Unique lens design leveraging behavioral artificial intelligence

For the very first time, a Varilux® lens is designed with behavioral artificial intelligence. Beyond prescription and eye physiology, the design now considers visual behaviors, a step beyond today's best and precise eye movements.

New: Varilux XR series

How to recommend Varilux XR series™ to your patients

1. We live on the go, hyper connected. With more than 100,000 movements per day, our eyes need to make extra efforts to maintain sharpness while we are in motion.
2. Current progressive lenses are conceived for stabilization and these eye behaviors, considering mainly prescription data.
3. Varilux XR series™ goes beyond your prescription. The lens responds to your visual behavior predicted by artificial intelligence based on exclusive wearable data.
4. It is the best overall progressive lens, offering instant sharpness at all distances even in motion: adaptation from ‘the very first day’ and natural eye navigation.

Varilux XR series, progressive lenses that know how our eyes really move.

The first eye-responsive progressive lens

Instant sharpness even in motion

Find out more on

LEONARDO
**Did you know that our eyes move more than 100,000 times a day?**

We live in an era of information overload that is increasingly on the go. Information is shared across a variety of devices.

We are constantly in motion, whether it’s our environment, our body, or our eyes. Maintaining sharp vision while moving requires additional attentional efforts from our eyes. Progressive lens wearers have to subconsciously adapt their behavior to maintain sharpness: they need to adjust their gaze down or even stop moving.

**WHY?**

Current progressive lens designs have a linear conception; however, eye movements are much more multidirectional. That may force the eyes to do extra efforts when changing gaze rapidly.

In order to have sharp vision at all times, sharpness all over the lens and affinitive eye movements are required.

**New XR-motion™ technology, a visual behavior-based optimization**

The XR-motion™ technology optimizes both lenses according to the visual behavioral profile of the patient through two major optimizations:

1. **Tacking binocular vision to the next level**
   - Optical differences in the left and right lenses, for instance, can allow binocular linear and monocular eye movements.
   - The gate-keeping model calculates the positional length of each focal point of the lens by reducing the optical differences between the two lenses. As a result, this behavior-based binocular optimization offers high visual acuity whenever the patient needs it.

2. **Precise positioning of the focus zones**
   - Without any additional mechanisms, the gate-keeping model calculates the positional length for each eye, which may differ between the left eye and right eye. This ultra-precise positioning of the zones guarantees a natural ocular navigation from near to far.

**The first eye-responsive progressive lens**

A new criterion, named volume of broadband vision, calculates the 3D area where the wearer can benefit from a high sharp vision on any visual target, even while moving, with a seamless ocular navigation between 30cm and infinity.

![High-end progressive lenses](image)

- **67%** volume of broadband vision vs high-advanced progressive lenses from competitors

- **49%** volume of broadband vision vs Varilux X series™ lens

Thanks to the extended volume of broadband vision, Varilux X series™ is the first eye-responsive progressive lens, which predicts wearers’ visual behavior (gaze fixing and object distances), hereby responding to how their eyes really move. This ensures sharp and fixed vision.

**Essential Blue series.**

A comprehensive personalized range to offer the best of Varilux X series™ lenses.

- **HR** fitting height
- **HR** fitting range
- **HR**+ fitting range
- **HR** range
- **HR**+ range

**Varilux X Track.**

- **XR** fitting height
- **XR** range
- **XR**+ range
- **XR**++ range
- **XR**+ range

**Conclusions**

- Satisfactory results of Varilux X series™ lenses in varying visual tasks.
- SR results of Varilux X Track lenses.
- Satisfaction of patients with the results.
- Objective results of Varilux X series™ lenses in daily activities.
- Indicators for the success of Varilux X series™ lenses in different visual tasks.

**Xpert**

- **WP** fitting range
- **WP** range
- **WP**+ range
- **WP**++ range
- **WP**++ range

**Transitions.**

- **TR** fitting height
- **TR** range
- **TR**+ range
- **TR**++ range
- **TR**++ range

**Varilux X Series.**

- **XR** fitting range
- **XR** range
- **XR**+ range
- **XR**++ range
- **XR**+ range

**Essential Blue series.**

- **HR** fitting height
- **HR** range
- **HR**+ range
- **HR**++ range
- **HR**+ range