

**VISION®**

For your eyes only!

Following the ICRP recommendation concerning the lowering of the dose limit for the crystalline lens, LANDAUER® set up a working group on this topic in 2012: the GEDOC. The group has conducted a number of workstation studies in medical, nuclear and industrial sectors. The VISION lens dosimeter design is based on what our clients said.



flexible and light weight



Compact



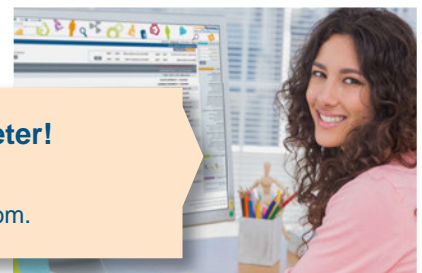
Rotating cap enables side or front orientation

**A DOSIMETER DESIGNED FOR YOU**

- Worker monitoring and workstation study
- Multiple ways to wear it with or without PPE
- Adaptable to any support
- Clear, complete and nonerasable identification
- Individual dose equivalent  $H_p(3)$
- Disinfection by immersion or brushing

**Test VISION dosimeter!**

Ask samples to [marketing@landauer-fr.com](mailto:marketing@landauer-fr.com).



# VISION® monitoring your lens in discreet

## Ergonomic lens dosimeter without blocking your field of vision

### > SIMPLE AND PRACTICAL TO USE

#### Compact and flexible

Ergonomic, light and small, VISION dosimeter does not affect participant's activity and view. It is made from a plastic resistant to torsion. Flexible, it can be carried closer to the eye.

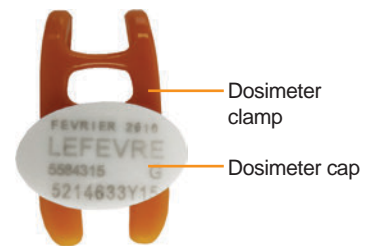
#### Flexible design

VISION is adapted to workstation studies or worker monitoring. It is adaptable, you can configure it for measurements behind or in front of the PPE (Personal Protective Equipment).

Offered in two sizes, VISION is adapted to all supports: sealed glasses, visors, mob caps... Self-gripping pads ensure a maximum fit.

Available on option: non-lead glasses to wear it without PPE.

The cap can be oriented from vertical to horizontal position to fit your morphology and your PPE.



### > WITH OR WITHOUT PPE, VISION FITS YOUR VIEW



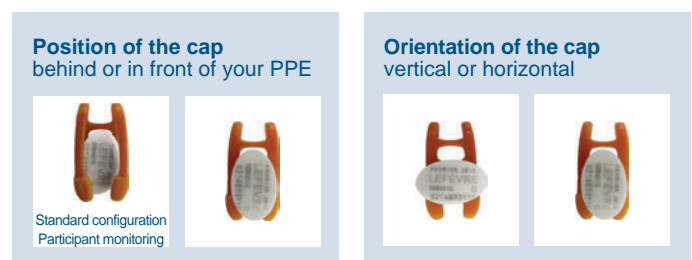
### > A MULTITUDE OF WAYS TO WEAR IT

You receive VISION standard configuration.

Following your use (participant monitoring, workstation studies, wearing of PPE, ...) you can adapt on the clamp:

- the position of the cap, in front or behind your PPE,
- the orientation of the cap, lateral or horizontal.

Once the position and orientation defined clip the cap on the clamp.



### > COMPLETE AND NONERASABLE IDENTIFICATION

With the same color code than IPLUS® and MONORING®, VISION offers a clear identification of the wearer and period of wear.

Particles of titanium oxide are injected into the polyethylene cap. They are revealed by laser for a permanent marking. Thus, it resists brushing and all disinfection procedures.



\* Warning: clip and unclip the cap more than once or twice could damage it.

# ways

## EASY TO DISINFECT

VISION dosimeter clamp is made with Polyamide 6 and SEBS\* molding. TLD chip is sealed in a linear low density polyethylene cap. Thus, VISION is easy to clean and disinfect.

