

ZEISS X OWNDAYS

Introduction to ZEISS Vision Care



ZEISS Vision Care
Singapore

2025



What is ZEISS?

Pioneers in **Quality Optics** & Vision Care

A close-up, high-resolution photograph of a human eye, focusing on the iris and eyelashes. The eye is looking slightly to the left. The image has a warm, brownish-orange color cast. The text is overlaid on the eye.

Our Global Brand Proposition

**Protect and improve the vision
and lifetime visual health of the
world's consumers.**



1846

First workshop opened by Carl Zeiss for precision mechanics and optical instruments.

Carl Zeiss



1866

Physicist and inventor Ernst Abbe was recruited to improve microscopes.

1889

After the passing of Carl Zeiss, Abbe continued the legacy through the Carl Zeiss Foundation, which continues to this day.

Ernst Abbe

Semiconductor Manufacturing Technology



Industrial Quality & Research



Medical Technology



Consumer Markets



Photonics and Optics as Strategic Business Unit since FY 24/25



Strategic Business Units

Semiconductor
Manufacturing Optics
Semiconductor Mask
Solutions
Process Control Solutions

Industrial Quality Solutions
Research Microscopy
Solutions

Ophthalmology
Microsurgery

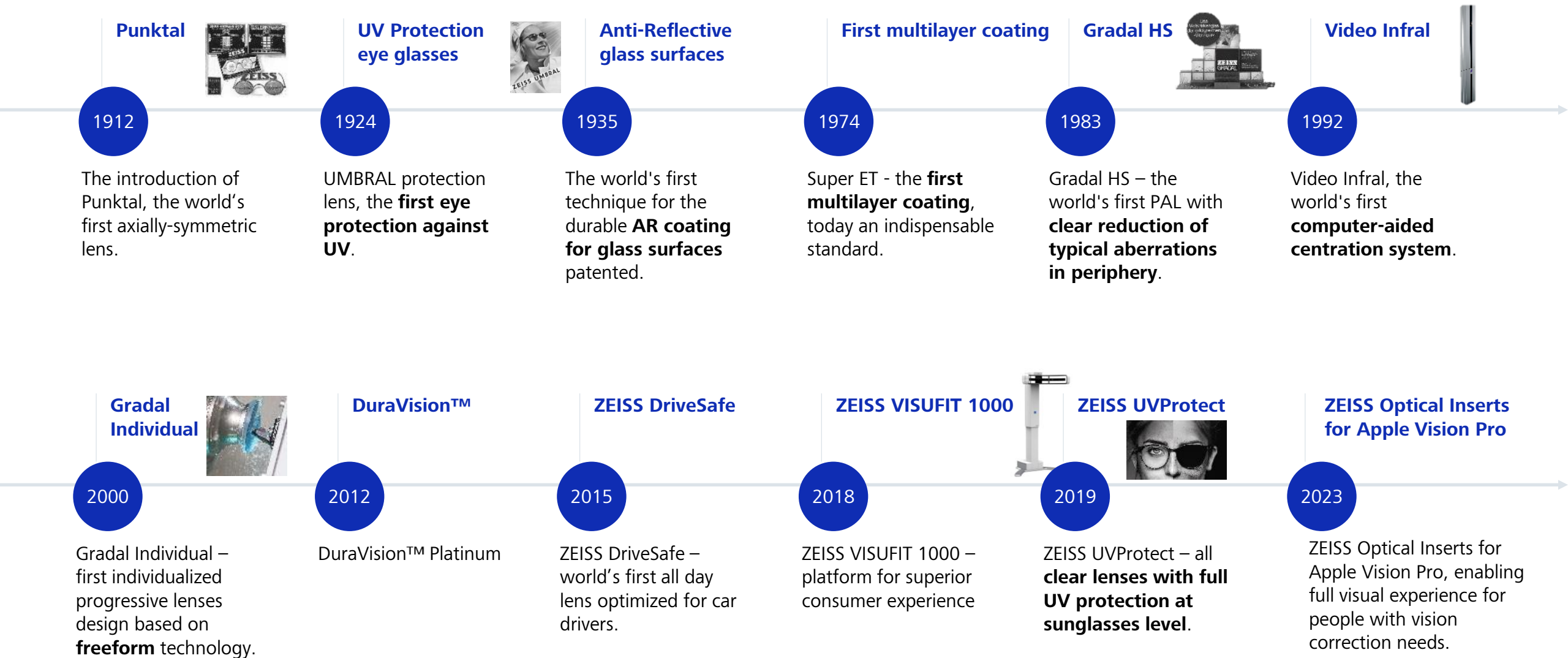
Vision Care

Specialized Businesses

Hunting and Nature
Mobile Imaging
Cine
Planetarium
Micro optics
Spectroscopy
Simulation Projection Solutions

Pioneers in Quality Optics and Vision Care

1900s to 2000s: Shaping the industry through innovations



Pioneers in Quality Optics and Vision Care

Closer to home, for the future



Singapore Polytechnic-ZEISS Vision Analysis Suite set up in a partnership to provide practical learning experiences and develop expertise.



Ngee Ann Polytechnic officially launched the NP-ZEISS Management Suite in a partnership to enhance the learning journey of future Optometrists.



The Hong Kong PolyU global partnership with ZEISS to expand impact and accelerate market penetration of patented myopia control technology.



The Ophthalmic Tech Innovation by ZEISS and SERI (OPTIZS) – Strategic Partnership to improve vision care for youth and aging population in Singapore.

Pioneers in Quality Optics and Vision Care

Closer to home, for our Eye Care Practitioners



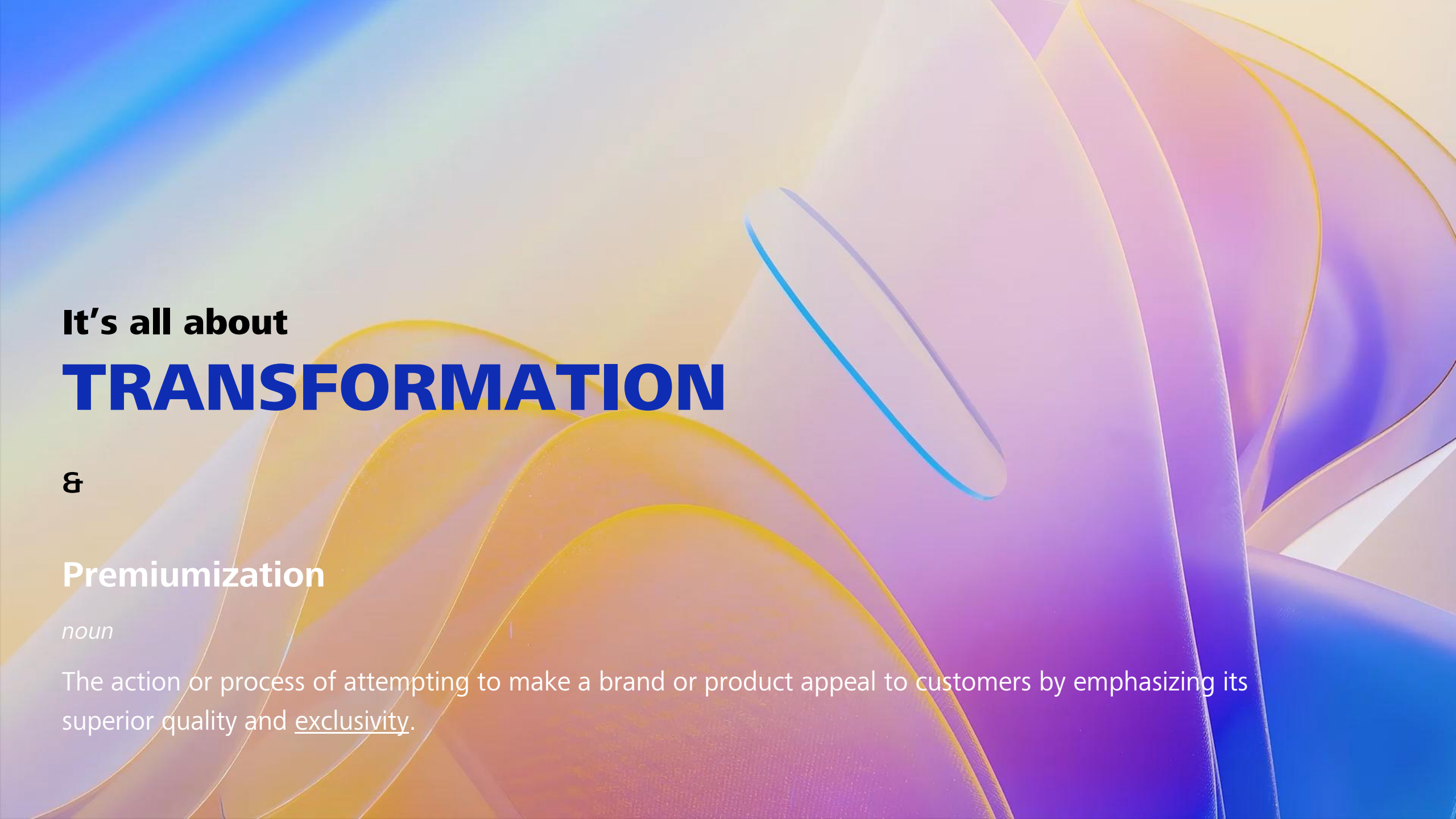
ZEISS' participation at regional events benefit industry professionals every year with the latest insights and technologies being shared.

Recent events: 4th GOMCC, Asia Optometric Congress 2024, International Myopia Summit 2025



At ZEISS, we want the best for you and your team. Trainings are curated and delivered to suit your business needs and bring your ambitions closer to reality.

Why recommend ZEISS?



It's all about **TRANSFORMATION**

&

Premiumization

noun

The action or process of attempting to make a brand or product appeal to customers by emphasizing its superior quality and exclusivity.

Why recommend ZEISS?

Professionalism & workflows

Part I : ZEISS Identity

Why recommend ZEISS?

ZEISS Identity



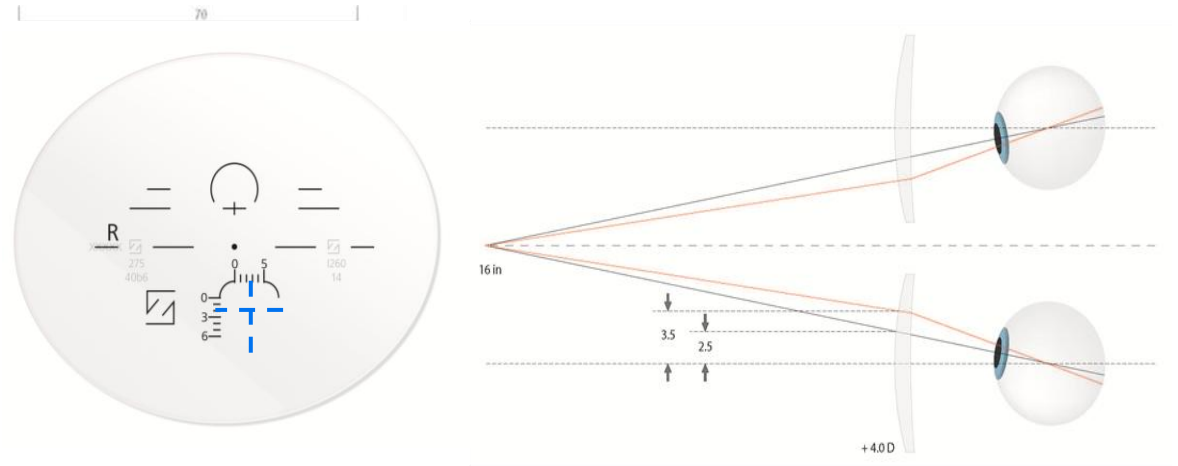
1 Advanced Eye-Lens Model Research

ZEISS utilizes one of the world's largest* position-of-wear parameter databases, with updated standard position-of-wear data used as default values during lens production.

Each lens design is adapted to the wearer's prescription and customized to achieve best possible correction at the top & periphery of lenses for straight ahead & peripheral vision.



Differences in Centre Of Rotation of the Eye (CORE) are considered in wearers across different refractive errors.



Variable inset at Near zone is precisely computed with consideration to wearer's monocular PD, and optimized to the ocular convergence and reading distance for each prescription (from 1.5mm to 5mm in 0.1mm increments)

*based on over 4 million sets of evaluated data in 2013

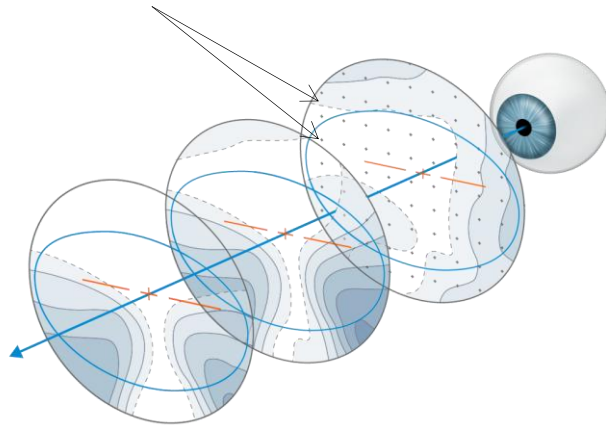
Why recommend ZEISS?

ZEISS Identity: Built on our renown reputation for optical clarity



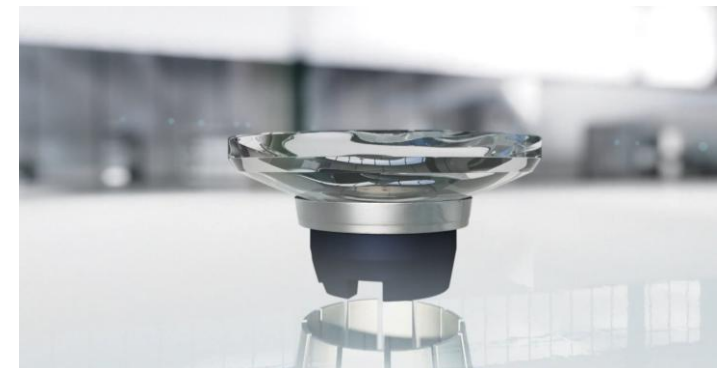
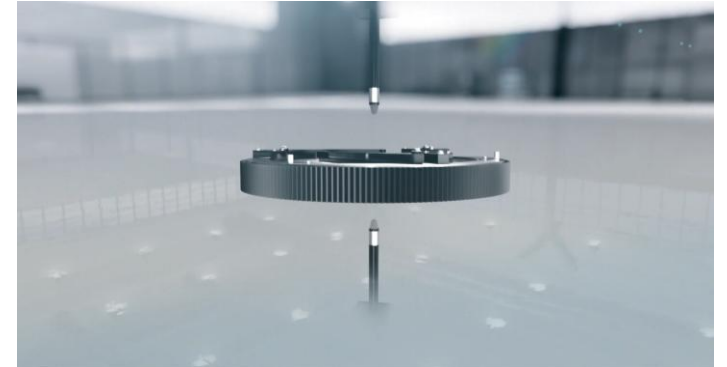
2 Advanced Point-by-point Calculation

- Real-time calculation based on all given data for each order
- Back surface optical optimization across the entire lens surface



3 Advanced Freeform Production

- Patented freeform surfacing processes ensures optical precision in any step



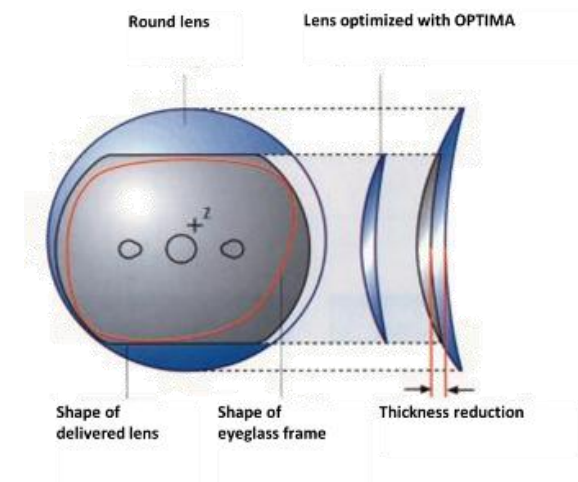
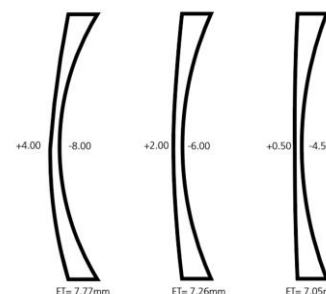
Why recommend ZEISS?

ZEISS Identity: Balancing lens aesthetics without sacrificing optical clarity

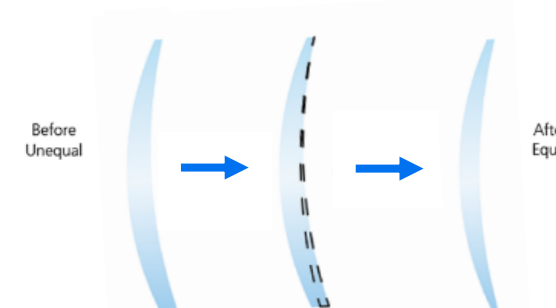


4 Thin Optics

- Proprietary algorithm for thickness optimization: "Optima" (aids in producing thinner & flatter lenses)
- Flexible lens Base Curve adaptation for all RX lenses (via VISUSTORE online ordering platform)
- Patented "Thinning Prism" technology to reduce edge thickness (available by Default in both progressive and digital lenses)



Eliminating the edge thickness difference of a progressive lens with base down prism



Market research

Main concerns for first-time PAL wearers



Emerging presbyopes are concerned about:

- ☐ Eye fatigue
- ☐ Problems with clear vision at all distances
- ☐ Unpleasant blur when looking to the left or right
- ☐ Difficulties assessing distances
- ☐ Long adaptation time
- ☐ Unattractive or heavy lenses

First time progressive lens wearers are afraid of selecting the wrong lenses as low- and mid-priced solutions *may* occasionally result in various problems.



ZEISS Light progressive lens series

Capturing every single detail in focus

ZEISS Light progressive lens series

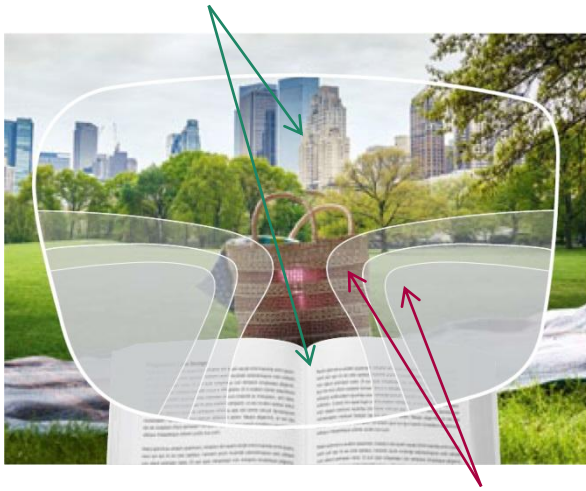
Portfolio design fingerprint



ZEISS Light progressive lens design fingerprint combines the advantages of traditional hard-design PALs and traditional soft-design PALs, providing wearers the **best balance** of **optimal performance** at a relatively **affordable price point**.

