this manner the color of CV becomes red)

Figure 3 present a measurement with medium CV (In this manner the color of CV becomes yellow)

Figure 4 present a measurement with low CV which makes it reliable and precise (In this manner the color of CV becomes white)

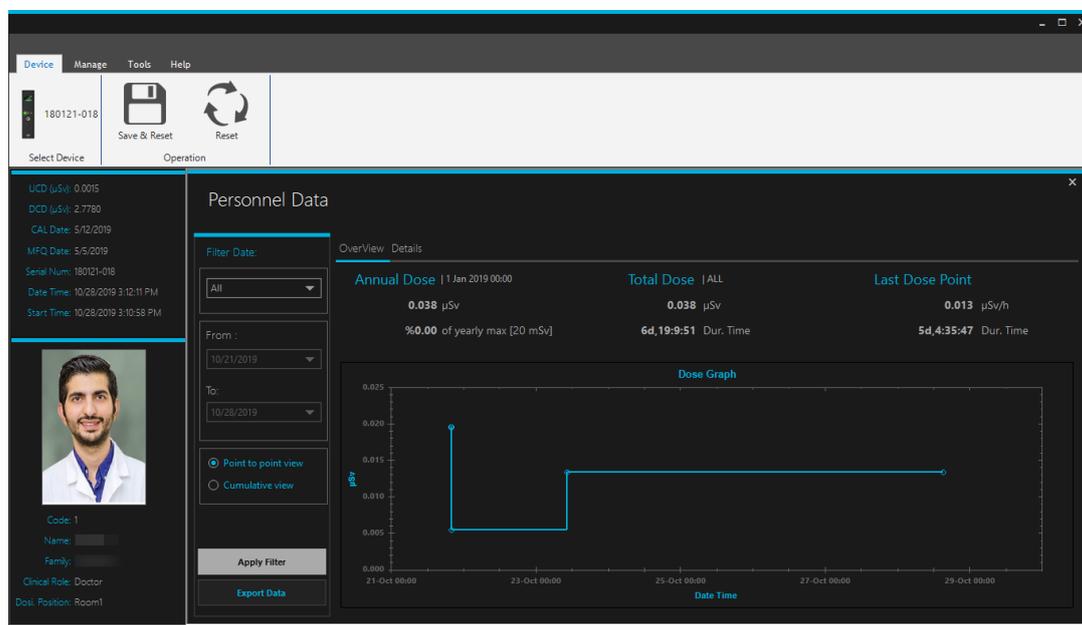


PD2318 GUI

PD2318 is also provided with an optional charging and reading unit equipped with a user-friendly software. This software provides various features including dose dashboard with total dose history, annual dose in number and relation to a configurable yearly limit, detailed views presenting time stamped dose history and battery status for different devices in the unit. This software includes the following panels:

- User panel
- Setting panel
- Admin panel

There are also three windows that show the detailed information for each user including dose overview, cumulative dose history and dose history versus time. Note that this software can be used in PC and Tablet but with limited features.



Main window on charger and dock unit

PC software

PD2318 (SOFTWARE)

Input /Output (Using PD2318 software)

USB

Data Output formats

CSV, TXT

Ordering info

Standard package includes GAMMA & X Version

Part #	Image	Description
PD2318 (X & GAMMA) main		PD2318, GAMMA & X version
ACCE2318001		User guide CD (1 Pack)
ACCE2318002		Box with inserted foam
ACCE2318003*		Guarantee (one year)
ACCE2318011		Phone jack 3.5mm cable
ACCE2318012		Lanyard Gray color

* We fully support our products. We guarantee your satisfaction in the quality of our instruments by providing a complete one-year warranty covering any defect of workmanship, material, and/or design. If our products do not perform, we will provide complete repair and/or replacement. For guaranty conditions, please refer to device manual (PD2319 - Manual).

Standard package includes BETA, GAMMA & X Version

Part #	Image	Description
PD2318 GAMMA & X		PD2318- GAMMA & X
ACCE2318001		User guide CD (1 Pack)
ACCE2318002		Box with inserted foam
ACCE2318003*		Guarantee (one year)
ACCE2318011		Phone jack 3.5mm cable
ACCE2318012		Lanyard Gray color

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Optional accessories and services

Part #	Image	Description
ACCE2318004		Installation
ACCE2318005		Training
ACCE2318006**		Re-calibration services
ACCE2318007		Protective Rugged Hard case
ACCE2318013		USB to USB extenuation Cable 10,15, 20, 30 meters
ACCE2318014 (DRCU2519-5D)		Charging and data unit with 5 docks
ACCE2318015 DRCU2519-1D		Charging and data unit (1 docks)

** = The proper maintenance & calibration of your instruments is critical to ensure proper performance & accuracy. For Re-calibration (interval) services, please call CFP company (021- 46045383).