VARILUX® series
Limitless Vision
Flawless vision should be simple. Yet, wearers still encounter some limits with their premium progressive lenses.

“I feel wary when going down the stairs.”

“When moving my head, I feel everything moves and yet nothing should move.”

“I do not enjoy reading anymore because I need to move my head constantly to target what I am looking at.”

These limits are due to the fact that progressive lenses are based on a compromise between wide fields of vision and limited swim effect. Each manufacturer manages this compromise differently.
Varilux S series, a Revolution in Progressive Lenses

Essilor breaks the progressive lens compromise and offers you the new Varilux revolution:

Varilux S series offers the first line of digital progressive lenses that provides a real breakthrough in wearer experience for both first-time and experienced progressive lens wearers. **Ranked #1** on every lens feature by real wearers in independent studies, **Varilux S series is undeniably in a class of its own** when it comes to addressing issues like swim effect, motion stability, expansive vision and personalization.

* Fields of vision are based on binocular fields of vision analysis. Swim effect is based on beam deviation analysis. Dots represent mean values on all analyzed lenses. Comparison between Varilux S design, Varilux Physio 2.0 and 6 premium progressive lenses from other manufacturers. Per product: 4 to 10 prescriptions have been analyzed from -3 add 2 to +2.5 add 2 - in lab R&D testing, 2011.
Nanoptix entirely re-engineers the fundamental structure of a progressive lens to reduce swim effect.

- Nanoptix considers the lens as a surface made up of many optical elements.
- On top of index and thickness, base curve and power impact beam deviation. Their combination is optimized for each optical element: base curve decreases as power increases to stabilize beam deviation all over the lens.
- Optical elements are then re-engineered to allow light to pass through without the deviations that cause swim effect.

Varilux S series reduces swim effect up to 90%* compared to other premium lenses.

* Swim effect based on beam deviation analysis. 90% represents maximum gain extracted from all analyzed lenses. Comparison between Varilux S design, Varilux Physio 2.0 and 8 premium progressive lenses from other manufacturers. Per product: 4 prescriptions have been analyzed from -3 add 2 to +2.5 add 2 – in lab R&D testing. 2011.
Simulation of vision through *Varilux* series and a standard progressive lens

**Standard progressive lens**
The base curve of the lens increases and the power increases between Far Vision and Near Vision.

**Varilux** series
The base curve of the front face of each optical element is re-engineered to compensate the effect of power: base curve decreases as power increases, beam deviation is stabilized.

**THE RESULT:** For the first time, a lens that not only virtually eliminates swim effect, but also offers unmatched stability of vision in motion, guaranteeing adaptation for every wearer.
SynchronEyes takes into account the physiological differences between the 2 eyes to ensure extra-large fields of vision.

- Because the quality of right and left retinal images impacts binocular fields of vision, the calculation of the 2 lenses is synchronized.
- Each lens optimization takes into account the differences between the right and left prescriptions, as well as pupil distances, to calculate the lenses as a pair.
- For all gaze directions, the quality of right and left retinal images is similar, resulting in maximized binocular fields of vision.

Binocular fields of vision are up to 50%* wider through Varilux S series lenses compared to other premium lenses.

*50% represents maximum gain extracted from all analyzed lenses. Comparison between Varilux S design, Varilux Physio 2.0 and 6 premium progressive lenses from other manufacturers. Per product: 10 prescriptions have been analyzed from -3 add 2 to +2.5 add 2 – in lab R&D testing, 2011.
Simulation of vision through VariLux® series and a standard progressive lens

**Standard progressive lens**
Low quality of binocular vision for lateral gaze direction.

![Image](image1.png)

Binocular fields of vision are reduced

+ 1.00 add 2.00  + 2.00 add 2.00

**Varilux® series**
High quality of binocular vision for lateral gaze direction.

![Image](image2.png)

Binocular fields of vision are maximized

+ 1.00 add 2.00  + 2.00 add 2.00

**THE RESULT:** Better retinal image matching and improved spatial perception, providing wide angle vision and edge to edge clarity.
The dominant eye reaches the object being viewed first when we change gaze direction and also plays an important role in space perception.

By respecting the dominant eye’s leading role, 4D Technology improves the reaction time of each wearer while maintaining excellent binocular vision.

4D Technology computes the binocular design to favour the performances of the lens in front of the dominant eye to provide unrivalled binocular vision.

**Relex vision** is now possible, even with progressive lenses.

Just as we are right or left-handed, our vision is also dominated by one eye. The exclusive 4D Technology takes the leading dominant eye into account in lens calculation to ensure instant reaction for the wearer.

![Graph showing reaction time variation](image)

This demonstrates the correlation between the dominant eye and reaction time of the wearer.
Leading dominant eye measurement

To automatically measure the dominant eye with the Visioffice, a specific tool has been designed: the 4D measuring tool.