### Maximum hygiene

Simple disinfection protocols, same as MONORING, are available on request. It can also be decontaminated easily using wipes.

We do not recommend heat sterilization whose temperature exceeds 40 °C.



### Disinfectants suitable for use on VISION

Disinfectant	Compatibility
Peracetic acid	Compatibility
Anioxide 1000	Yes
Anioxy-twin*	Yes
Endocide	Yes
Concentrated hydraseptic	Yes
NU Cidex ASP	Yes
Chlorine derivatives	Compatibility
Wip'Anios Premium* wipes	Yes
Hydro-alcohol solutions	Compatibility
Ethyl alcohol	Yes
Isopropyl alcohol	Yes
Hydrogen peroxide	Compatibility
Actanios HLD*	Yes
Bioxal M	Yes, 1hr maximum contact
Pre-disinfection products	Compatibility
Salvanios pH7	Yes
Septanios	Yes

*These data come from theoretical material compatibility tables. Instructions must be validated by our your health committee.*

## MODULARITY

VISION is designed for worker mandatory monitoring as well as workstation studies

## TECHNICAL PERFORMANCE

Types of radiation measured	Result of the VISION dosimeter
	Photons
Personal dose equivalent	$H_p(3)$
Dose range	from 0.10 mSv to 10 Sv
Minimum reporting value	0.1 mSv
Linearity response	from 0.10 mSv to 10 Sv Standard deviation <9 %
Energy response (average energy)	from 24 keV to 1.25 MeV
Angular response	$\pm 60^\circ$ from 24 keV to 1.25 MeV
Response to other types of radiation	Insensitive to neutrons

\* SEBS: copolymer polystyrene-b-poly (ethylene-butylene) -b-polystyrene

## ENVIRONMENTAL RESISTANCE CHARACTERISTICS

<b>Operating and storage temperature</b>	No effect on detector sensitivity up to 40 °C
<b>Hygrometry</b>	No effect on detector up to 90 % humidity
<b>Exposure to light</b>	No effect on detector

## GENERAL CHARACTERISTICS

**Manufacturer** Dosimeter designed and manufactured in France for LANDAUER  
Detector manufactured according to LANDAUER's own specifications

**Types of radiation measured** Photons (X- and gamma rays)

**Detector** Single element, one TLD chip

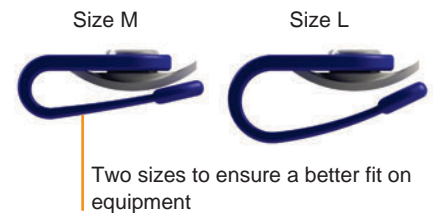
**Chip material** LiF:Mg,Ti (lithium fluoride doped with magnesium and titanium)

**Clamp material** Polyamide 6 (SEBS molding)

**Cap material** Polyethylene

**Mechanical properties**

Weight	M: 720 mg
	L: 770 mg
Two sizes	M: 4.6 mm
	L: 7.6 mm



## MEASUREMENT METHOD

VISION dosimeter is composed of a polyamide clamp on which is clipped a cap. It contains a lithium fluoride TLD chip. This detector is placed inside a cavity on the cap which is sealed by ultrasound. The information is marked on the cap by laser, making it nonerasable.

The TLD (ThermoLuminescent Dosimeter) works on the basis of detector heating. When the chip is heated, visible light is emitted in proportion to the exposure of ionising radiation.



## COMPLIANCE WITH STANDARDS

EN 62387-1:2012 - Passive integrating dosimetry systems for personal and environmental monitoring of photon and beta radiation - Radiation protection instrumentation

## QUALIFICATIONS OF OUR LABORATORY

- Participation in national and international inter-comparisons
- Dosimeter characterisation carried out by an independent reference laboratory: Henri Becquerel French National Laboratory (LNHB) - CEA