Traditional hard-design PAL

GOOD: larger visual fields and better reading zone



LIMITED: by high peripheral distortion and narrow access to near zone

ZEISS Light design PAL, for **easy adaptation**

GOOD: low lateral distortion and easy access to near zone



GOOD: larger visual fields and wide reading zone

Traditional soft-design PAL

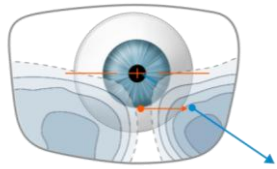
GOOD: low lateral distortion and easy access to near zone



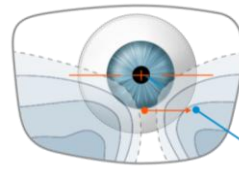
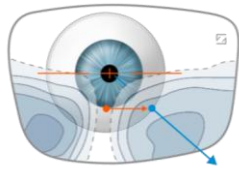
LIMITED: by narrow visual fields, small reading zone

ZEISS Light progressive lens series

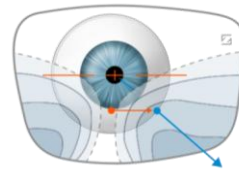
Philosophy for easy wearer adaptation & natural vision



Asymmetric peripheral blur provides unbalanced optics (in traditional PAL)



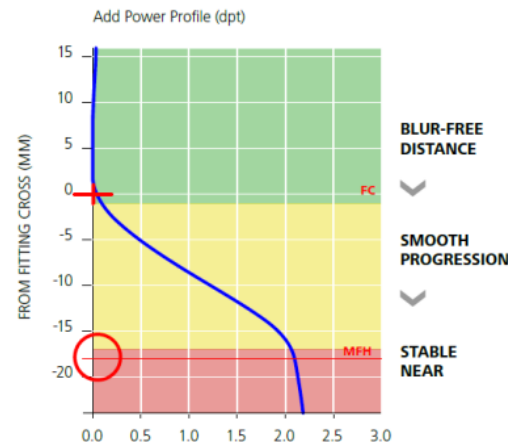
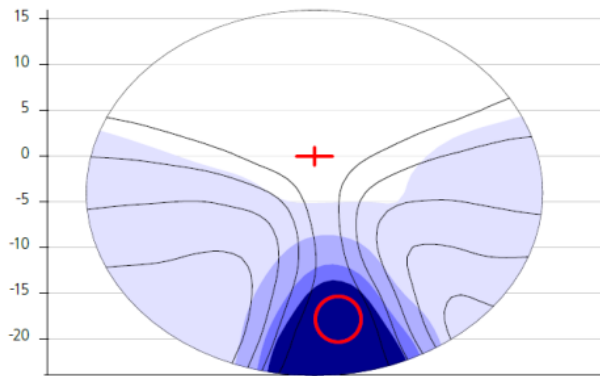
Horizontal symmetry in peripheral blur provides balanced optics (in ZEISS Light PAL)



1. Optimized Boundaries technology

Distance zone is designed to be slightly larger than less sophisticated soft progressive lenses.

Improved vision in the periphery with the use of proprietary horizontal symmetry technology to optimize blur zone boundaries.



2. Optimized Power Profile technology

Considers the natural convergence of the eyes.

Allow vision to feel more instinctive and easy focus at any distance and direction. (Strain-free)

Optimized Power Profile

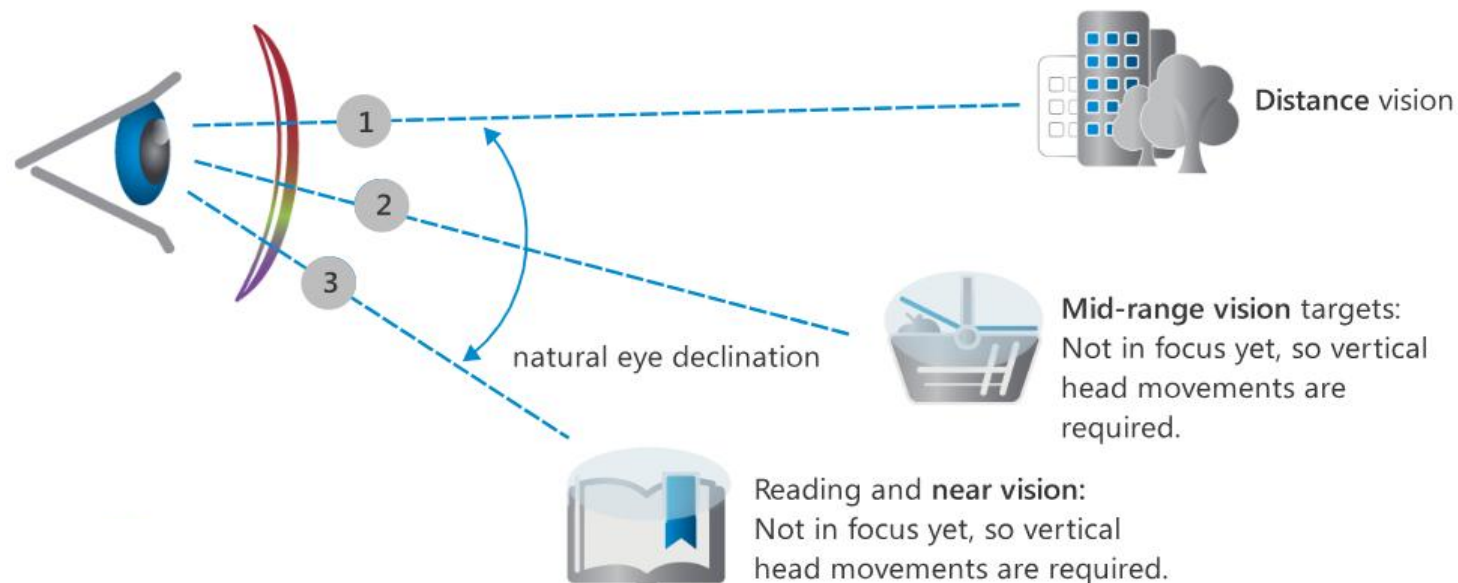
Natural & comfortable eye declination



Conventional progressive lenses with standard power profiles often don't match the natural declination* of the eyes.

This results in wearers having to adjust their head position frequently with uncomfortable movements.

*Declination is the vertical path of the eyes inside the lens when looking from Distance to Near.



Optimized Power Profile

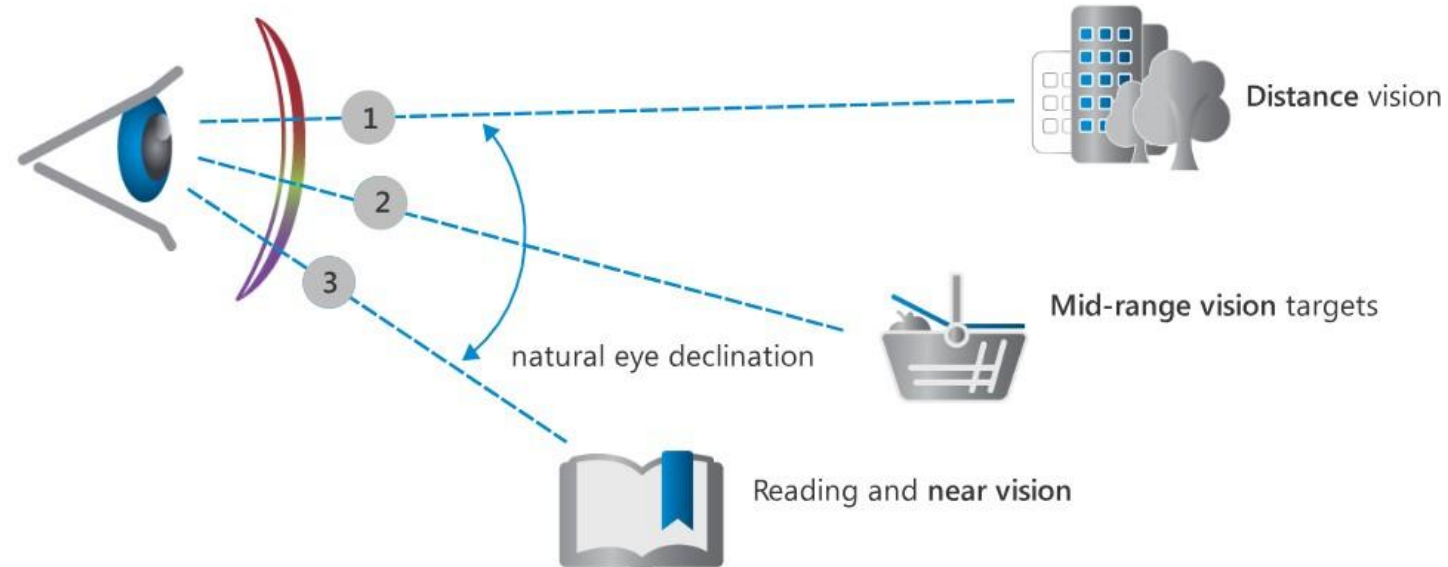
Natural & comfortable eye declination



Using an optimized power profile, **ZEISS Light** progressive lens series ensure a perfect match between

- the natural eye declination
- the object-model distance(s), and
- the corresponding zones of the lens.

This creates a **smooth transition** when viewing objects from Distance to Near, minimizing unnecessary head movements and improved strain-free comfort.



ZEISS Light 3D

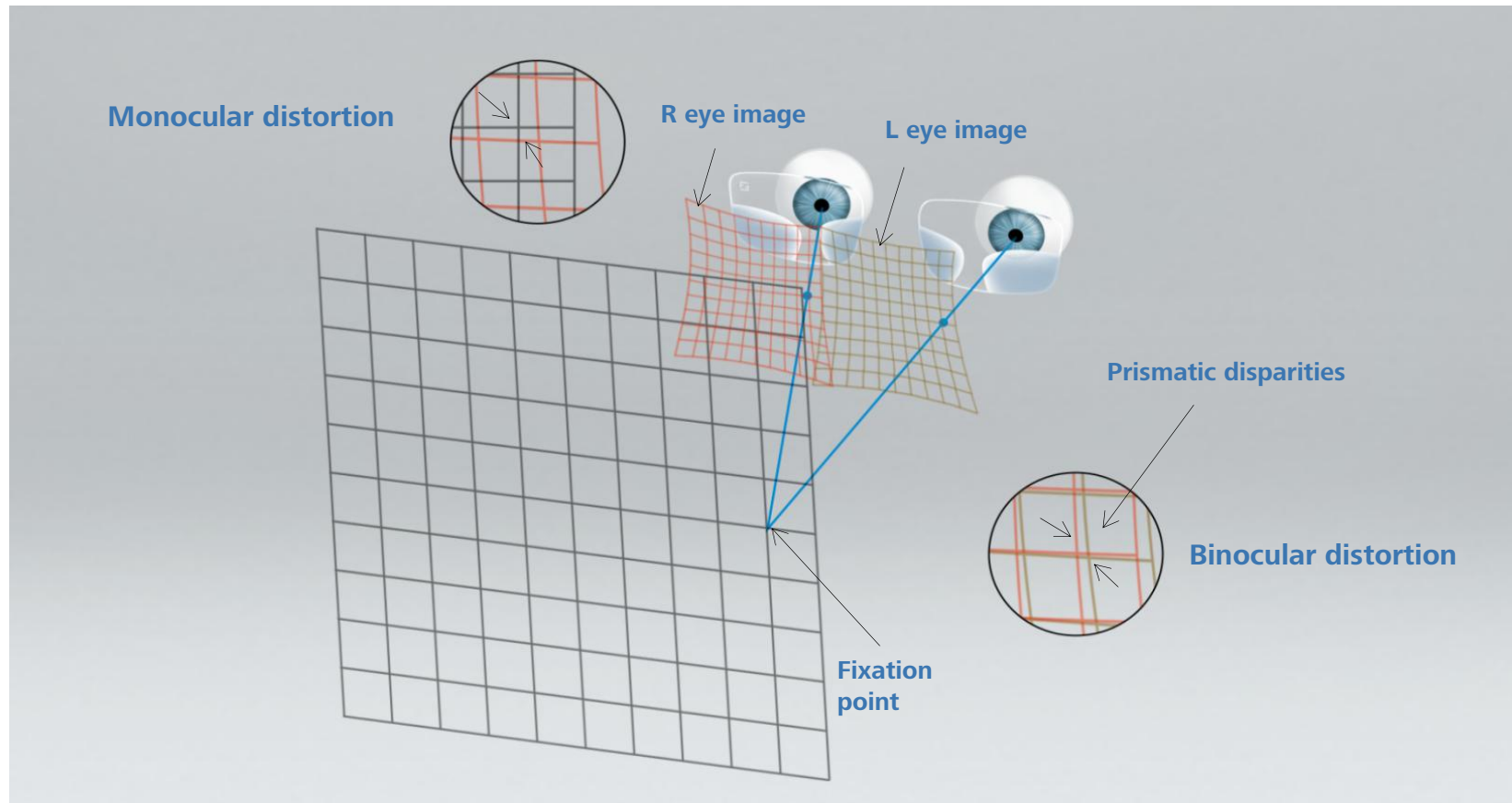
Binocular optimization for improved perception of space at all distances

ZEISS Light 3D progressive lens

Binocular optimization (synchronization of both eyes)



Traditional less sophisticated progressive lenses do not minimize monocular and binocular distortion, which may impair spatial perception and in turn affect the wearer's confidence (e.g., insecurities when climbing stairs).



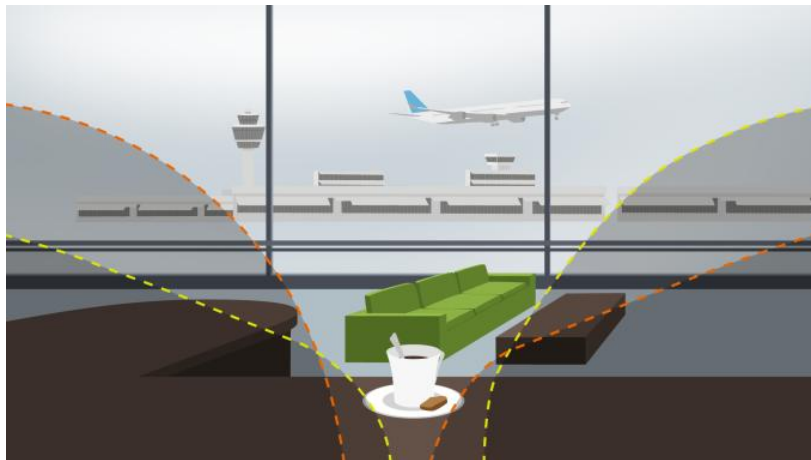
ZEISS Light 3D progressive lens

Binocular optimization (synchronization of both eyes)

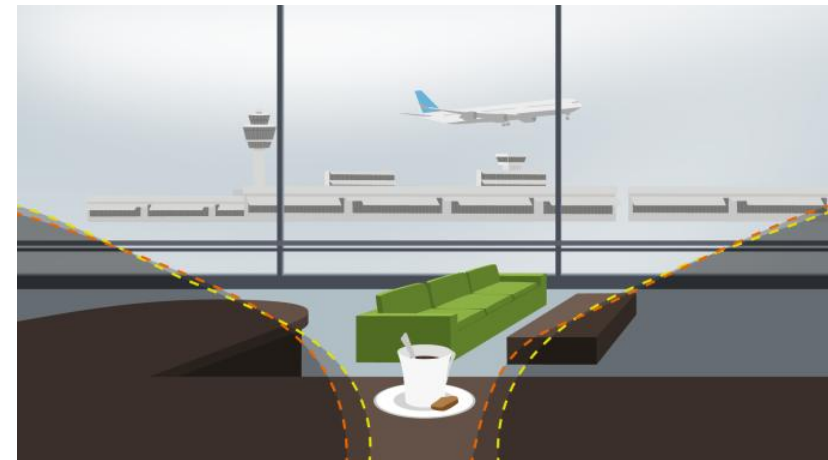


With **3D binocular optimization**, ZEISS ensures the progressive lens design is even more accurately synchronized between the right & left eyes.

This providing the wearer with **better spatial perception** and an **enhanced reading experience**.



Traditional progressive lenses without 3D binocular optimization.



ZEISS Light 3D with improved spatial perception and improved reading.

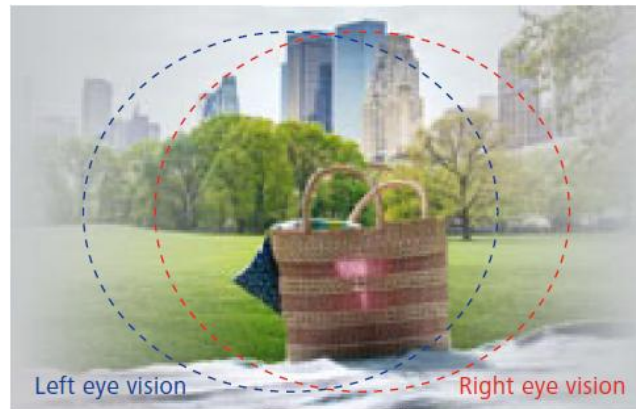
ZEISS Light 3D progressive lens

Binocular optimization (synchronization of both eyes)

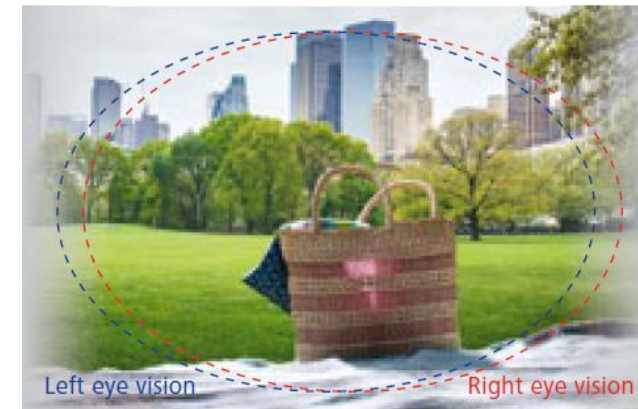


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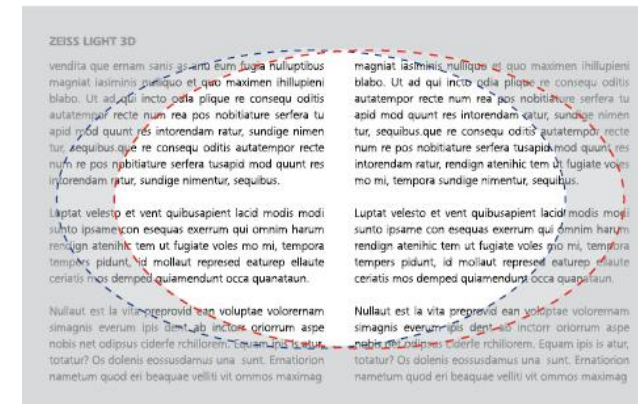
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Traditional progressive lenses without 3D binocular optimization.



