



### 11. Data exchange

Any data exchange with your dosimetry service, such as changing the assignment of persons, can be done in electronic form. On request, we would be pleased to inform you about our on-line services offered for this purpose, DosiNet and DosiCon. [awst-online@mirion.com](mailto:awst-online@mirion.com)

### 12. Dosimeter ID numbers/codes

The Dosimeter number is given in readable format as a bar code and as a 2D code.

- **Dosimeter number:** 7 character, starting with 8; leading 0 without relevance; on detector card and label
- **Bar code:** inverse (white on black); type 128C; on detector card
- **2D code:** commercial data matrix code, security feature ECC200; on label

The codes were introduced for internal purposes. We reserve the right to make necessary changes to the code type. Please take this into account when considering the use of these codes.

### 13. Ready to use Dosimeter



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## OSL DOSEMETER TECHNICAL DATA

DOSIMETRY SERVICE (AWST)



**MIRION**  
TECHNOLOGIES

## WHOLE-BODY DOSEMETER AWST-OSL-GD 01

### 1. General information

Field of application	Whole-body Dosimeter to determine the personal dose equivalent $H_p(10)$ due to photon radiation for individual whole body monitoring
Dosimeter type	Personal Dosimeter type AWST-OSL-GD 01 using BeOSL technology with two ceramic BeO detectors
Accreditation	PTB Certification DE-17-M-PTB-0026
Calibration	Individual for each detector
Measurement method	Radiation-induced, optically stimulated luminescence (OSL), luminescence light measurement
Dose determination	Mathematically from the detector luminescence signal, a zero measurement before exposure, and the individual calibration factor
Detector material	Non-hazardous ceramic BeO detectors (no danger of inhalation of beryllium particles)

### 2. Dosimeter components

Whole-body Dosimeter badge, consisting of Dosimeter cover and Dosimeter card including two detectors. Official Dosimeters are sealed in a plastic packaging (blister).

At the site of the dosimetry service (Mirion Technologies – AWST): OSL evaluation systems of the type BeOSL.



### 3. Instructions for use of the Dosimeter

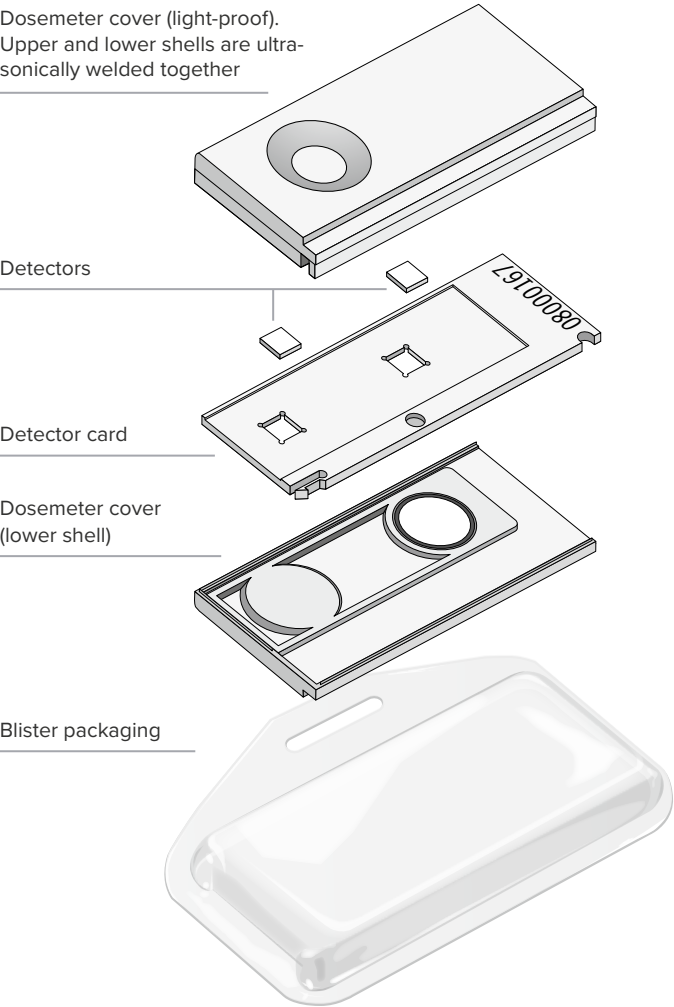
- **Measurement location:** at a point that is appropriate to the radiation field, usually on the trunk (chest, hips)
- **Dosimeter packaging:** made from plastic (PET); if the blister packaging is damaged, no official dose value can be determined!
- **Attachment:** Clip, additional support frames in different colors available on request
- **Assignment to person:** by Dosimeter ID
- **Monitoring period:** usually one month, maximum 3 months
- **Cleaning:** with a damp cloth

### 4. Image of the Dosimeter



Ready to use  
Dosimeter

### 5. Schematic sketch of the Dosimeter



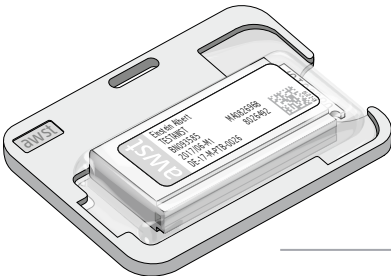
### 6. Dosimetric data

Type of radiation	Photon radiation
Measured quantity	Personal doses equivalent $H_p(10)$ in mSv
Dose range	0.1 mSv to 10 Sv
Preferred direction for radiation incidence	Vertically from the front onto the top of the detector
Reference point on the Dosimeter	Near the upper left corner of the 2D code
Influence of beta or neutron radiation	Negligible

### 7. Dimensions and Weights

**Dimensions:**  
Dosimeter in blister packaging (mm): 72 x 43 x 9.4  
Support frame (optional), without clip (mm): 76 x 51 x 4.2

**Weights:**  
Incl. blister packaging: 12 g  
With support frame and clip: 27 g

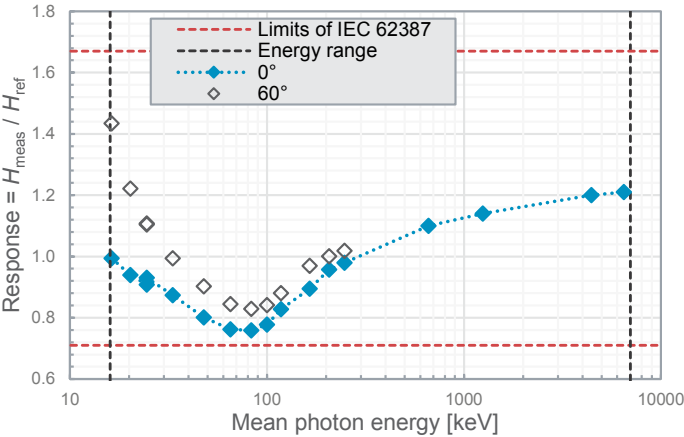


Ready-to-use Dosimeter in  
optional support frame

### 8. Nominal operating ranges

Photon energy	16 keV to 7 MeV
Radiation incidence direction	$\pm 60^\circ$
Ambient temperature	-10°C to 40°C
Relative humidity	10% to 90% (max. 30g/cm <sup>3</sup> H <sub>2</sub> O)
Sunlight exposure	0 W/m <sup>2</sup> to 1000 W/m <sup>2</sup>
Mechanical shock, drop height	1 m
Monitoring period	Maximum of 3 months

### 9. Responsiveness of the Dosimeter



### 10. Quality assurance

Accreditation according to ISO 17025/ PTB certification and annual inspections/ International intercomparisons