

NEW

Varilux®

Physio® extensee™ Classic Edition

Varilux®

#1 progressive lens brand

worldwide¹

High vision intensity in any light.²

Extra visual sharpness and contrast
with the new Pupilizer™ lens technology³

1. Source: Euromonitor International, 2024 data; Retail value amongst spectacle lenses category, brands representing progressive lenses.
2. Varilux® Physio® extensee™ - in-real life consumer study - Eurosyn - 2024 - France (n=79 progressive lens wearers [75/79]).
3. Varilux® Physio® extensee™ - in-real life consumer study - Eurosyn - 2024 - France (n=79 progressive lens wearers [69/79]).



essilor

evolving
vision

24 hours, countless moments – all meant to be seen, without limitations.

Eyes rely on contrast and sharpness to see well

The pupil is remarkable in its ability to constantly adjust to a wide range of light levels, providing clear and comfortable vision at any time of day.

Certain lighting environments can pose a challenge for progressive lenses wearers, and many complain about a drop in visual performance.

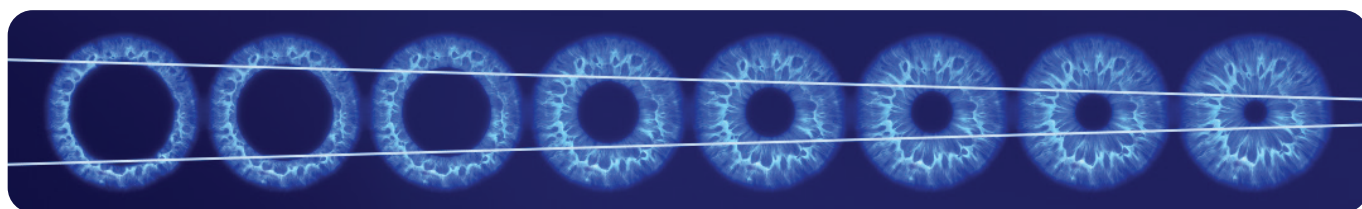


are very interested in corrective lenses designed to improve their vision comfort regardless of light intensity⁴

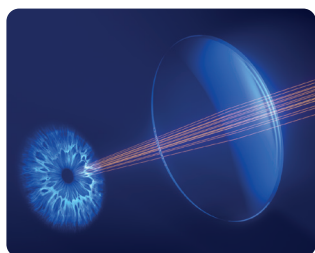


have difficulty reading fine print⁴

Pupil changes are unique to every individual

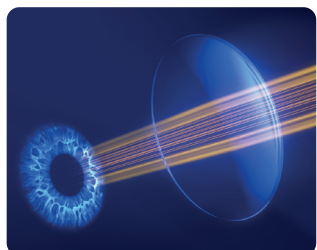


However, most progressive lenses today are designed with the assumption that the wearer's pupil size remains constant in all lighting situations.



This assumption is problematic, as progressive lenses can produce significant levels of high-order aberrations (HOA), negatively impacting visual acuity and contrast sensitivity.

When the size of the pupil increases, more high-order aberrations enter the eye due to the larger surface area used in the progressive lens.



This impacts the image quality reaching the retina.

Accounting for pupil-size variation in lens design is key for maximizing contrast perception and visual performance.

With a large pupil, the light beam crosses a large portion of the lens and contains more aberrated peripheral rays than with a smaller pupil, hence more HOA.

4. Source: Essilor International – Vision Care Usage and Attitudes – CN/FR/US – June Marketing – 2023 (n=10 611 respondents).
• 39% : Analysis based on 481 (45-65 yo PAL wearers) • 41% : Analysis based on 1 350 (45-65 yo PAL wearers).

Introducing a unique combination of AI twinning technology and state-of-the-art pupil modeling

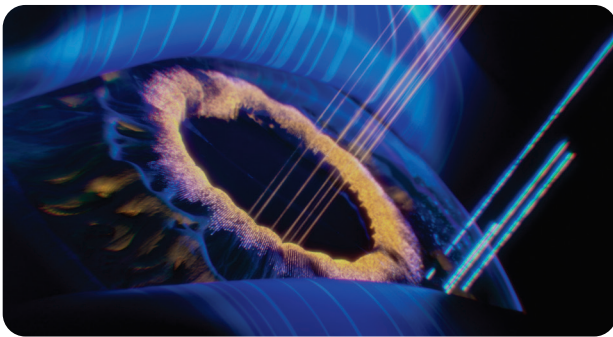
Vision scientists have only recently been able to derive a model that accounts for the four main parameters that influence pupil size⁵:

 Age

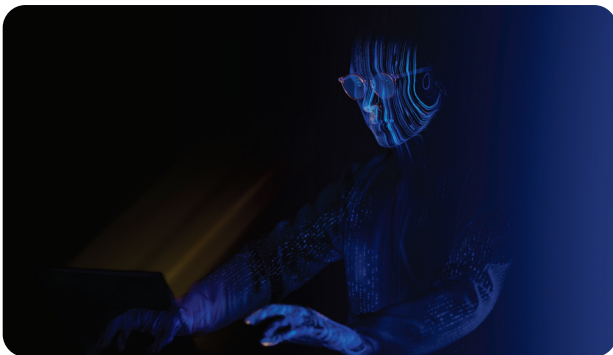
 Object distance

 Object luminance

 Size of a luminous object



The result is a **state-of-the-art dynamic pupil model** that integrates multiple studies and datasets to describe and detail pupil size variations.