ZEISS Light 3D with improved spatial perception & reading experience.

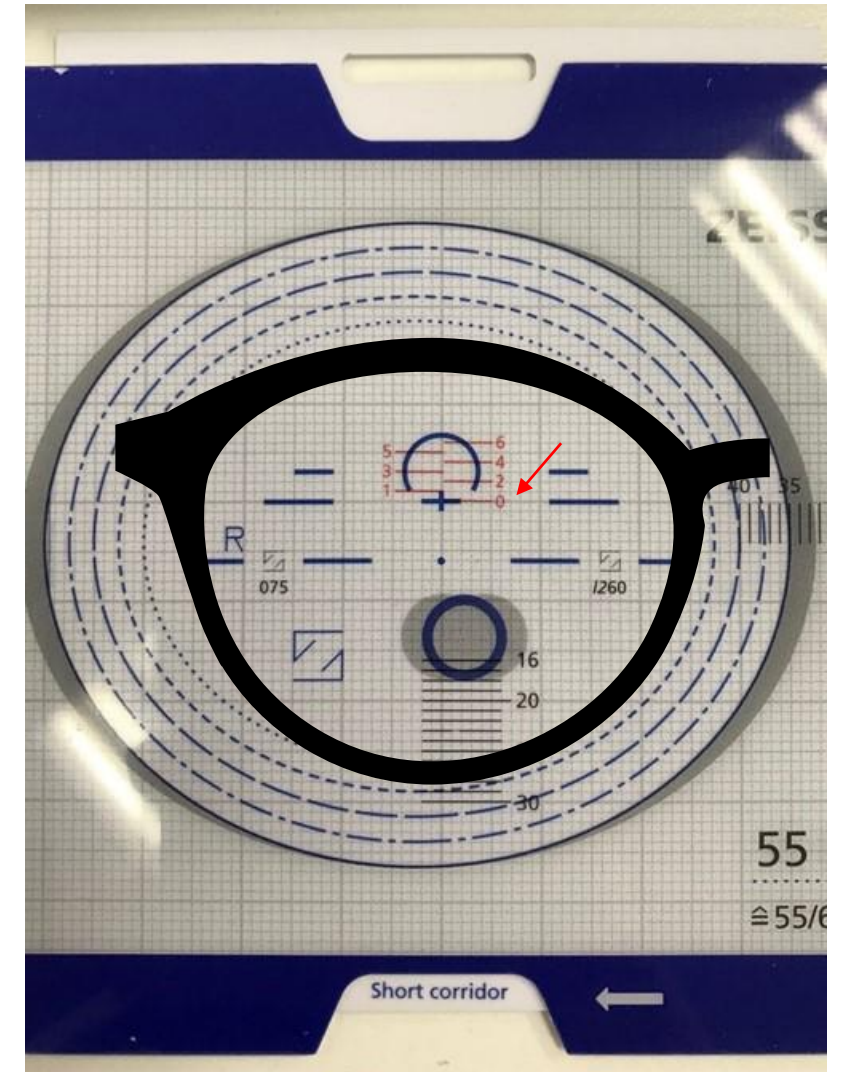


ZEISS Light 3D progressive lens

Available in 3 fixed corridor lengths to prescribe



Corridor	FrameFit Value (FFV)	Corridor Length	Minimum Fitting height
Short	 0	10	14
	1	11	15
Medium	2	12	16
	3	13	17
Regular	4	14	18
	5	15	19
	6	16	20

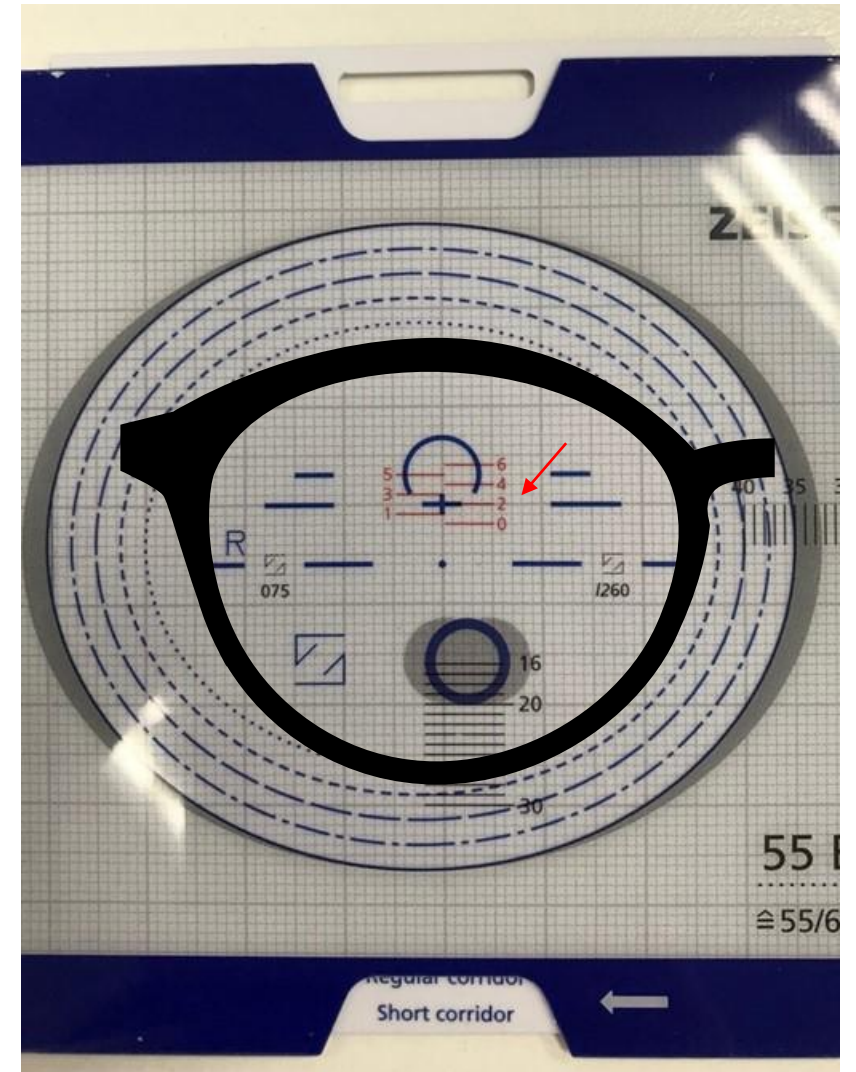


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	6	16	20



ZEISS Light 3Dv

Personalization of vision for full freedom of frame choice

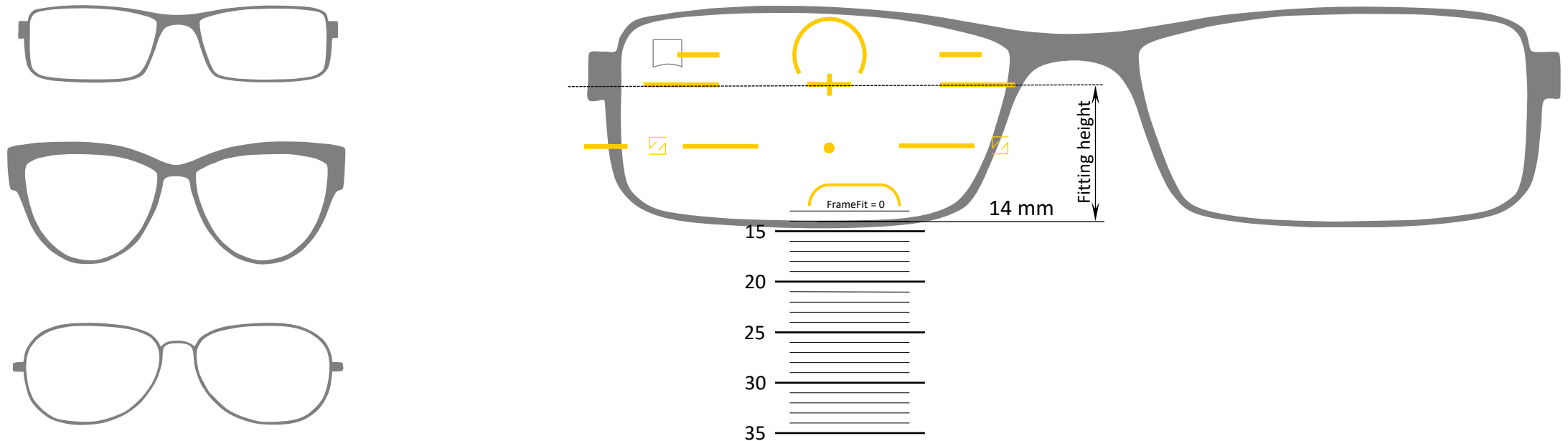
ZEISS Light 3Dv progressive lens

Variable corridor length customization for free frame choice



Allows ECPs to readily customize the reading area in progressive lenses on the vertical plane.

- This allows ECPs & wearers full freedom of choice to select any Frame for progressive lens wear.
- Identical reading circle can be replicated for existing PAL wearers; no need for further adaptation.
- **No compensation or compromise in optical performance.**



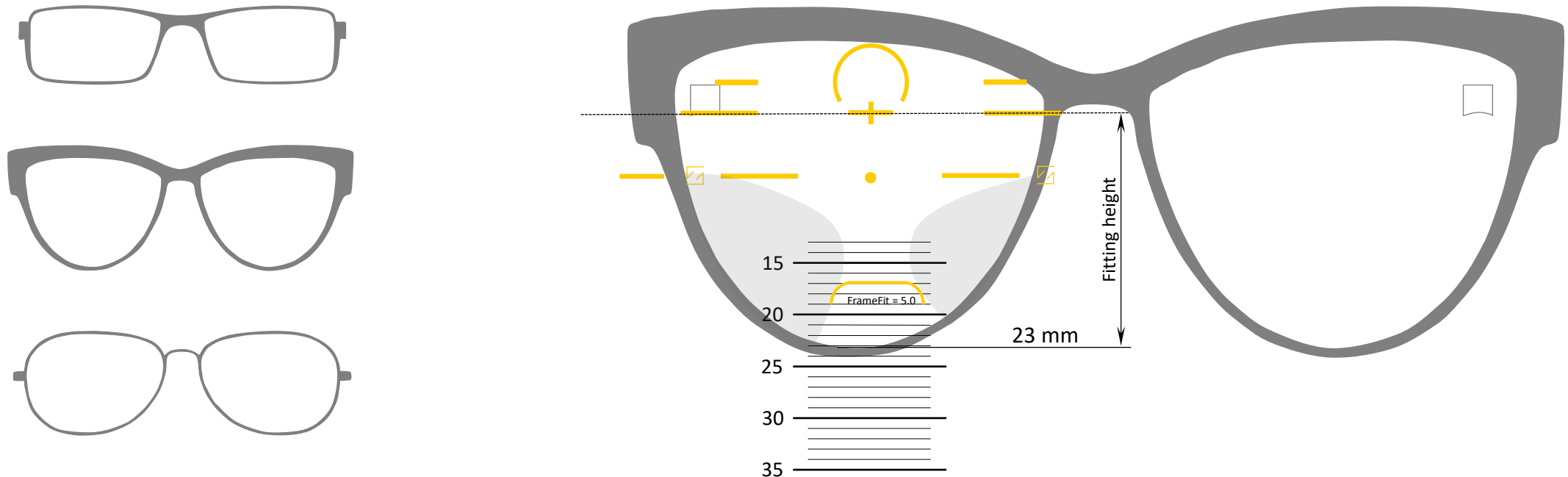
ZEISS Light 3Dv progressive lens

Variable corridor length customization for free frame choice



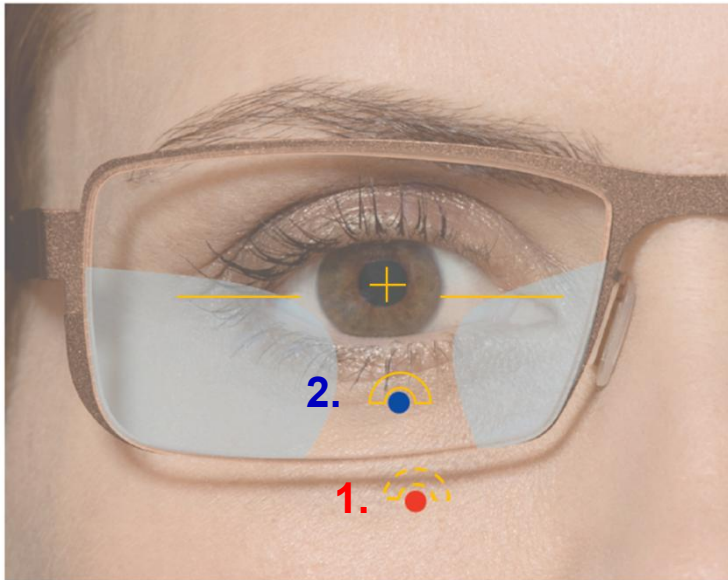
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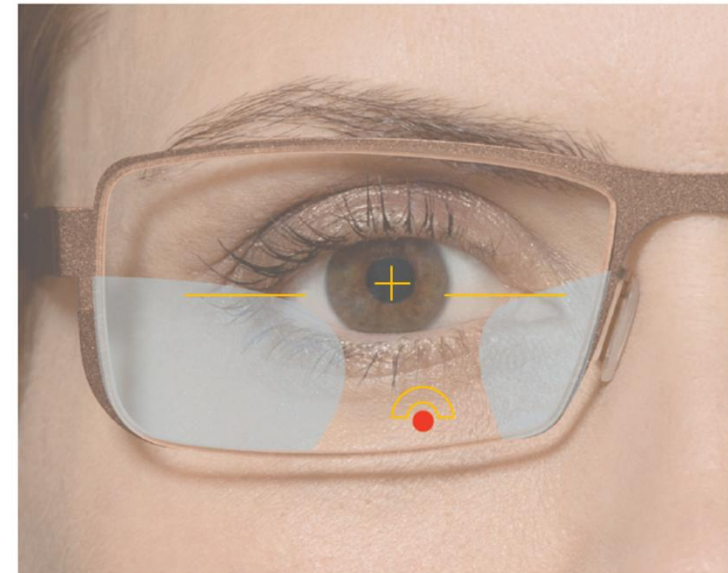
ZEISS Light 3Dv progressive lens

Variable corridor length customization for free frame choice



Without a variable corridor, the conventional Near zone of a PAL cannot be optimally positioned, resulting in a *reduced* lens performance.

1. Using a (pre-determined) regular corridor which is too long for a smaller frame.
2. Using a (pre-determined) short corridor that is positioned too high, resulting in increased peripheral blur.



Light 3Dv variable corridor reduces excessive downsizing & allows the wearer to enjoy optimum range-of-vision including the Near zone, irrespective of frame size.

Lenses are designed to the wearer's **expected behavior**; this also allows for easy migration in existing PAL wearers.

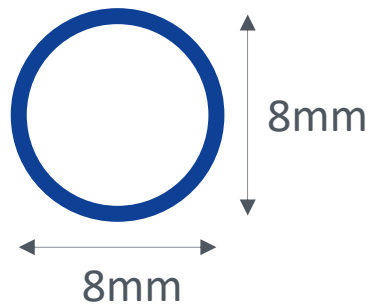
ZEISS Light 3Dv progressive lens

Variable corridor length selection based on Frame Fit Value (FFV)

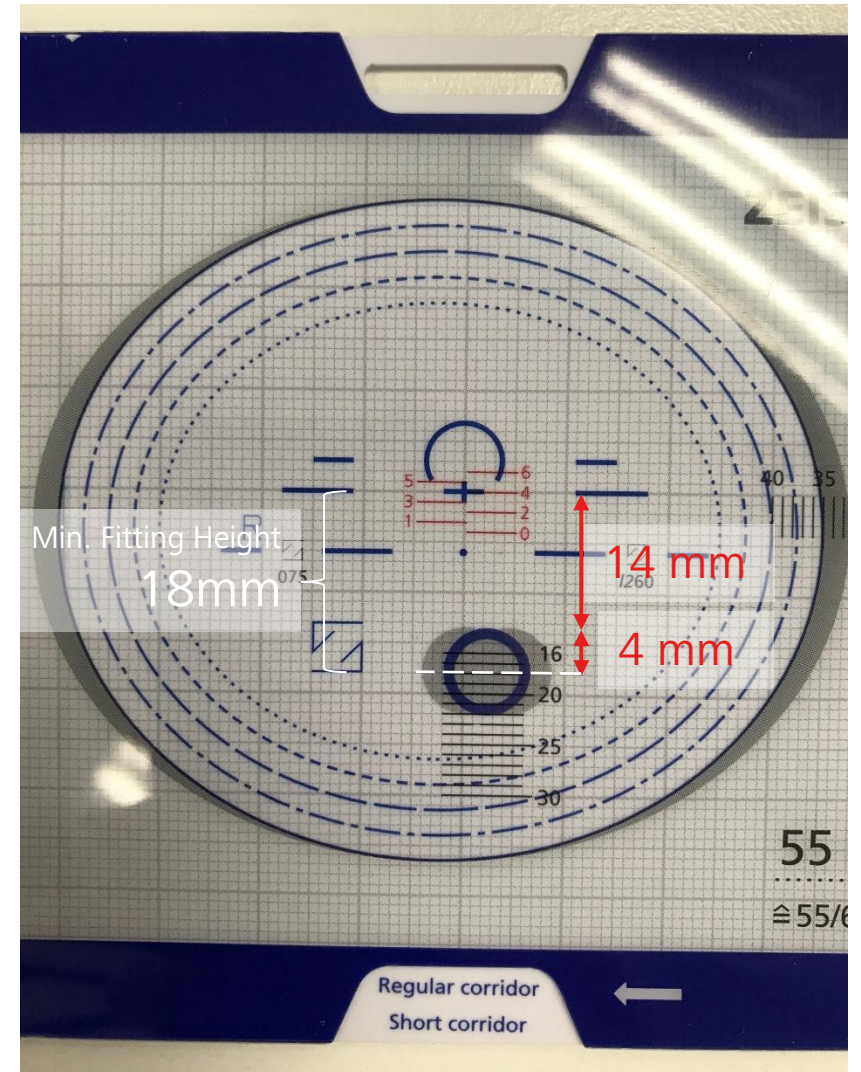


Corridor	FrameFit Value (FFV)	Corridor Length	Minimum Fitting height
Short	0	10	14
	1	11	15
Medium	2	12	16
	3	13	17
Regular	4	14	18
	5	15	19
	6	16	20

