



11. Data exchange

By means of assignment/order form.

12. Dosemeter ID numbers/codes

The Dosimeter ID number is printed in plain text and as a bar-code on the top of the outer cover.

- **Dosemeter ID:** 10 digits, no letters
- **Barcode:** of type 2of5interleaved

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

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OSL-AREA DOSEMETER
TECHNICAL DATA

DOSIMETRIE SERVICE (AWST)



MIRION
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OSL-AREA DOSEMETER
AWST-OSL-OD 01

1. General information

Field of application	Area Dosimeter to determine the ambient dose equivalent $H^*(10)$ due to photon radiation for workplace monitoring
Dosimeter type	Area Dosimeter of type AWST-OSL-OD 01 using BeOSL technology with two ceramic BeO (Beryllium oxide) detectors
Accreditation	according to ISO 17025, IEC 62387
Calibration	Individual for each detector
Measurement method	Radiation-induced optically stimulated luminescence (OSL), measurement of luminescence light
Dose determination	Mathematically from the detector luminescence signal, a zero measurement of the detector performed before exposure, the individual calibration factor and an algorithm for energy correction
Detector material	Nonhazardous ceramic BeO detectors (no danger of inhalation of beryllium particles)

2. Dosimeter components

Two-element OSL area Dosimeter badge in a plastic scattering body and a numbered Dosimeter cover.

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



3. Instructions for use

- **Measurement location:** At workplaces inside buildings, near the radiation source
- **Mounting:** The area Dosemeter has a hanger for mounting. The two radiation-sensitive detectors are in one plane with the hanger. The Dosemeter should be mounted with the main direction of radiation incidence perpendicular to this plane.



Reference point of
Dosemeter marked blue

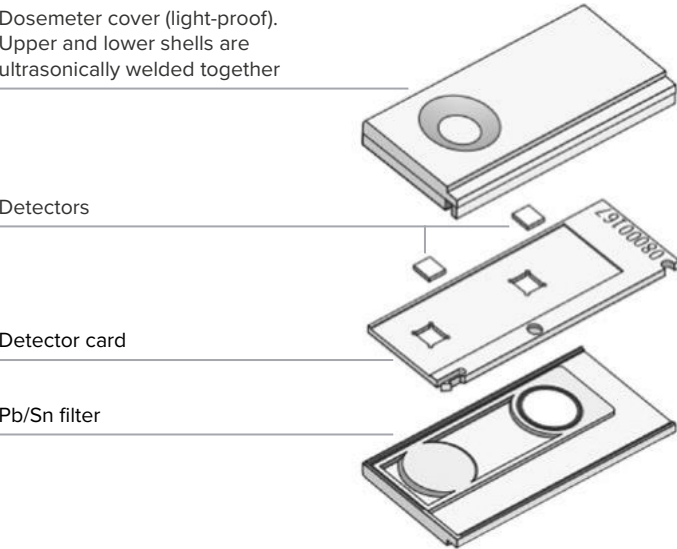
- **Assignment to measurement location:** by the Dosemeter ID. Labels with the names of the measuring locations are supplied if ordered in writing or by email. Changes in assignments to locations can be ordered using an order/assignment form.
- **Monitoring period:** 1, 3, 6 or 12 months
- **Cleaning:** The outer cover can be cleaned with a damp cloth. The Dosemeter is not waterproof.
- **Note:** The Dosemeter cover must not be opened!

4. Image of the Dosemeter



Note: In the case of ready-to-use Dosemeter, the scattering body is firmly glued into the lower part of the outer cover.

5. Schematic sketch of the Dosemeter



6. Dosimetric data

Type of radiation	Photon radiation
Measured quantity	Ambient dose equivalent $H^*(10)$ in mSv
Dose range	0.05 mSv to 1 Sv
Preferred direction for radiation incidence	Perpendicular on the Dosemeter from the front or back
Reference point of Dosemeter	See illustration in section 3
Influence of beta or neutron radiation	negligible

7. Dimensions and weight

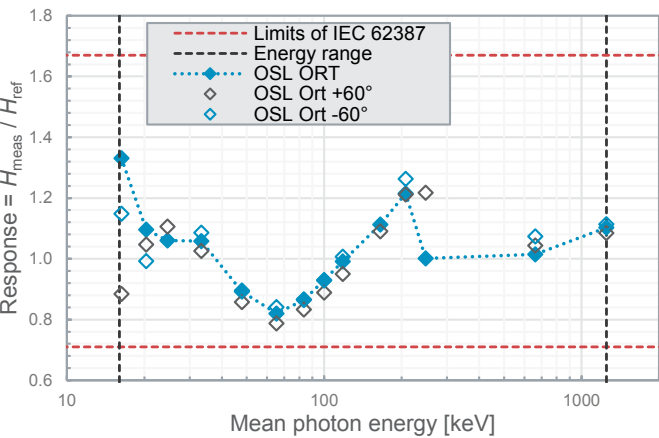
Dimensions (mm):
80 x 35 x 39

Weight:
32 g

8. Nominal operating ranges

Photon energy	16 keV to 1.25 MeV
Radiation incidence direction	0° bis ±60° (or 180° to ±120°)
Ambient temperature	-10°C to 40°C
Relative humidity	10% to 90% (max. 30 g/cm³ H ₂ O)
Sunlight exposure	0 to 1000 W/m²
Mechanical shock, drop height	1 m
Monitoring period	1 to 12 months

9. Energy and angular response



10. Quality assurance

Accreditation according to ISO 17025/ Blind test by external calibration laboratories