Enriched for the first time by this comprehensive dynamic pupil model, Varilux® lens AI twinning technology can now map dynamic pupil profiles during various activities throughout the entire day, incorporating:

- Numerous wearer profiles of different ages
- Multiple lighting conditions
- Several object sizes
- Several object positions



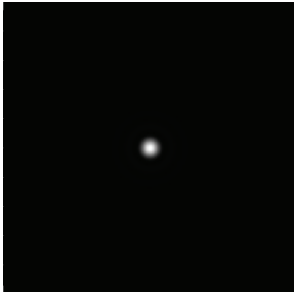
By matching the wearer's prescription to a dynamic pupil profile, the lens is designed to closely match their daily, real-life pupil variations throughout the day.

5. Zapata-Díaz, Juan F., Hema Radhakrishnan, W. Neil Charman, and Norberto López-Gil. (2019). Accommodation and Age-Dependent Eye Model Based on in Vivo Measurements. *Journal of Optometry*, 12 (no.1), 3-13.

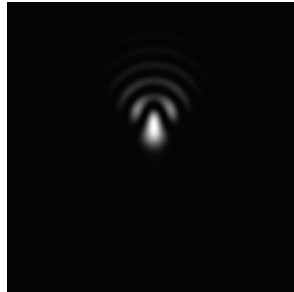
Varilux® Physio® extensee™ exclusive lens technologies

Pupilizer™ lens technology

When patients wear lenses that do not account for high-order aberrations, the sharpness of their vision is impacted and they can experience a halo or comet tail around sources of light.



Light source not impacted by high-order aberrations

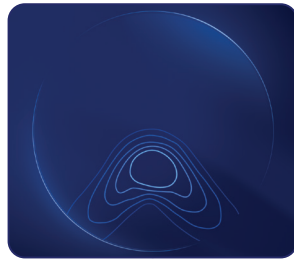
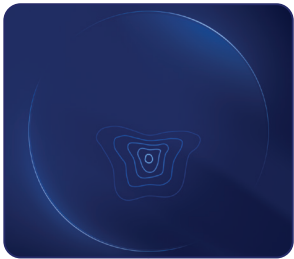


Light source impacted by high-order aberration: coma



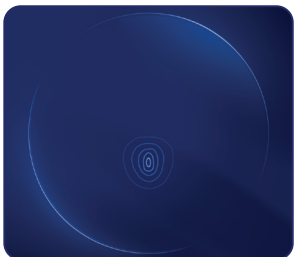
Light source impacted by high-order aberration: trefoil

Varilux® Physio® W3+ lens



Thanks to pupil-variation prediction, and without any additional measurement, Pupilizer™ lens technology refines the corrective surface on the back of the lens to **reduce high-order aberrations and minimize wavefront distortion.**

Varilux® Physio® extensee™ lens



The lens can now provide even more precise correction for each wearer's pupil dynamics, **improving sharpness and contrast in any lighting conditions, even in low light.**

Exclusive technologies

Our latest technology powered by AI twinning technology for extra sharpness and contrast in all lighting conditions

And enhanced to provide smooth transitions from distance to near and a wider field of vision



High vision intensity in any light²

A new criterion, high vision intensity, is defined by high-contrast visual perception and high-level visual sharpness across varying light levels, from high to low light.⁶



of contrast and sharpness enhancement compared to Varilux® Physio® W3+ lens in all light conditions, even in low light⁷



of contrast and sharpness enhancement compared to similar lenses in the market in all light conditions, even in low light⁸

Wearers can now access more visual information, enabling them to capture finer details to see more and enjoy more anytime.

Product availability

Varilux®
Physio® extensee™
Classic Edition

MATERIAL	CLEAR & BLUE	TRANSITIONS®	POLAR	POWER RANGES	ADD POWER
1.50	YES	YES Colors Available	YES	-10.00 to +6.00	+0.75 to +3.50, +4.00
1.53	YES	YES	NO	-10.00 to +6.00	+0.75 to +3.50, +4.00
1.59	YES	YES Colors Available	YES	-10.00 to +6.00	+0.75 to +3.50, +4.00
1.60	YES	YES	NO	-12.00 to +8.00	+0.75 to 3.50, +4.00
1.67	YES	YES Colors Available	YES	-14.00 to +9.00	+0.75 to 3.50, +4.00
1.74	YES	YES	NO	-18.00 to +13.00	+0.75 to +3.50, +4.00

More detailed availability can be found in the "Varilux® lenses availability for eyecare professionals" document.

6. Without considering the glare effect.
7. Simulations vs Varilux® Physio® W3+ - done with AI twinning technology during activities in near vision in various luminance - Comparison between mean's value based on several prescriptions & materials weighted by WW sales - Internal R&D simulations - 2024.
8. Simulations vs relevant progressive lens products - done with AI twinning technology during activities in near vision in various luminance - Comparison between mean's value based on several prescriptions & materials - Internal R&D simulations - 2024.

Wearers maximized their quality of vision



In an independent study, 79 progressive lens wearers—fitted with prescriptions identical to their previous lenses—evaluated Varilux® Physio® extensee™ lenses in their daily lives.

94%

experienced high vision
intensity in any light⁹

92%

felt confident in low
light conditions⁹

84%

adapted within
the first day⁹

9. Varilux® Physio® extensee™ – in-real life consumer study – Eurosyn – 2024 – France (n=79 progressive lens wearers).

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