Half the reading circle

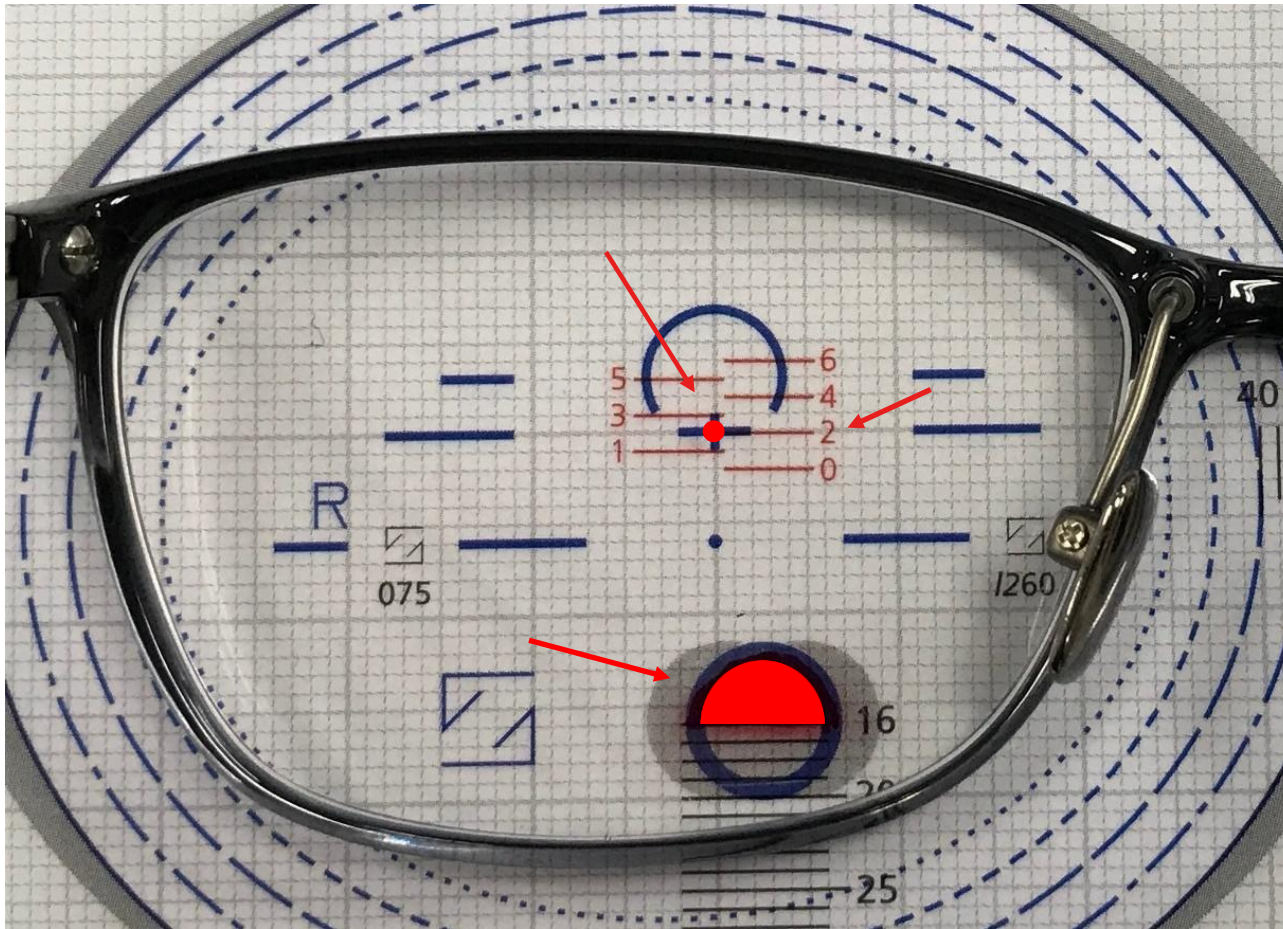


For ZEISS lenses only, Corridor Length is *always* measured from the fitting cross to the **top** of the Reading circle.



Determining the ideal corridor length to prescribe

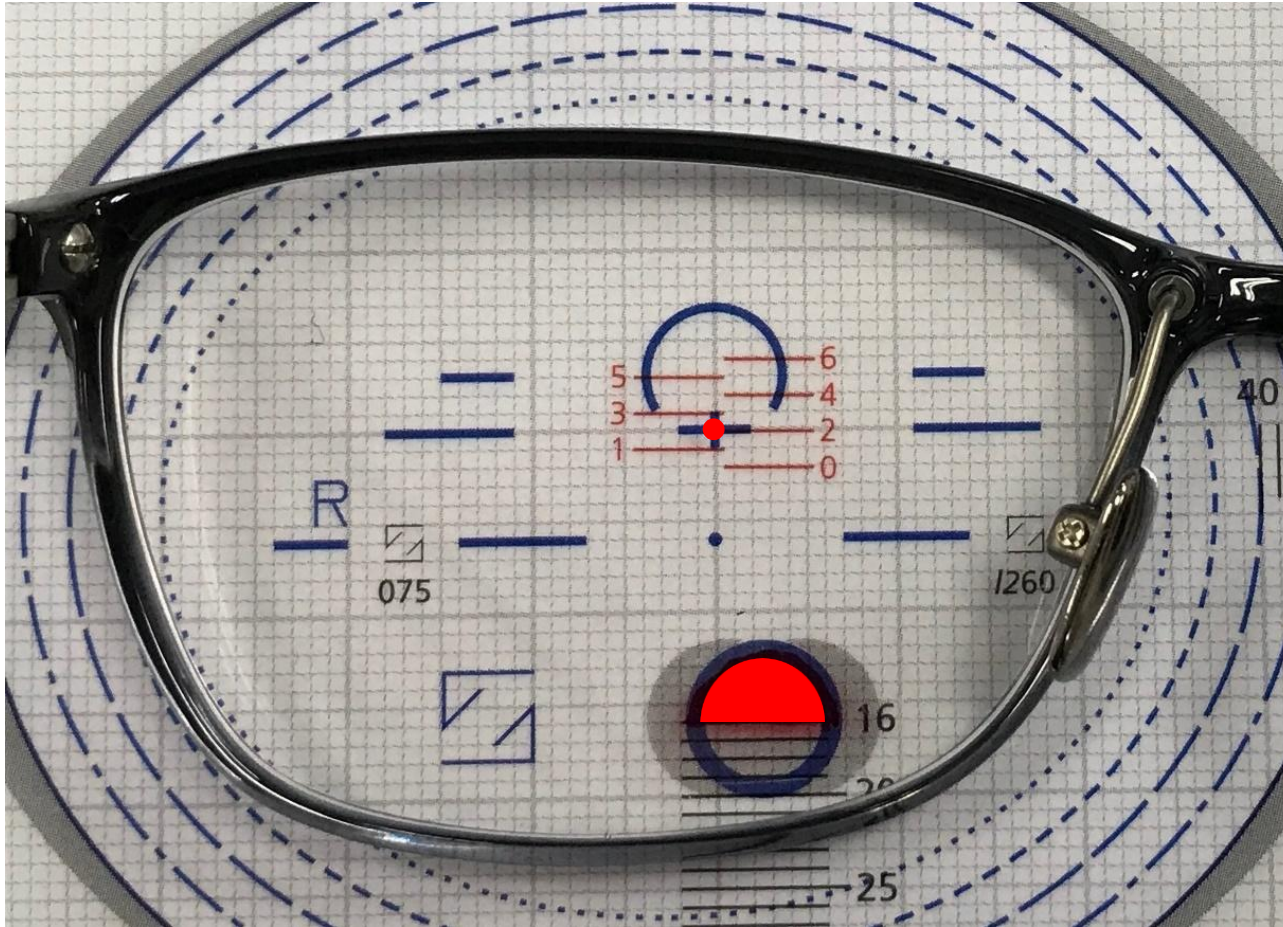
Recommended methodology



- **Always do adequate frame adjustments first!**
- Place your centration dotting on the fitting cross.
- Shift the insert in the ZEISS Progressive Centration Chart to your arbitrary value (e.g., FFV 2) on the fitting cross.
- Colour the **top half** of the reading zone only.

Determining the ideal corridor length to prescribe

Recommended methodology



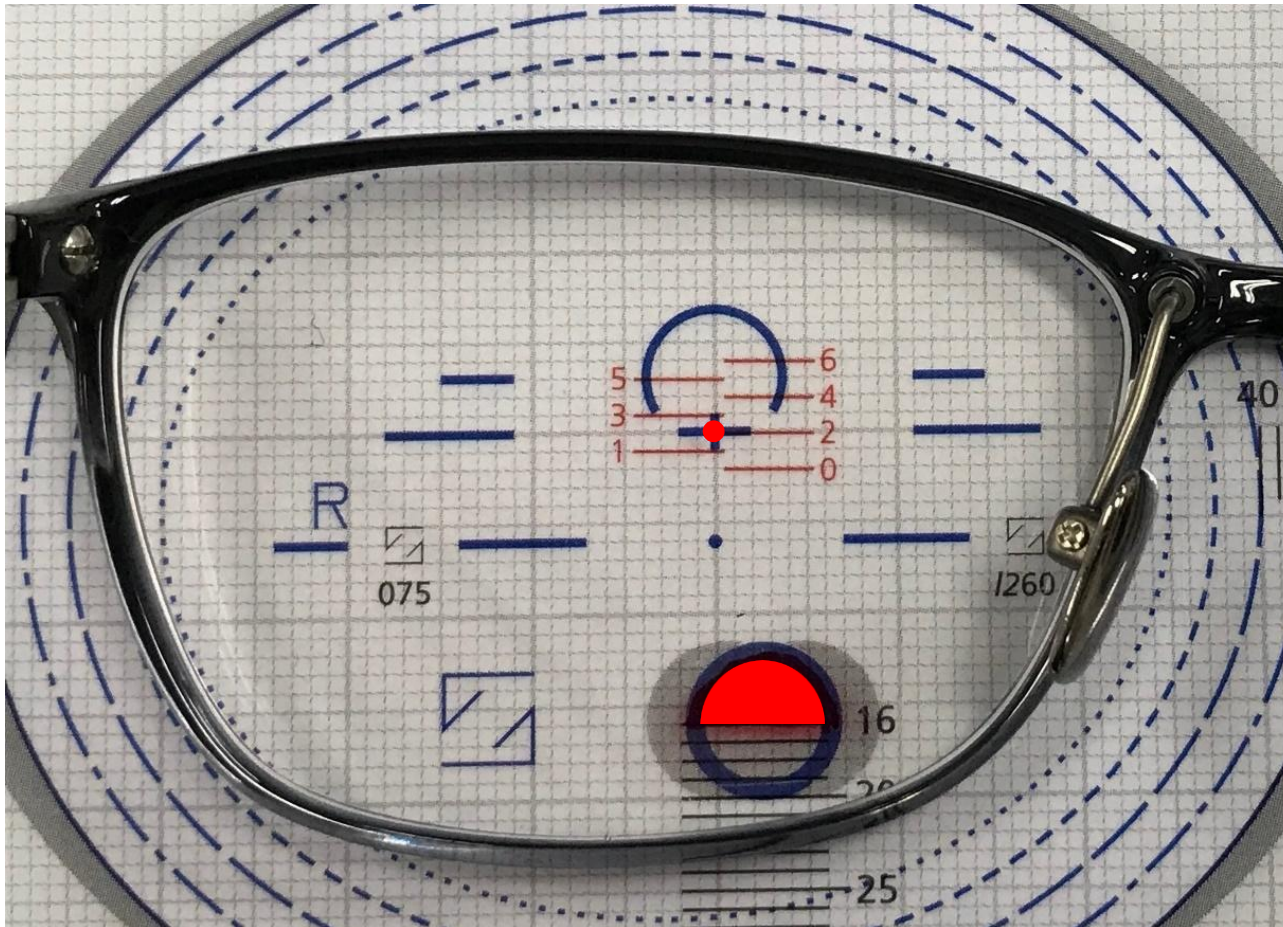
(Repeat on the other side if necessary)

Instructions

- 1) Get customer to put on the glasses.
- 2) Instruct them to look at his / her mobile phone.
- 3) Ask him / her if the 'red semi-circle' is covering whatever they are reading.
- 4) If the answer is yes, chosen corridor / FFV is correct.
- 5) Otherwise, ask if the 'red semi-circle' is above or below what he / she is reading.

Determining the ideal corridor length to prescribe

Recommended methodology



Quiz

If customer says the 'red semi-circle' is **BELOW** what he / she is reading.

to Lengthen or Shorten
the Corridor?

Shorten!

**There is always another 4mm allowance below your 'red semi-circle', unless your chosen frame doesn't permit.
(Reading zone doesn't end at where you have shaded.)

Expected Q&A

Appropriate sales pitch & responses



1. What's the difference between ZEISS Light progressives and the previous progressive lenses offered?

- ✓ It's ZEISS branded quality – these lenses are engineered to *exceed* the needs of wearers who are used to less sophisticated progressive lenses.

2. What are the benefits of using ZEISS Light progressive lenses?

- ✓ Compared to other ZEISS lens offerings, the ZEISS Light progressive lens series is a more **cost-affordable** lens solution that offers comfortable vision and an enhanced reading experience.

3. Optimized Boundaries – how does it work?

- ✓ The Optimized Boundaries design keeps the Distance zone wide and clear, while access to the corridor is soft and easy with very low peripheral distortion.
- ✓ The Near zone is also enlarged and accurately shaped to the average wearer's needs, optimizing for any horizontal eye movements.

4. Optimized Power Profile – how does it work?

- ✓ With the Optimized Power Profile, a perfect match is created between the natural eye declination and the dedicated zone of the lenses.
- ✓ This leads to a smooth vertical transition from Distance vision to Near, minimizing uncomfortable head movements – allowing for easy migration and rapid adaptation.

Expected Q&A

Appropriate sales pitch & responses



5. What does ZEISS progressive Light 3D stand for?

- ✓ 3D refers to the binocular optimization for optimal perception of space and distances.
- ✓ Additionally, the design of ZEISS Light progressive lenses provides large visual fields and easy access to the Near zone.

6. Binocular optimization – how does it work?

- ✓ With 3D binocular optimization, the lens design is more accurately synchronized between the left and right eye, leading to an improved perception of space and an enhanced reading experience.

7. What does ZEISS progressive Light 3Dv stand for?

- ✓ 3D refers to the binocular optimization for optimal perception of space and distances.
- ✓ The v represents variable corridor for precise lens adaptation to any frame size.
- ✓ Additionally, the design of ZEISS Light progressive lenses provides large visual fields and easy access to the Near zone.

8. Variable corridor – how does it work?

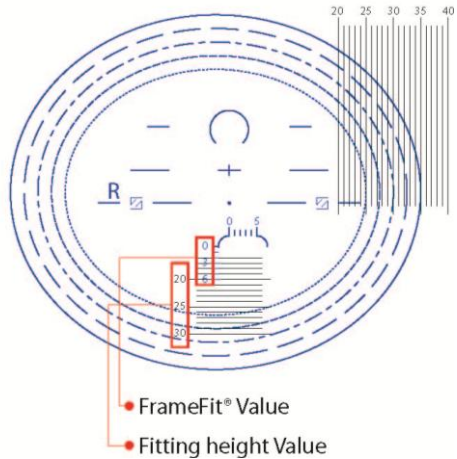
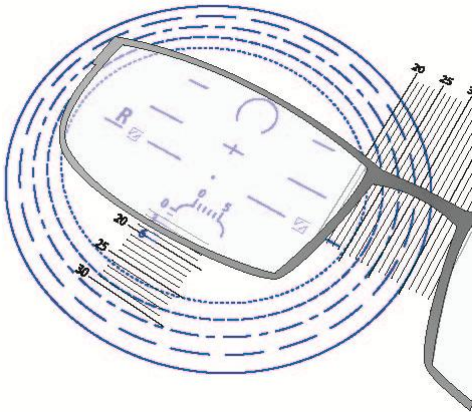
- ✓ ZEISS Light 3Dv progressive lenses allows the lenses to be produced with a variable corridor.
- ✓ This allows wearers to experience an optimal range of vision personalized to their behavior – no matter the choice of the frame.