Varilux S 4D takes into account 15 parameters that are measured in a few minutes with the Visioffice:

- **Eyecode**: Mandatory
- **Frame data**: Mandatory
- **Dominant eye**: Mandatory

**THE RESULT:** Varilux S 4D is the most sophisticated level of advancement in the Varilux S series portfolio. Varilux S 4D lenses offer faster visual reaction time, allowing the wearer to experience quick and automatic gaze shifts for a reflex vision.
A Revolution in Lens Technology
The fundamental progressive lens structure is re-engineered during lens calculation to virtually eliminate swim effect.

A Revolution in Lens Design
Lens design takes into account the physiological differences between the 2 eyes for edge to edge clarity.

Benefits for your wearers:
- Limitless vision
- Stability of vision in motion
- Wide angle vision

Benefits for you:
- Access to the most cutting edge innovation on the market
- Offer your wearers a worldwide tested and approved lens
- Ensure the satisfaction and the loyalty of your wearers

A Revolution in Personalization
For the first time, 4D Technology takes the leading dominant eye into account for a faster visual reaction time.

Benefits for your wearers:
As part of Varilux S series, Varilux S 4D delivers limitless vision in every situation, stability of vision in motion and wide angle vision.
Thanks to the additional leading dominant eye measure, Varilux S 4D also provides:
- Reflex vision
- Spontaneous vision
- Intuitive vision

Benefits for you:
- Give value to your expertise and differentiate your practice thanks to Visioffice and its new 4D measuring tool
- Capitalize on Visioffice’s unique ability to take exclusive measurements
- Benefit from a complete quick and efficient personalization process
To integrate Nanoptix, the Essilor manufacturing process has deeply evolved for the highest accuracy and quality. S Digital Surfacing benefits from the full performances of Digital Surfacing and is 5 times more accurate.

S Digital Surfacing is based on a new patented Essilor process: an active loop uses the accurate measurement of the lens position in the blocker whensurfacing with the diamond tool.

Micro-controlling
Precise measure of the blocking position

S Digital Surfacing
Diamond tool position adjustment
Varilux S series is #1 on every single lens feature

Wearers around the world highlighted the excellence of Varilux S series over Varilux Physio 2.0**:

#1 when moving and when surroundings move

#1 in vision quality and width of fields

Varilux S series versus Varilux Physio 2.0

<table>
<thead>
<tr>
<th>Overall quality of vision</th>
<th>Significantly Better</th>
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<tbody>
<tr>
<td>Distance Vision</td>
<td>Better</td>
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<tr>
<td>Intermediate Vision</td>
<td>Significantly better</td>
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<tr>
<td>Near Vision</td>
<td>Better</td>
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<td>Dynamic Vision</td>
<td>Significantly Better</td>
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<tr>
<td>Adaptation</td>
<td>Significantly Better</td>
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* Prof. José Sahel receives no compensation in a private capacity for the validation of these protocols.
** Based on average evaluations - Comparative Wearer Test (Varilux S design versus Varilux Physio 2.0) conducted by independent 3rd parties - 97 wearers - Worldwide - 2011.
Varilux S series provides the most technologically advanced progressive lenses ever made, for limitless vision.
Varilux S series is a product line of its own. It is composed of three lenses that benefit from different technologies.

<table>
<thead>
<tr>
<th>4D Technology</th>
<th>Nanoptix</th>
<th>SynchronEyes</th>
<th></th>
<th>W.A.V.E.S 2.0</th>
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<tbody>
<tr>
<td>Varilux S 4D</td>
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*: optional

## Ordering parameters

<table>
<thead>
<tr>
<th></th>
<th>Leading Dominant Eye</th>
<th>Reading Distance</th>
<th>Eye Rotation Center Distance</th>
<th>Head Cape</th>
<th>Wearer Initials</th>
<th>Progression Length</th>
<th>Pantoscopic Tilt</th>
<th>Wrap Angle</th>
<th>Vertex Distance</th>
<th>Pupillary Distance</th>
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M: mandatory / O: optional / *: reading distance can be replaced by inset
Limitless Vision is a product line of its own

The current Varilux range is still available.
**Range availability**

- Cylinder up to 6
- Addition up to 4.00D - including 3.75 versions; except Varilux S design short: add. up to 3.50D
- Clear, Transitions grey and brown
- TL1.74 and Xperio available soon

![Graph showing range availability with various categories like Cylinder, Addition, and Lens Types.](image)

**Verification, fitting height and mounting**

Varilux S series offers your wearers Limitless Vision. These new progressive lenses benefit from Nanoptix that modifies the shape of the lens. As a result, focimeter measurement will not give you the ordered prescription. For checking purpose, please refer to the wearer power indicated on the conversion sheet.

<table>
<thead>
<tr>
<th>Minimum fitting height</th>
<th>Engraving</th>
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<tbody>
<tr>
<td>Varilux S 4D</td>
<td>14 mm</td>
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Design engravings

Addition engraving

Offer the best of the Varilux series with: [Brand Logos]