Technical factsheet

Required ordering parameters



Progressive Lenses		Light 3D	Light 3Dv
Prescription		•	•
Addition		•	•
Position-of-wear data	Monocular PD	•	•
	Fitting height	3 fixed corridor lengths; Min. fitting height S = 14mm M = 16mm L = 18mm	Variable corridor lengths; Minimum fitting height from 14mm onwards
	Frame Fit Value	N.A.	0 to 6
Frame Data (for Optima)	Frame size	•	•
	Total Frame Height	•	•
	Distance Between Lenses (DBL)	•	•
	Frame shape	•	•



RX Lead time D+5

Technical factsheet

Power range



// LIGHT 3D		
UVProtect®	BlueGuard®	PhotoFusion® X with BlueGuard®
with DuraVision® Platinum UV		

// LIGHT 3Dv		
UVProtect®	BlueGuard®	PhotoFusion® X with BlueGuard®
with DuraVision® Platinum UV		

INDEX	DIAM	SPH	MAX CYL	CMPD	ADD
1.60	55/60/65/70/75	+6.00 to -10.00	-6.00	-10.00	+0.75 to +4.00
1.67	55/60/65/70	+8.00 to -12.00	-6.00	-12.00	+0.75 to +3.50
1.74	55/60/65	+9.00 to -14.00	-6.00	-14.00	+0.75 to +3.50

Technical factsheet

Stamp layout & lens engravings (Uncut sample)



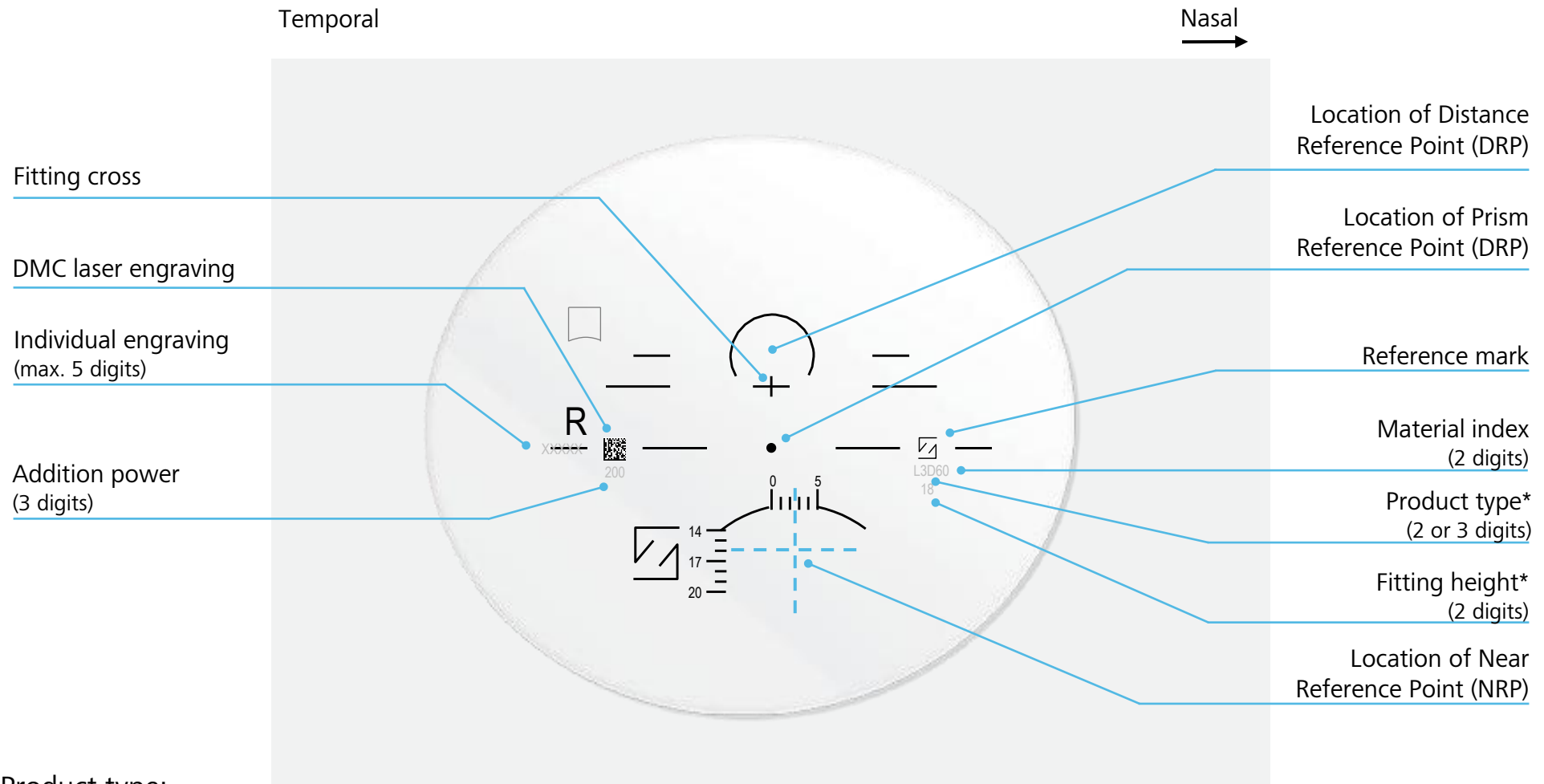
Temporal

Nasal
→



Technical factsheet

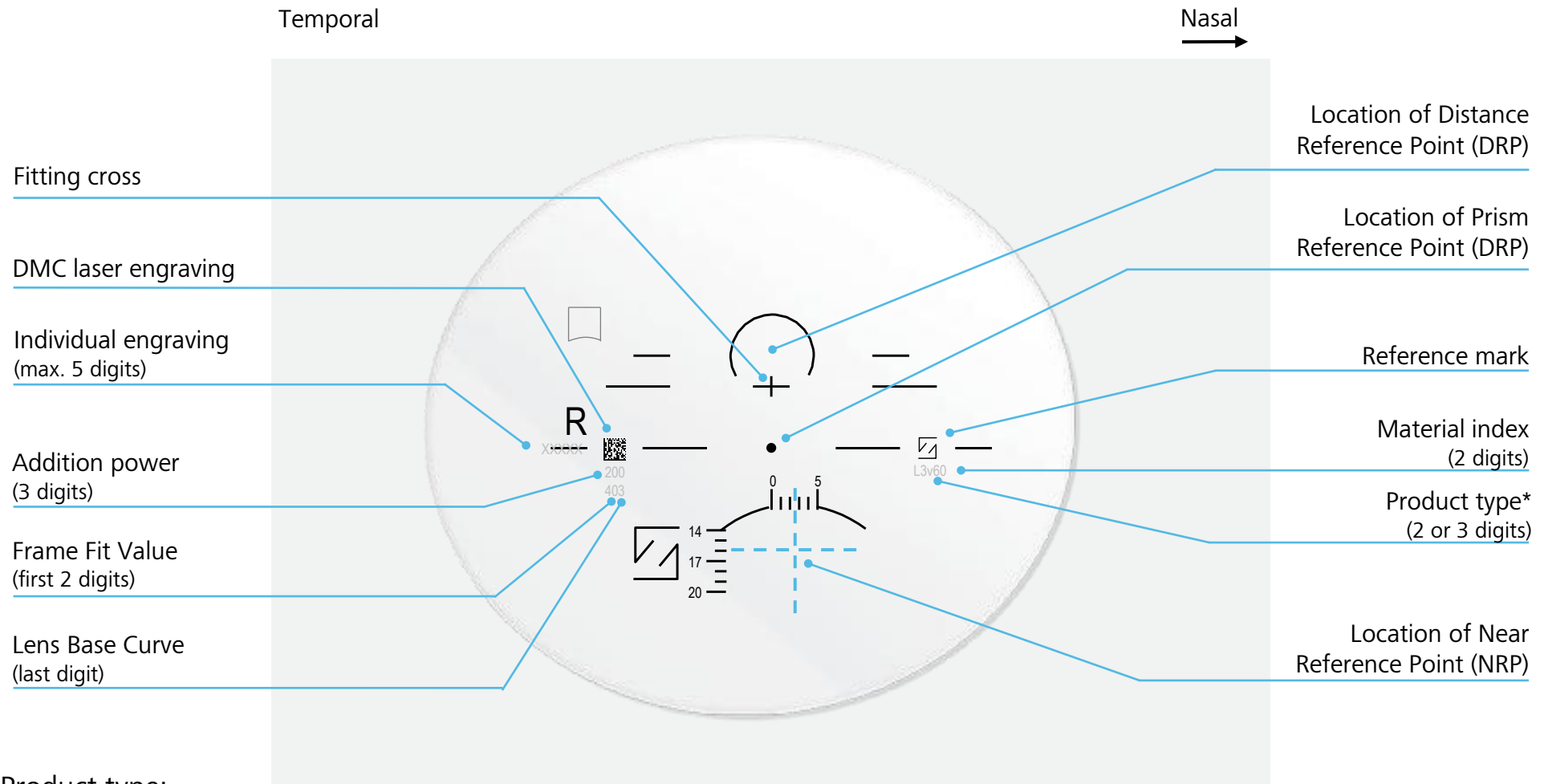
Stamp layout & lens engravings for Light 3D



*Product type:
ZEISS Progressive Light 3D lenses: **L3D**

Technical factsheet

Stamp layout & lens engravings for Light 3Dv



*Product type:
ZEISS Progressive Light 3Dv lenses: **L3v**

ZEISS Premium Lens Coating

DuraVision Platinum UV , applied across all ZEISS X OWNDAYS lenses

ZEISS Premium Lens Coating

What do wearers expect?



Consumers often measure the quality of their lenses by the Coating.

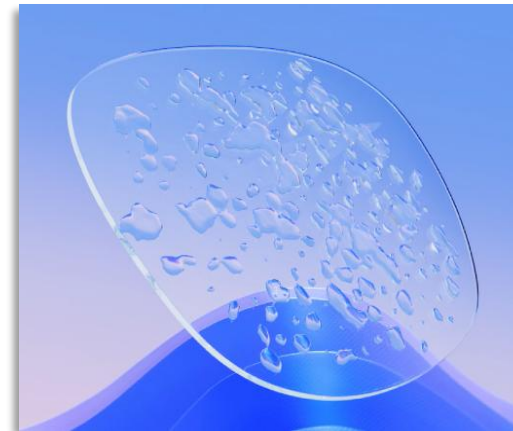
Coatings influence how clean the lenses stay throughout the day, how well they reduce glare & reflections, and how scratch-resistant they are.

In a large-scale consumer study ⁸,



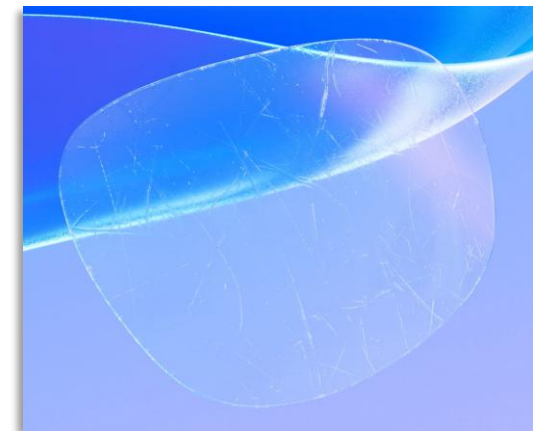
Clarity

88% of lens wearers prioritized **clear & sharp** vision.



Hassle-free

80% of lens wearers want their lenses to be smudge-resistant and **easy to clean**.



Longevity

82% of lens wearers associate **scratch-resistance** with quality eyewear.

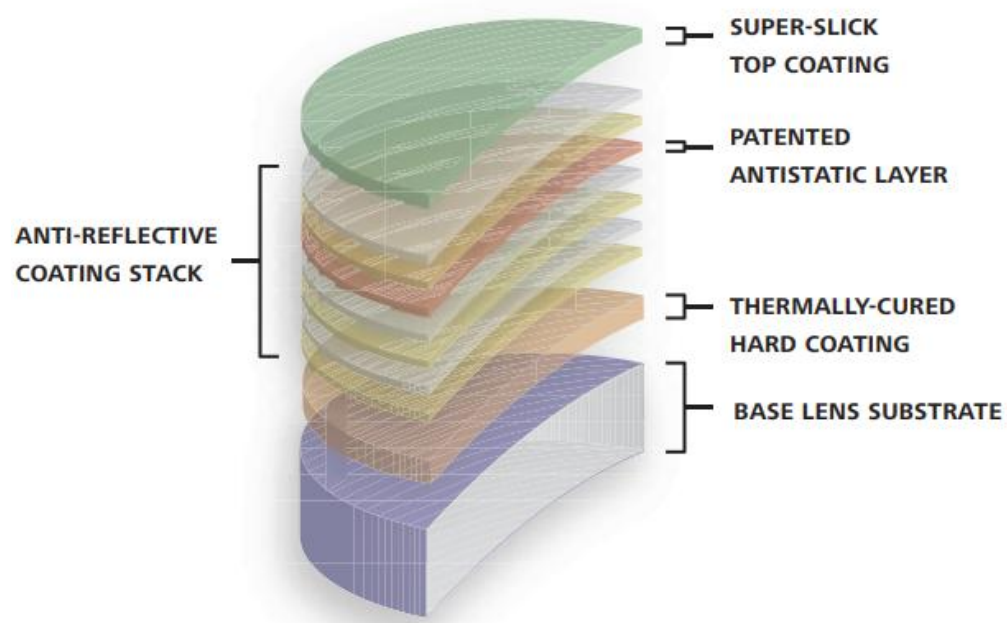
⁸ Vision Care Brand Fundamentals Tracker, March 2024, vision correction users in 18 countries surveyed, n=19,800

ZEISS DuraVision Platinum UV

Our default Premium Coating



ZEISS DuraVision Platinum UV



ZEISS DuraVision Platinum UV provides

- UV400 protection & anti-reflection on both the Front & Back surface of the lenses
- Excellent scratch resistance
- Easy to clean
- Long lasting durability

Bayer test

Analysis of scratch / abrasion resistance of coated eyeglass lenses



Conducting the Bayer test

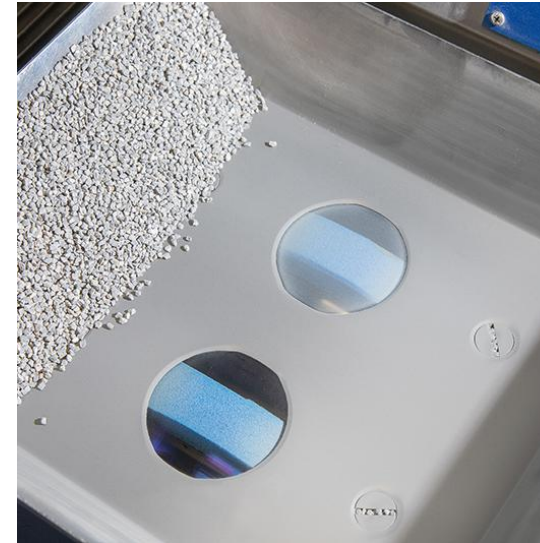
Comparison is done between the tested product & a standard control lens without coating⁴

A machine is filled with a standardized abrasive material (Alundum, a sharp-edged material specifically manufactured for testing applications that resembles small pebble stones)



Testing in progress

The machine persistently shakes & moves a tray with both inserted lenses back and forth 600x



Upon completion

Resultant damage and scratches on the lens surface scatters light, and creates a 'haze'

The greater the surface damage, the higher the visual impairment



Objective measurement

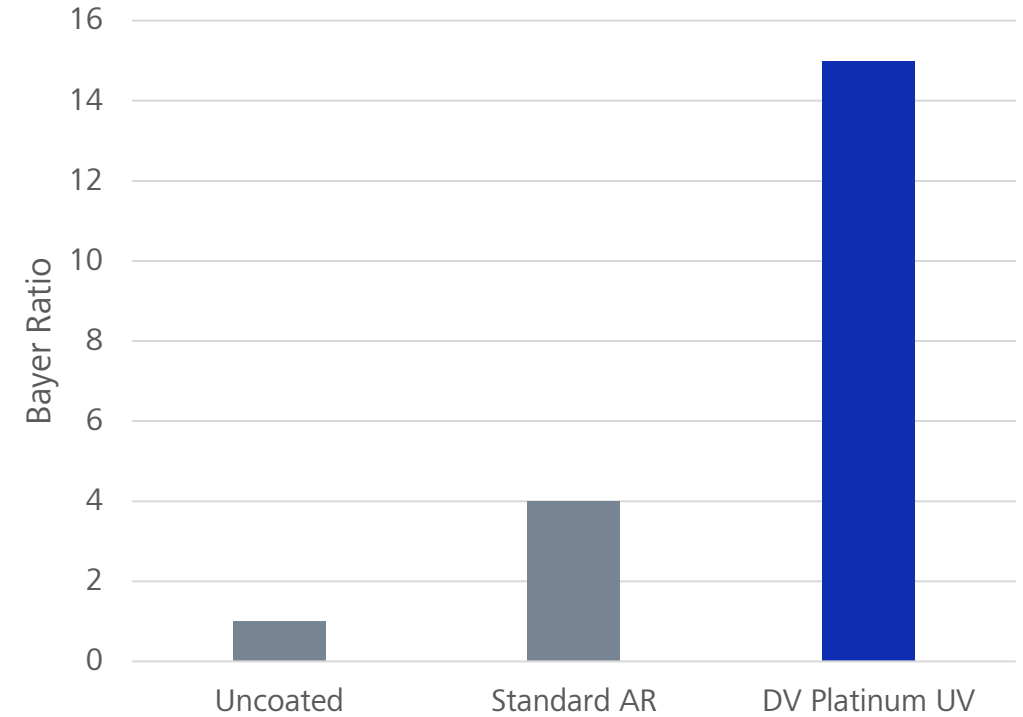
Scattered light measurement is objectively quantifies the degree of scratch / abrasion resistance

ZEISS DuraVision Platinum UV

Our default Premium Coating



Abrasion Resistance



Average Bayer ratio tested across 1.60, 1.67 lens materials to ISO/IEC 17025 regulations, 2024.

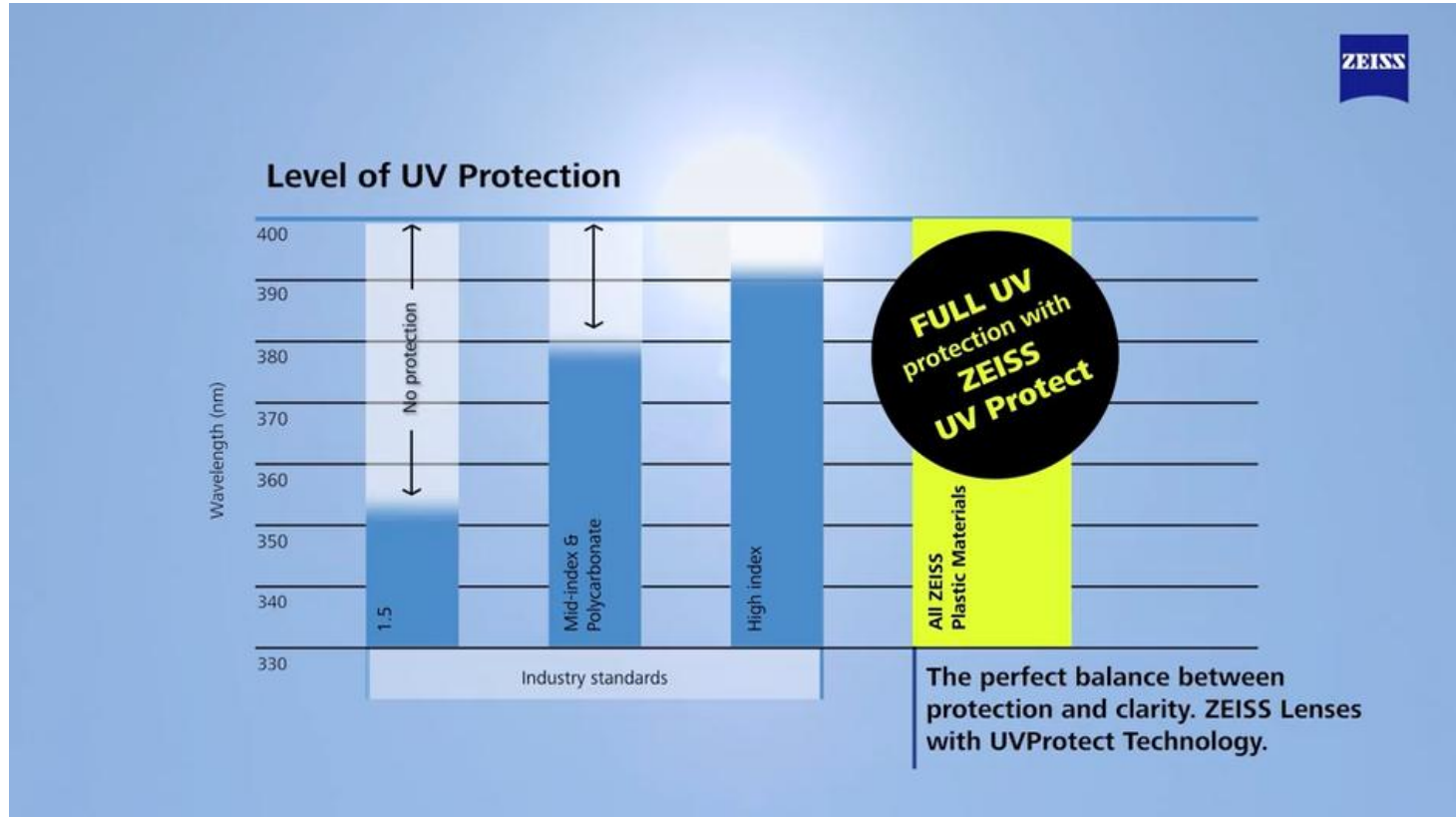
DuraVision Platinum UV coating provides excellent durability.

ZEISS Lens Materials

UVProtect , BlueGuard & PhotoFusion X

ZEISS UVProtect lens

Clear lenses, available in 1.6 to 1.74 index



ZEISS UVProtect material provides full UV protection of **up to 400nm**

*compared to other industry standard that only covers up to 380nm

ZEISS BlueGuard lens

Blue-light blocking lenses, available in 1.6 to 1.74 index

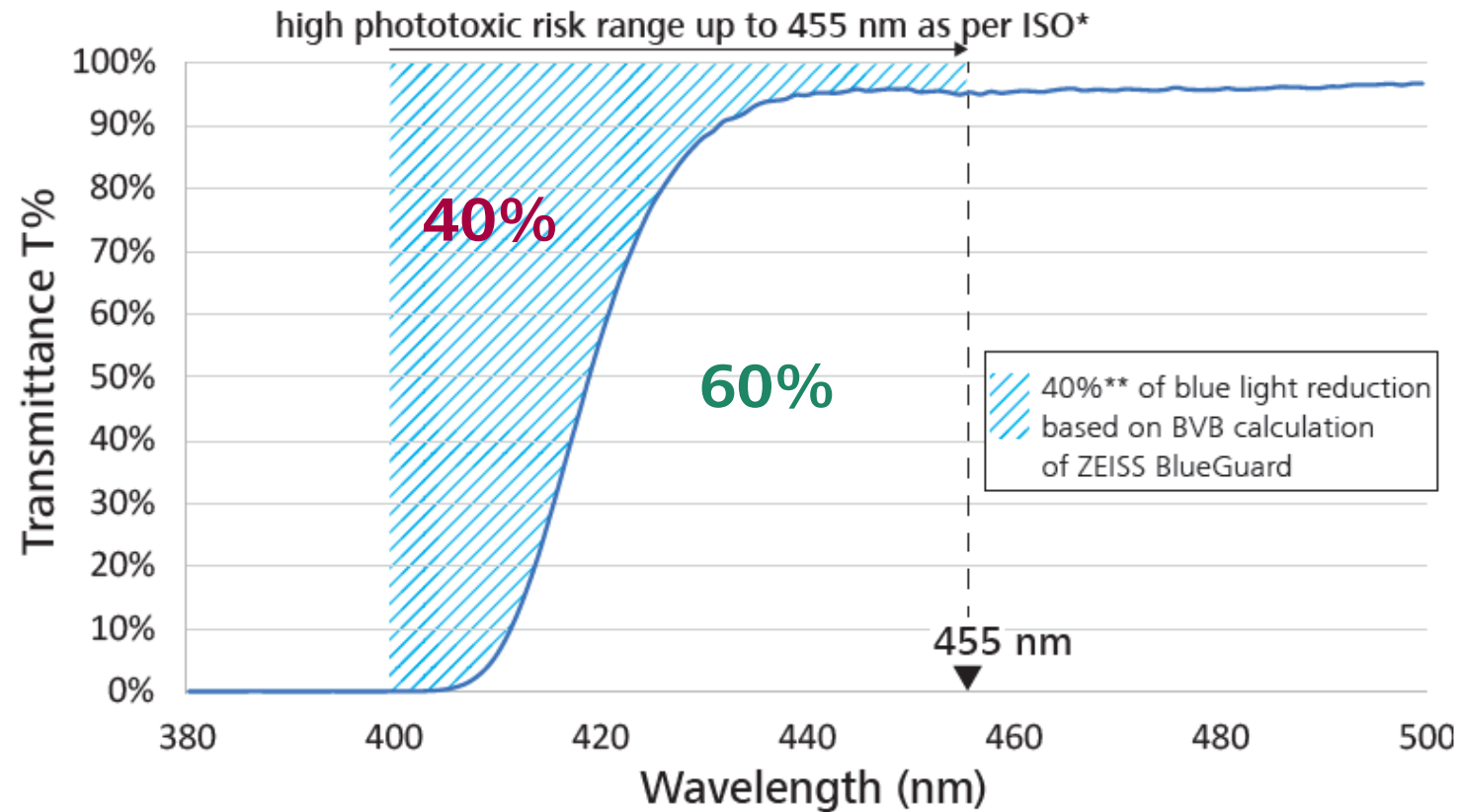


ZEISS BlueGuard lenses are designed to

- Block off potentially-harmful blue light whilst offering full UV400 protection
- Address digital eye strain
- Reduce unwanted lens reflections for better aesthetics

ZEISS BlueGuard lens

Blue-light blocking lenses, available in 1.6 to 1.74 index

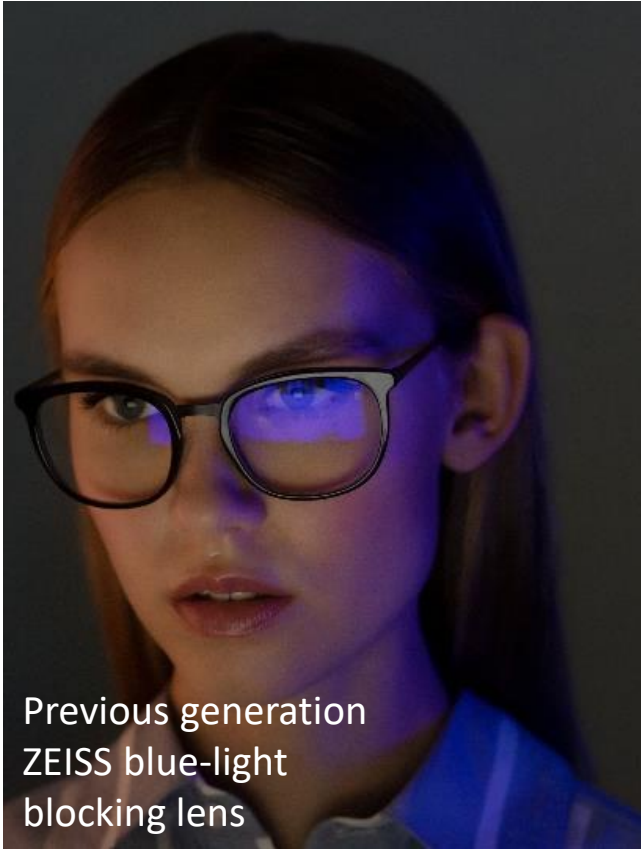


*ISO/TR 20772:2018, **ZEISS BlueGuard 1.6 Material

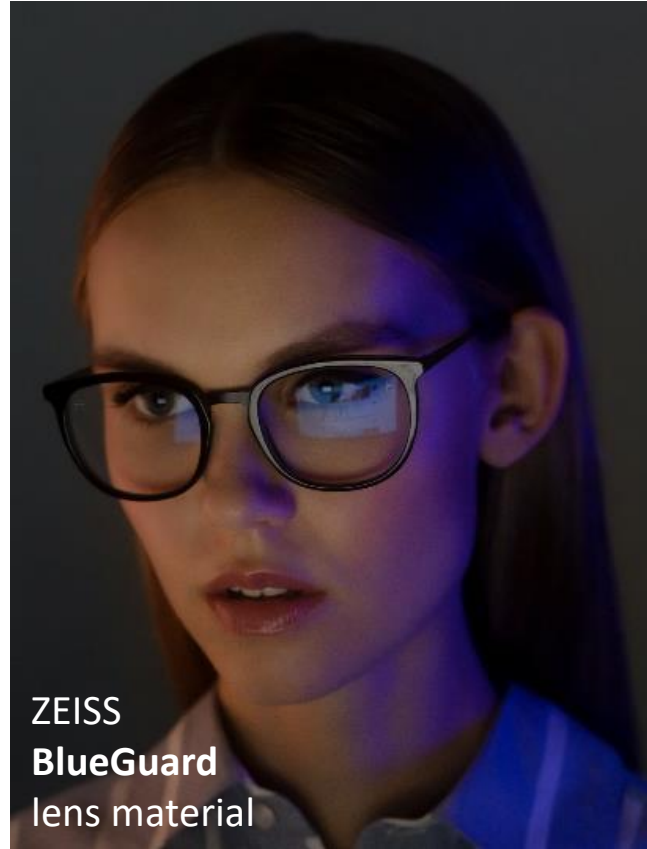
ZEISS BlueGuard lenses blocks off **up to 40% of potentially harmful blue light** in the 400 – 455nm wavelength spectrum.

ZEISS BlueGuard lens

Blue-light blocking lenses, available in 1.6 to 1.74 index



Previous generation
ZEISS blue-light
blocking lens



ZEISS
BlueGuard
lens material

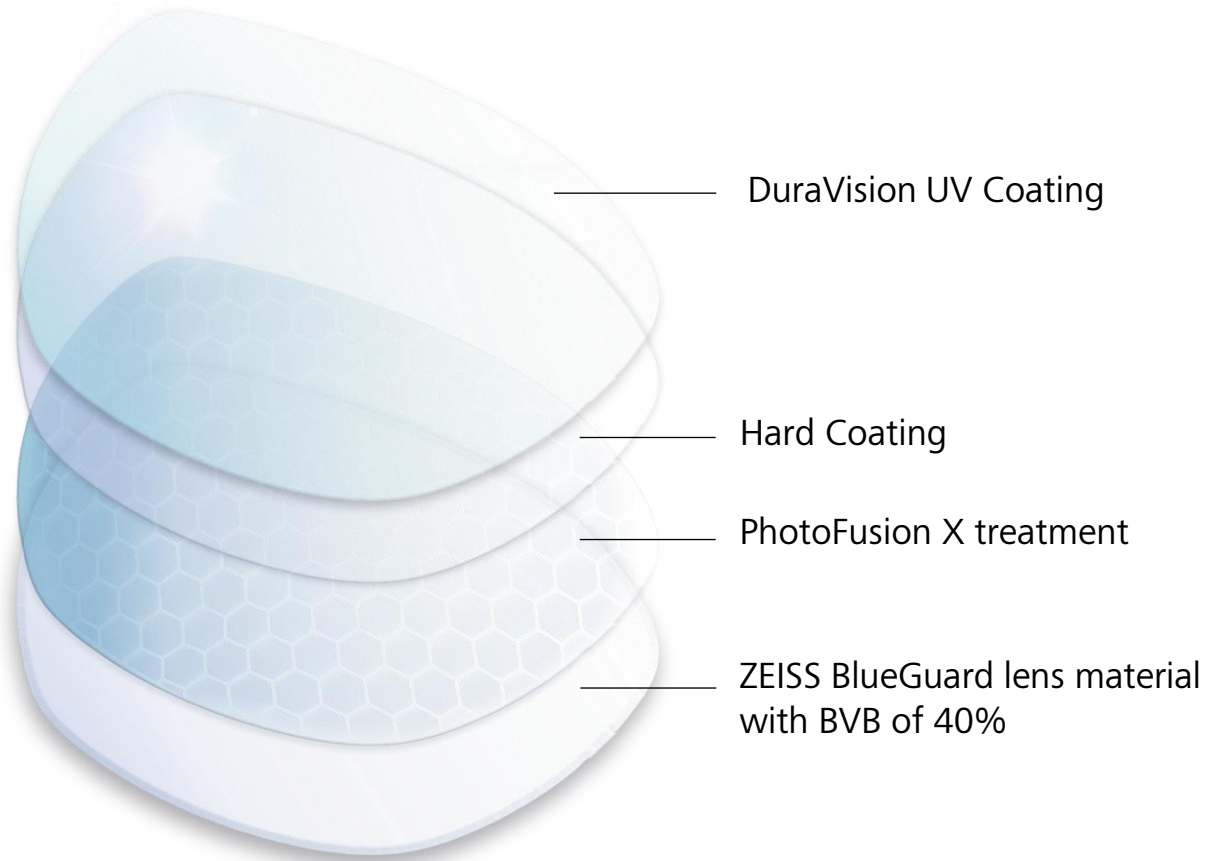
ZEISS BlueGuard lens material
delivering excellent clarity & aesthetics
while reducing unwanted lens
reflections.

(In low light conditions, the screen reflections may be even more visible)

*Consumer preference test with N= 100 spectacle lens wearers in Germany in September 2020 by external market research institute.

ZEISS PhotoFusion X lens

Photochromatic lenses, available in 1.6 to 1.74 index



- **ZEISS PhotoFusion X with BlueGuard** comes with full UV and potentially harmful blue-light protection.
- All-in-one lens combination without the additional need to top-up for blue light protection.
- Latest generation blocks indoor potentially harmful blue-violet light by **up to 50% in the clear state**, and up to 94% outdoors when fully activated.

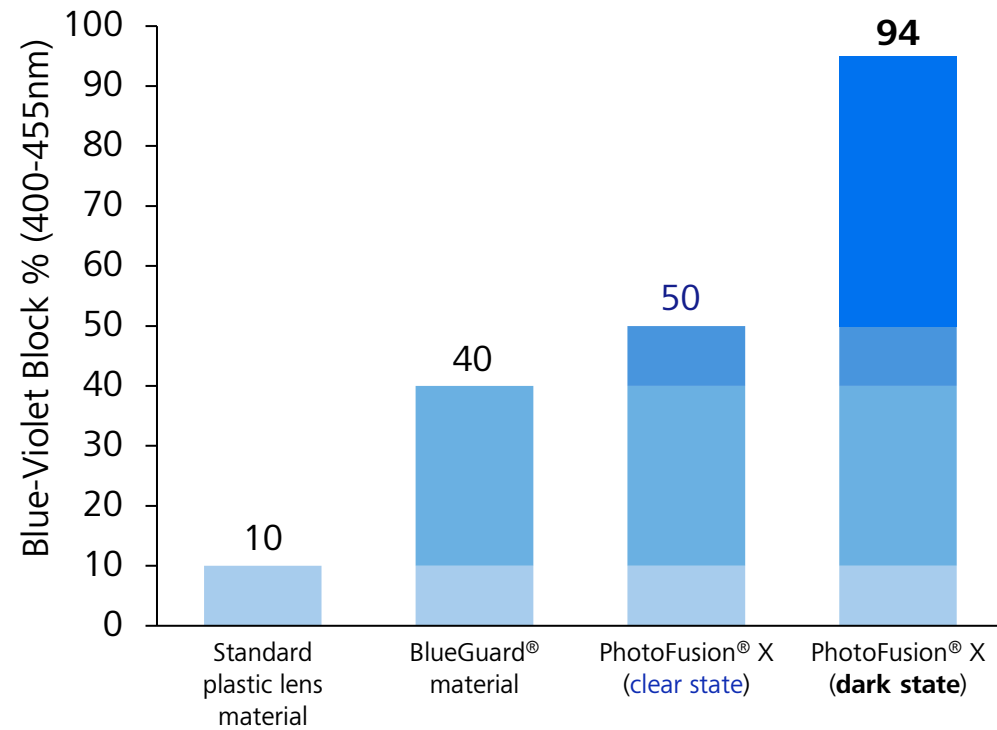
Analyses by Technology and Innovation, Carl Zeiss Vision GmbH, DE 2021. Based on Blue Violet Block (BVB) metric that quantifies the amount of light 400-455 nm blocked by the lens in 1.6 grey and brown HC only. BVB indoor calculation for 1.60 grey & extra Grey = 50%; BVB outdoors PFX Brown is 96% - 94% PFX Extra Grey is 94% or more, PFX Grey 92-94%.

ZEISS PhotoFusion X lens

Photochromatic lenses, available in 1.6 to 1.74 index



Potentially Harmful Blue Light Blocked by Lens



Blue Violet Block % (BVB) values. "Standard lens material" is a typical 1.5 HC only lens, BlueGuard® and PhotoFusion® X Extra Grey values are for 1.6 HC only lenses.



ZEISS PhotoFusion X lens

Photochromatic lenses, available in 1.6 to 1.74 index



Protection. Performance. Perfection.

Now available in 7 colours



Grey



Extra Grey



Black



Brown



Pioneer



Blue

*not available in 1.74 index

Why recommend ZEISS?

Professionalism & **workflows**

Part II : VTS Enablement

Why recommend ZEISS?

Professionalism & Workflows



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ZEISS Vision Technology Solutions (VTS) Enablement

Consumer research

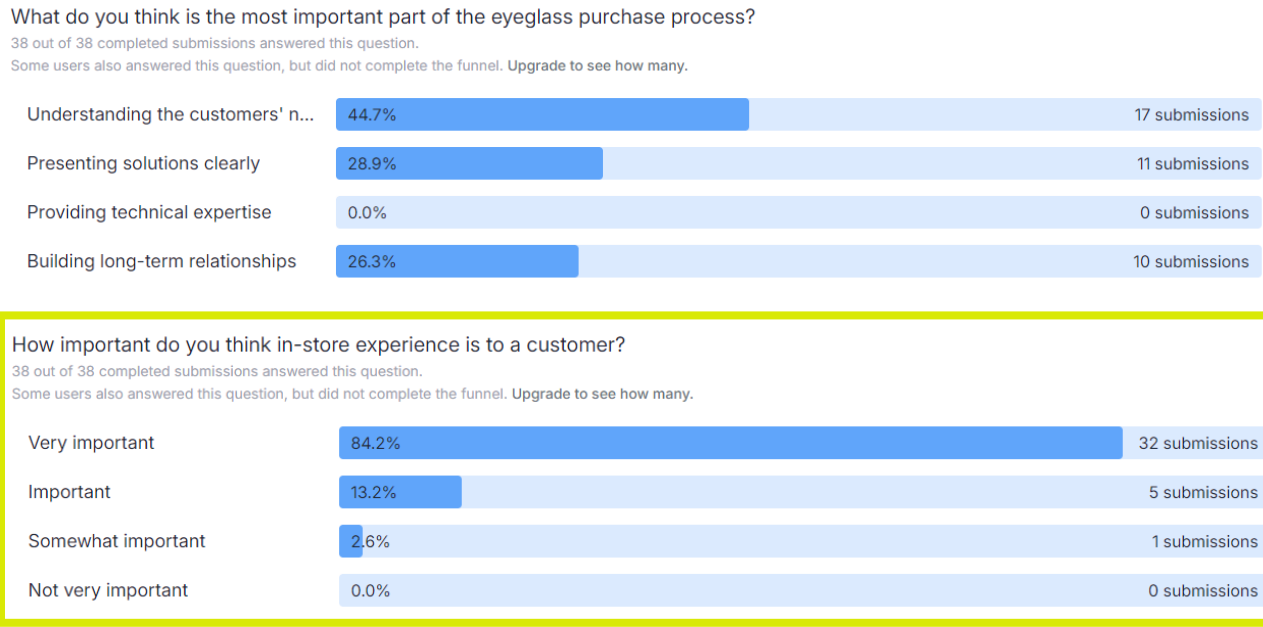


Consumers tend to be loyal to their ECPs



Based on consumer research study by external agency BOLT for 2023.

ECPs understand the value of long-term consumer relationships



Based on personality quiz for ECPs in 2024 (What is your consultation style?)



Digital centration is the key to enhance the lens performance as well as the service quality, boosting the professionalism of eye care practitioners.

43% of patients are looking for restoration of natural vision, eye health and individualized treatment.¹

69% of patients would prefer going to a practice using digital consultation technology over a practice using a common service.²

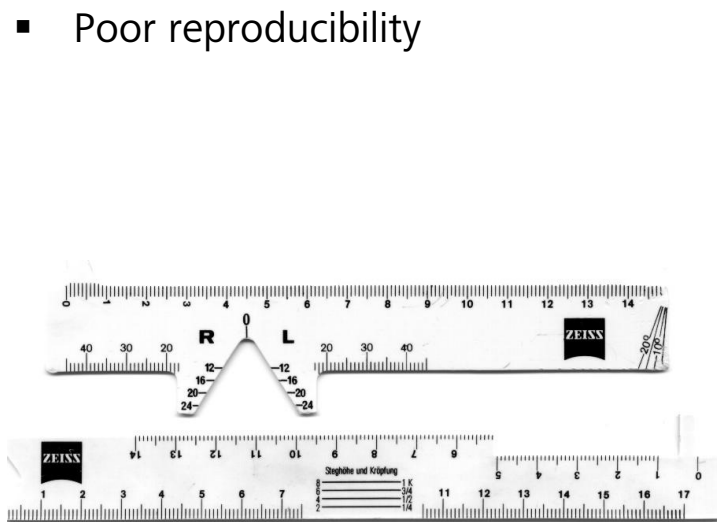
01 | Introduction

Limitations of traditional centration methods



Disadvantages of manual centration

- Training & experience are crucial in delivering consistent and accurate results.
- Results are often subject to skill-dependence of the optometrist / optician.
- Poor reproducibility



Disadvantage of pupillometer

- Does not consider the position of the chosen frame in relation to the patient's eyes.
- Each frame can produce variances in the final position-of-wear (Different monocular PD / Segment Height etc.).



Why recommend ZEISS?

Professionalism & Workflows



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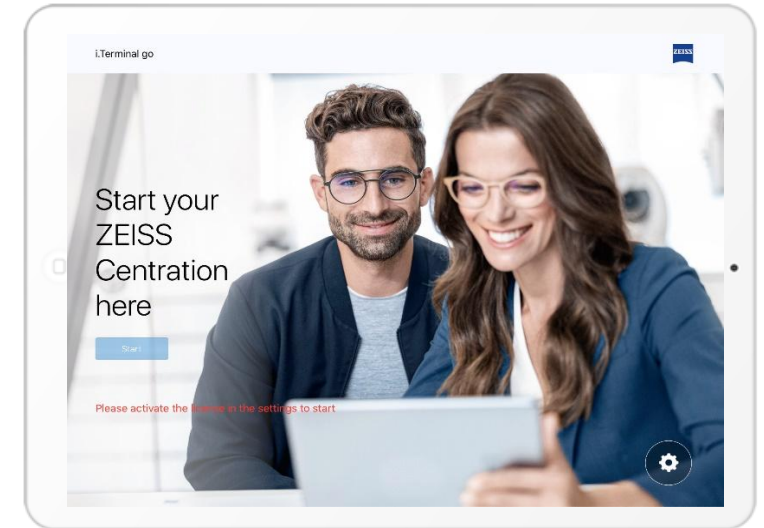
02 | Product Overview

At a glance



Digital centration

via the Apple iPad &
supported by the Centration
Frame-Clip



Intuitive standalone native iOS application
without the need for Internet connection

02 | Product Overview

Advantages of i.Terminal go



Easy to use & train

- Intuitive user interface which supports you and prevents errors.
- All you need is the Apple iPad and the Centration Frame-Clip



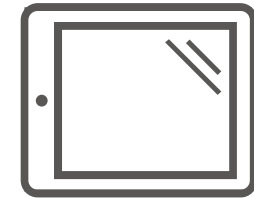
Compensation

The impact of eye convergence and accommodation is mathematically compensated.



Rotation & tilt control

- The system automatically indicates if head rotation & tilt are good.
- Head contour for orientation appears in **green** to prompt practitioners when measurement is taken.
- Measurement is both simple and easy.



No bulky accessories

- Smaller and lighter than a standard pupillometer.
- No other bulky accessory / camera / device / technical equipment required.

02 | Product Overview

Captured centration data



Centration

i.Terminal go



Centration

	PD	x	FH	SH
R	30.7	20.3	26.6	
L	30.5	20.0	24.5	
Total	61.2			

	BVD	Framefit	Diameter
R	12.0	0.0	60E
L	12.0	0.0	60E

Frame Data

Panto	Wrap	A	B	DBL
6.2°	5.0°	46.0	41.1	21.0

Centration Rule: Primary Position
Material: Plastic
Lens type: Digital Digital

Redo < >

Centration Data

PD Interpupillary distance (z)

FH Fitting Height

SH Segment Height (for Bifocals)

A Horizontal boxed lens size

B Vertical boxed lens size

DBL Distance Between the Lenses

BVD Back Vertex Distance

Panto Pantoscopic Tilt: Angle of the lenses to the horizontal eye axis

Wrap Wrap / Bow Angle: Horizontal angle of the lens plane

All necessary data can be measured with ZEISS i.Terminal go

Why recommend ZEISS?

Professionalism & Workflows



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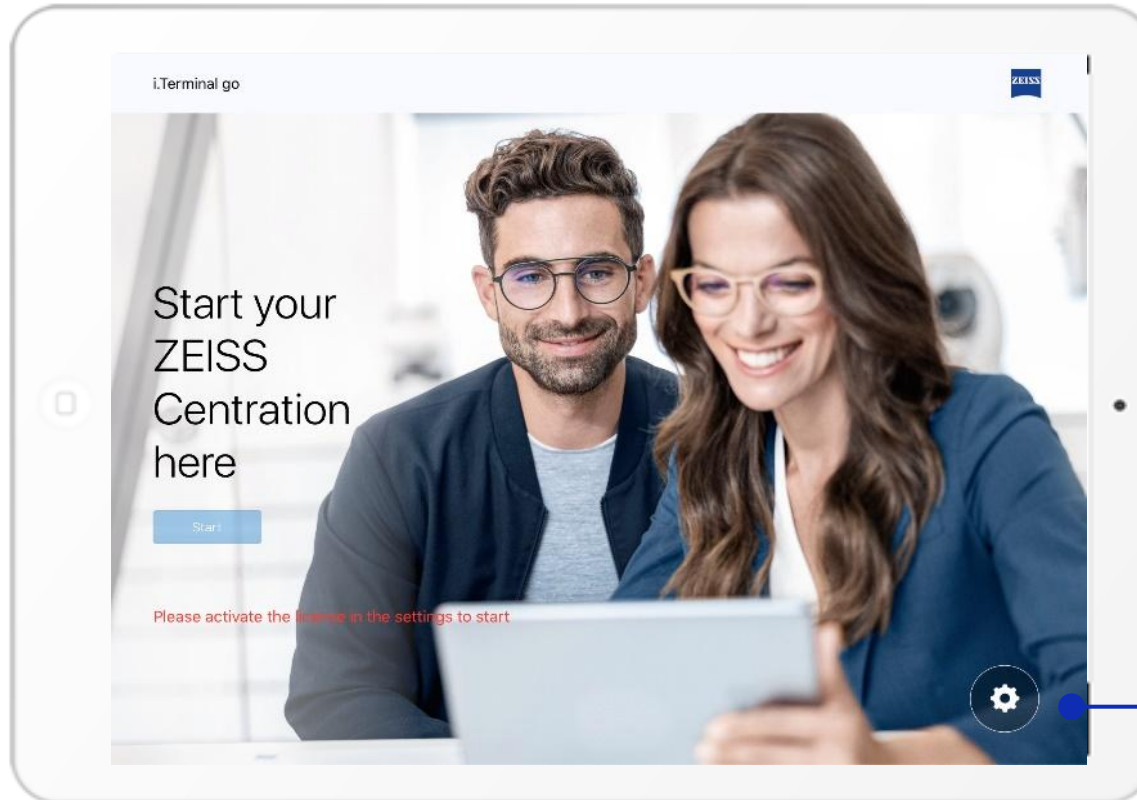
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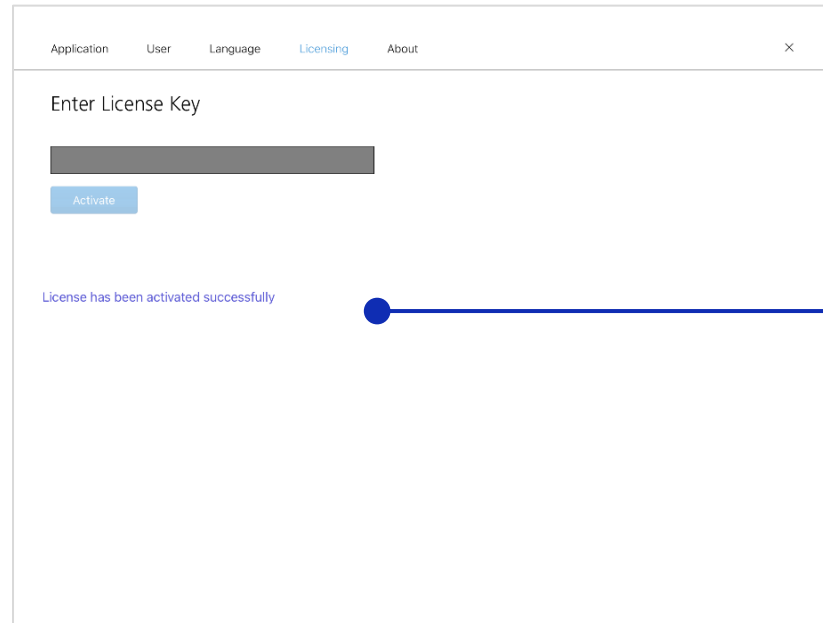
Modify settings before use



ZEISS i.Terminal go can be customized to your personal needs via Settings.

03 | Preconditions

After installation (by I.T. department)

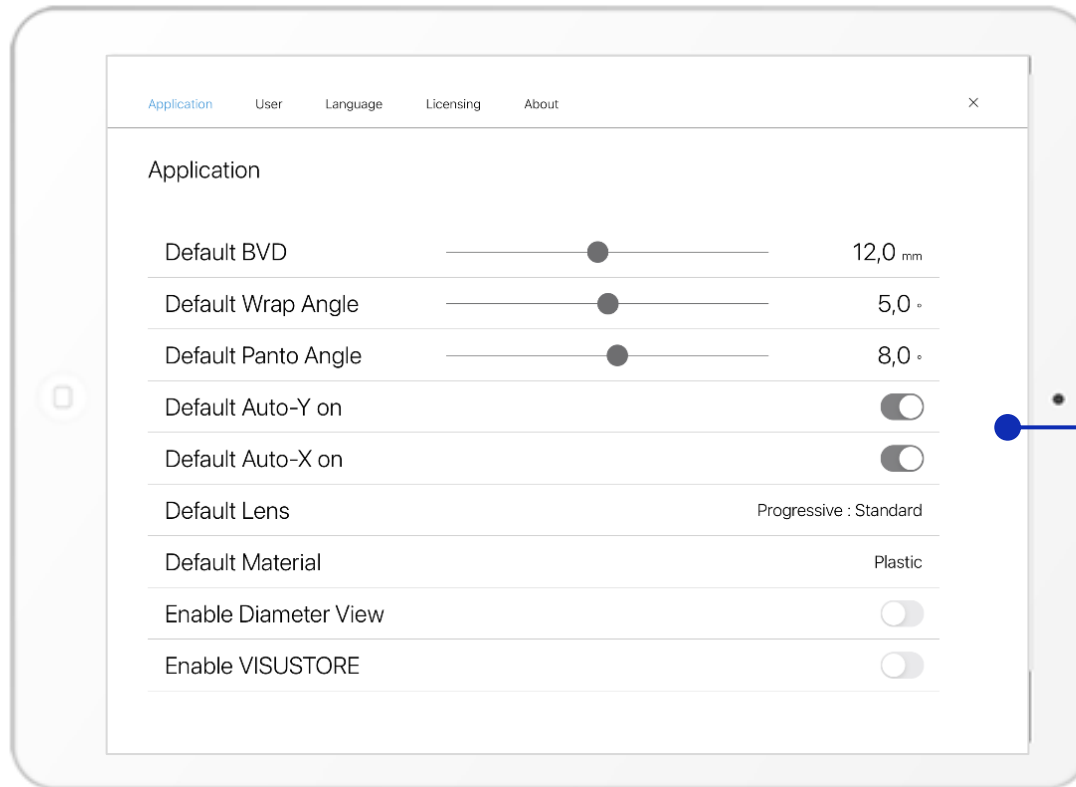


In order to activate the product, please enter the activation code from the license key and press "Activate".

- As the ZEISS i.Terminal go is an offline application, it has no online license mechanism.
- **Each license key can only be activated once and cannot be used again.**
- When the application is uninstalled and subsequently installed on the identical (or different) iPad, a new license key is required.

03 | Preconditions

Set-up by Eye Care Practitioners (ECPs)



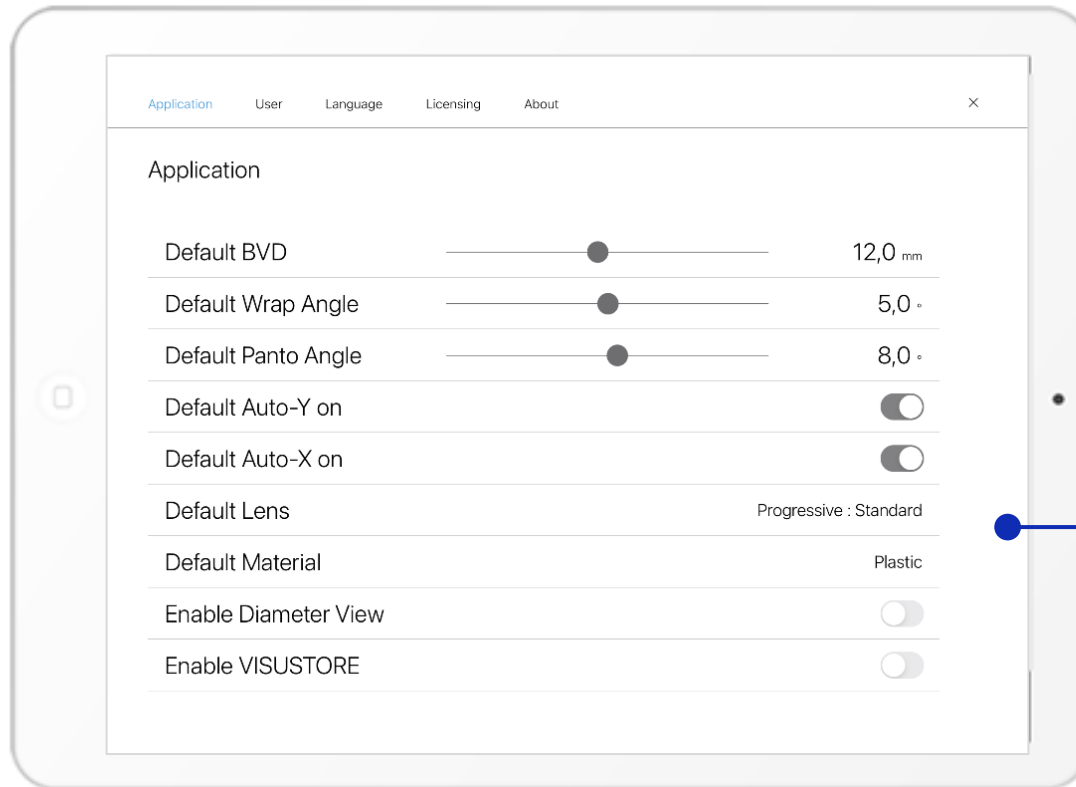
Native application supports numerous options to adapt to practitioner's preferences.

IMPORTANT: Before use, ensure both “Default Auto-Y on” and “Default Auto-X on” are enabled.

(This is to ensure captured centration data is mathematically compensated for head rotation on both the horizontal & vertical plane.)

03 | Preconditions

Set-up by Eye Care Practitioners (ECPs)



****Recommended: Select
Progressive: Variable
as the Default Lens of choice**

Why recommend ZEISS?

Professionalism & Workflows



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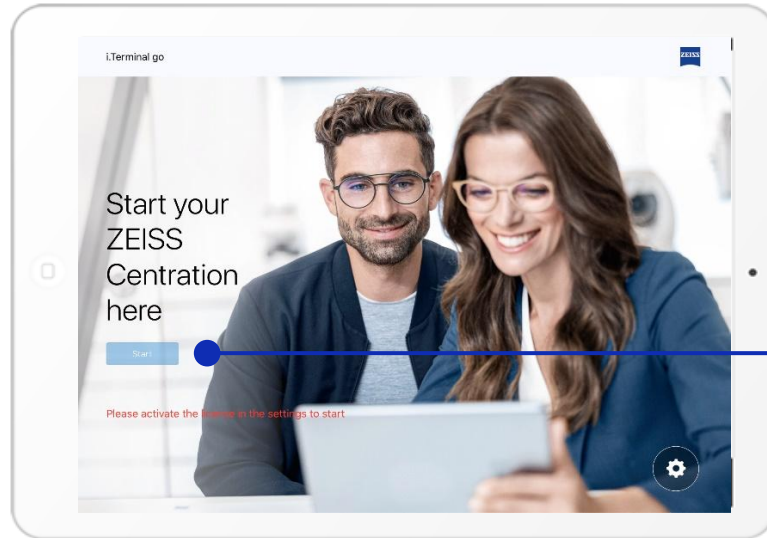
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04 | Image Capture

Taking a new measurement



Click on "Start" to begin the measurement directly.

"I'm going to help you take some measurements with the ZEISS i.Terminal go.

*This device precisely measures how your chosen frame is positioned in relation to your eyes, and these measurements will help to **unlock the full potential of the ZEISS Light 3Dv / 3D lenses** for optimal vision.*

This will only take a few minutes."

04 | Image Capture

Preparation of the Frame



Make sure the chosen frame is anatomically well adjusted.

Open the clips and position the frame inside the Centration Frame-Clip.

Ask your patient to put on the frame as they usually would do.

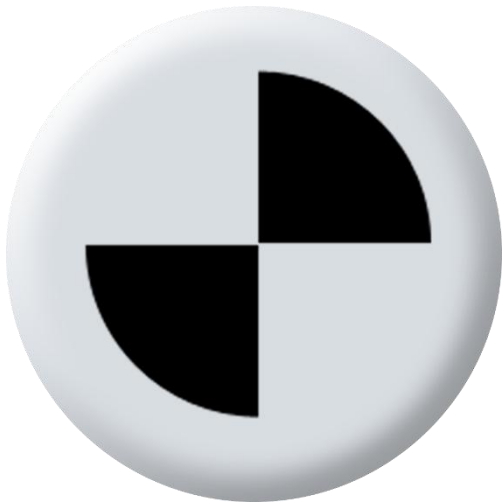
Check that the Centration Frame-Clip is positioned centrally on the frame.

04 | Image Capture

Calibration marks in detail



The high-contrast calibration mark allows i.Terminal go to recognize the very exact position of the frame.



To ensure that the calibration marks are working properly,



Check regularly that the markers are still sharp & visible.



Do not trace them with a felt tip pen as this may compromise its functionality.



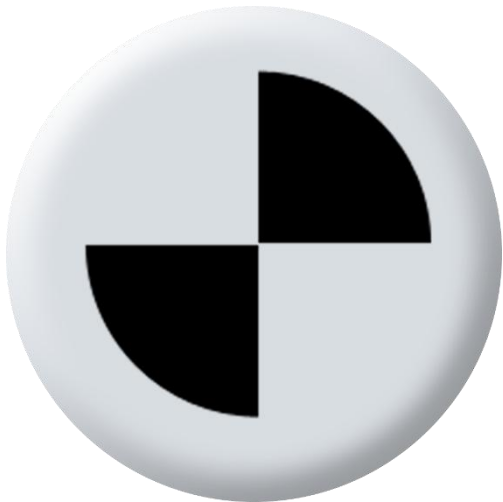
Ensure the image capture is done in good lighting conditions.

04 | Image Capture

Calibration marks in detail



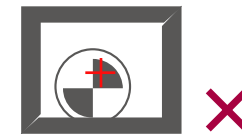
The high-contrast calibration mark allows i.Terminal go to recognize the very exact position of the frame.



To ensure that the calibration marks are working properly,

Ensure that the black and white markings on the Centration Frame-Clip are not at the edge of the photo.

Otherwise, it will not be possible to evaluate them.



04 | Image Capture

Patient Positioning

Before the image capture, ensure you and your customer are properly positioned.

Your patient should adopt their natural and relaxed body posture*.

Use terms like:

Natural – relaxed – habitual

Avoid words such as:
Accurate – stiff – special

*Recommended to take measurements while the patient is standing.

To have good lighting conditions:

- Ensure sufficient brightness
- Avoid direct overhead light sources
- Do not position the patient against a window



Step-by-step guide:

- 1) **Position yourself at arm's length in front of the patient (~ 40cm)**
- 2) **Instruct the patient to look at the camera on the iPad**
- 3) **Hold the iPad at the same height as the patient's eyes, matching the head contour.**
- 4) **During the measurement, do not tilt or twist the iPad.**

04 | Image Capture

Taking the front picture



Make sure that the head contour includes the customer's head, and the frames are aligned.

Adjust your distance to the customer, and do not tilt the iPad.



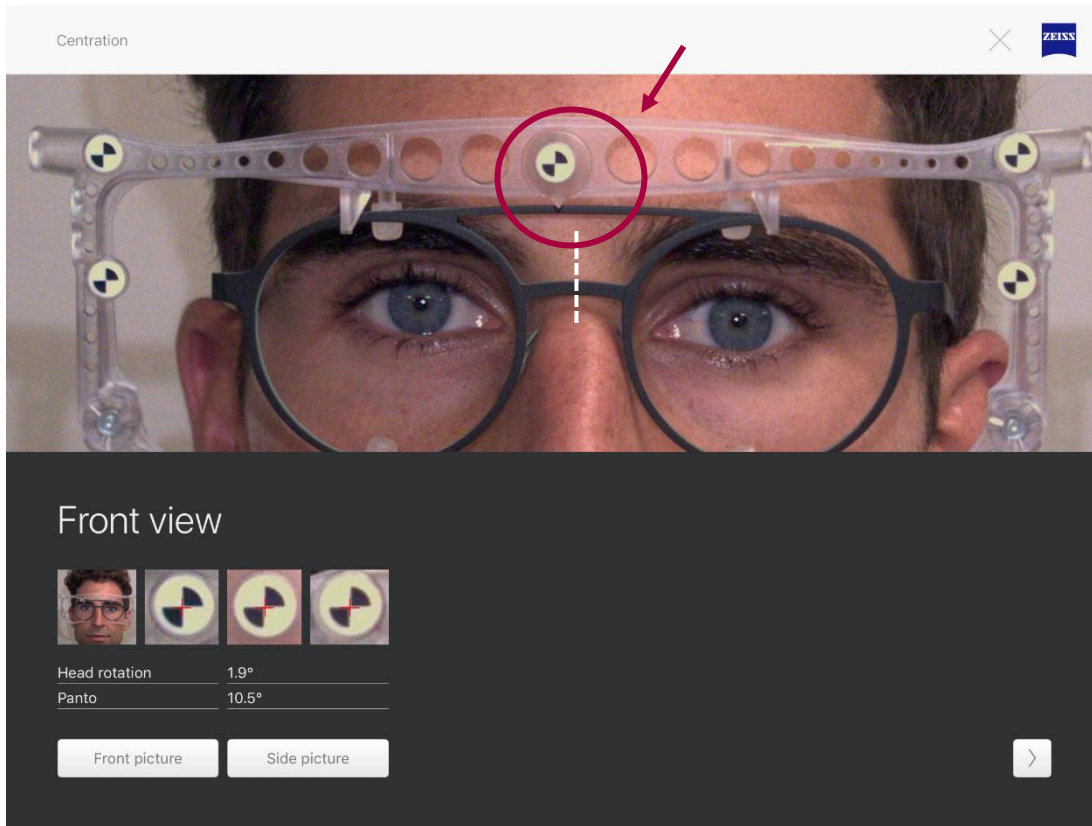
Match the black-&-white virtual markers on the iPad to the physical markers on the Centration Frame-Clip to easily find the correct distance to the patient.

The virtual markers displayed on the application should be positioned **close** to the actual physical markers but need not be overlaid exactly – as it is intended to be an indicator for better positioning.



04 | Image Capture

Examples – Scenario 1

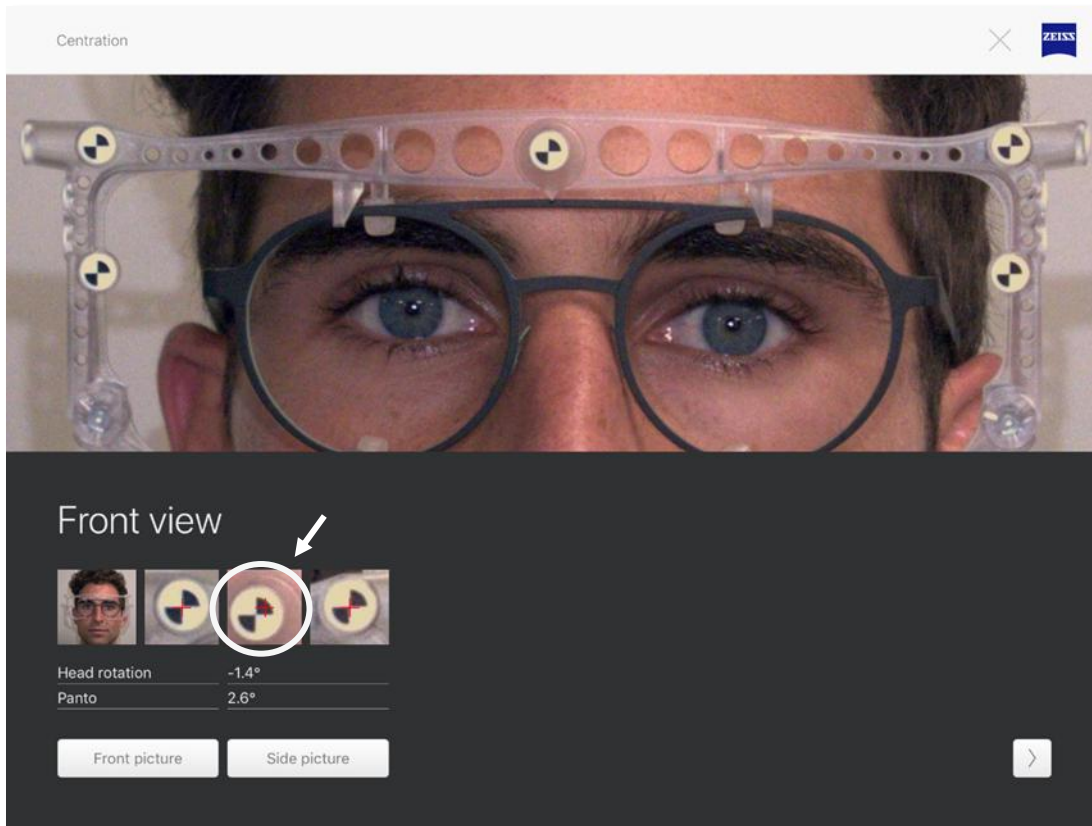


Can this image capture be used? **✗**

NO !
Calibration Frame-Clip is displaced.

04 | Image Capture

Examples – Scenario 2



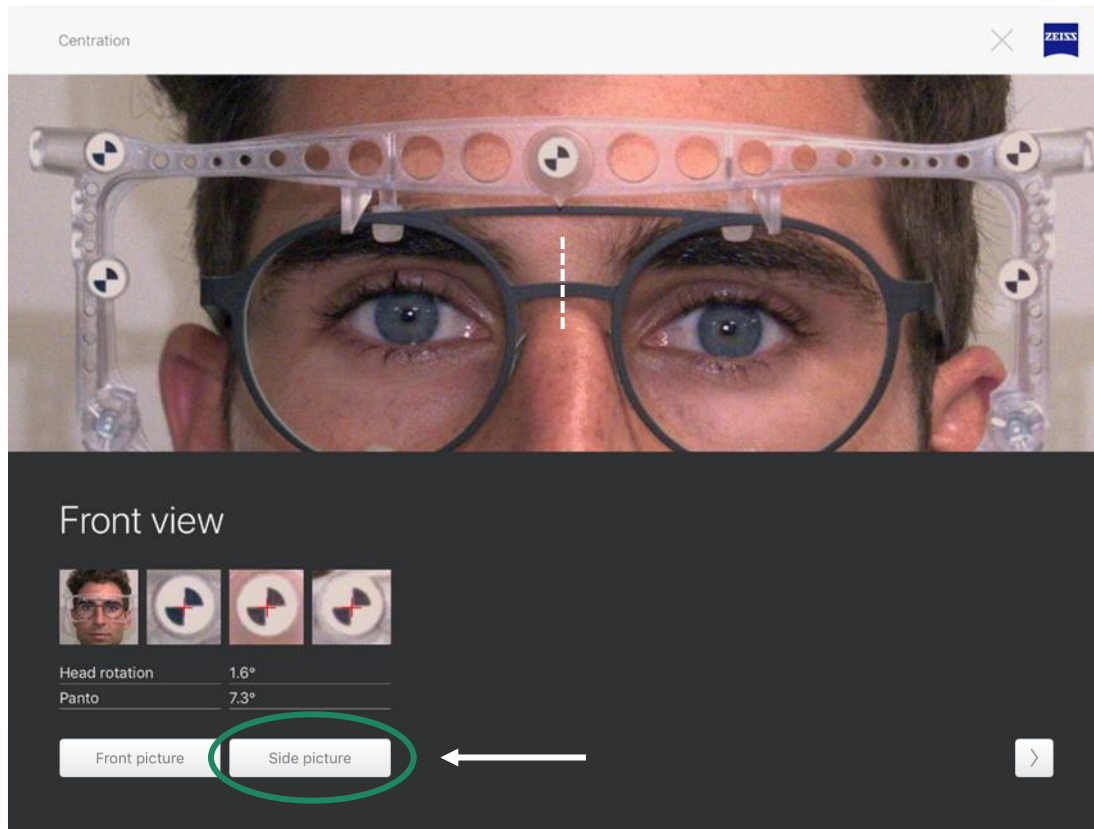
Can this image capture be used? ✗

NO !

This calibration mark is not identified correctly.

04 | Image Capture

Examples – Scenario 3



Can this image capture be used? ✓

YES !

The Side picture* can now be taken.

***Capturing the Side picture is *highly recommended* as the centration data obtained will be far more accurate.**
(However, if faced with time constraint – it can still be omitted.)

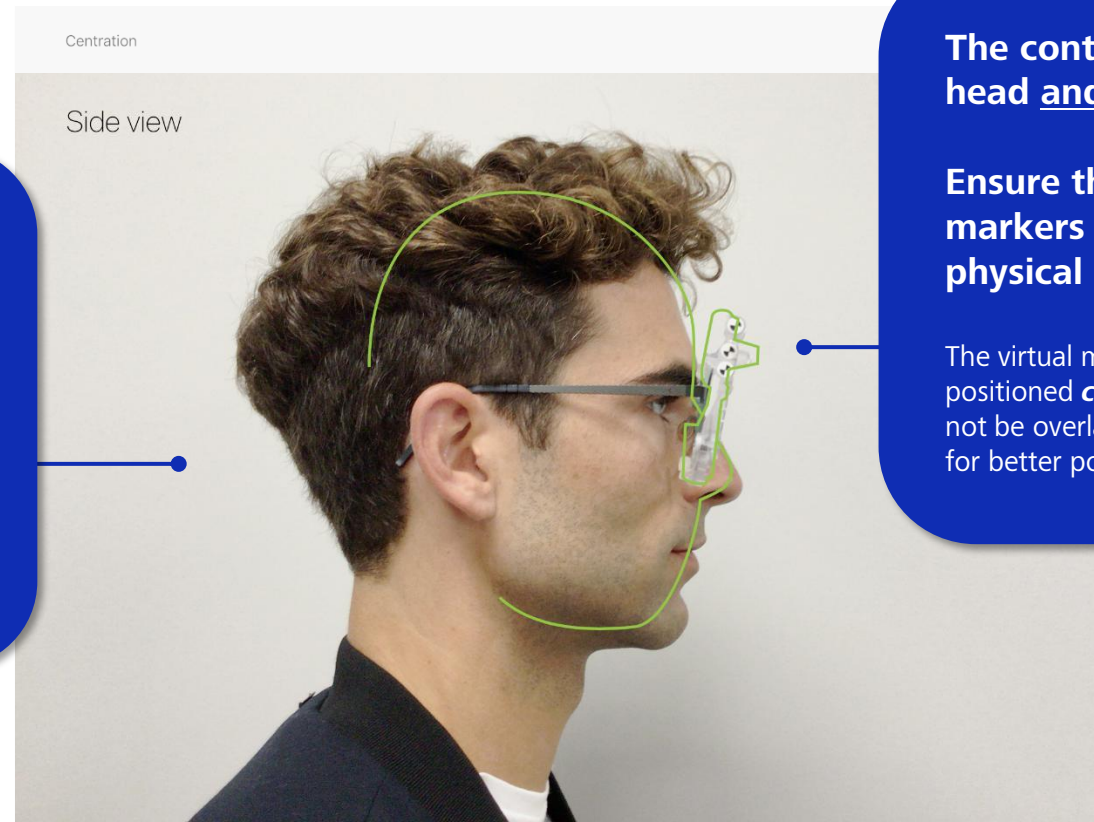
04 | Image Capture

Taking the side picture



The practitioner should move to the right side of the patient and position themselves perpendicular to the patient.

Again, adjust your distance to the customer, and do not tilt the iPad.



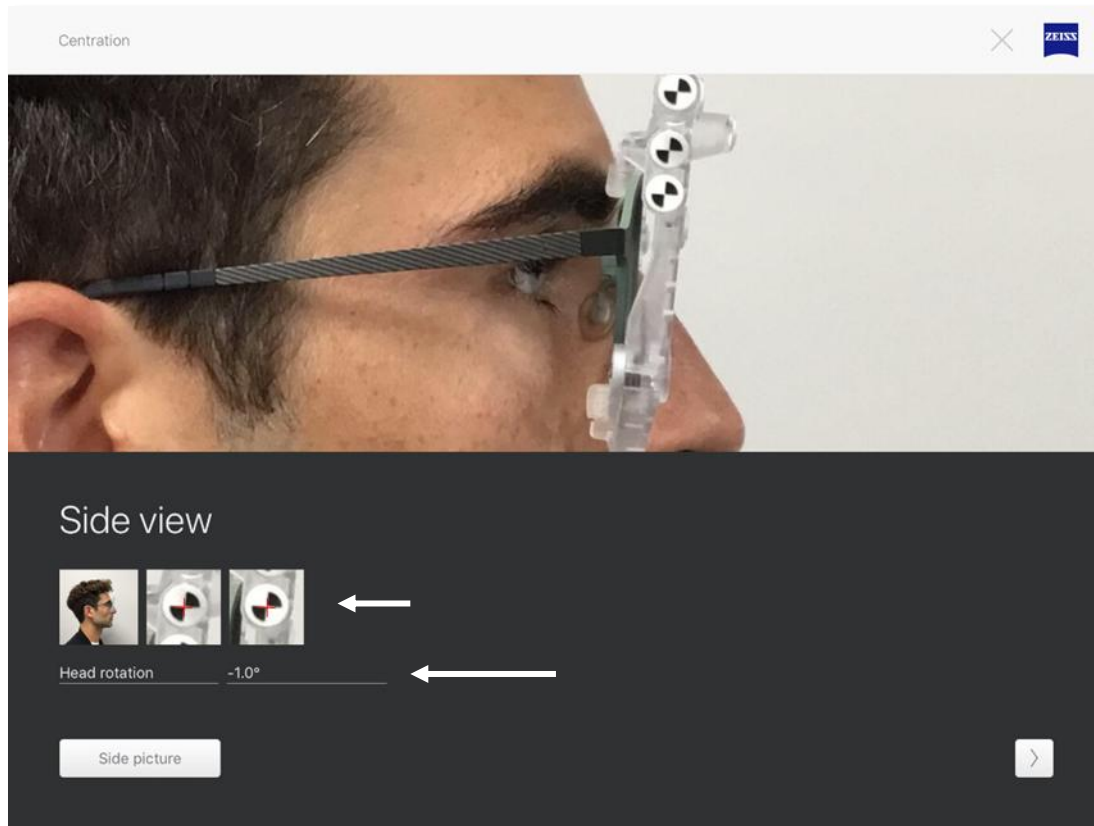
The contour must include both patient's head and the Centration Frame-Clip.

Ensure the small virtual calibration markers are *closely aligned* to the physical markers.

The virtual markers displayed on the application should be positioned **close** to the actual physical markers but need not be overlaid exactly – as it is intended to be an indicator for better positioning.

04 | Image Capture

Examples – Scenario 4



Can this image capture be used? ✓

YES !

- ✓ Head rotation less than 3°
- ✓ Correct alignment between the red cross and the high-contrast calibration markers

Good head profile with little head rotation.

Why recommend ZEISS?

Professionalism & Workflows



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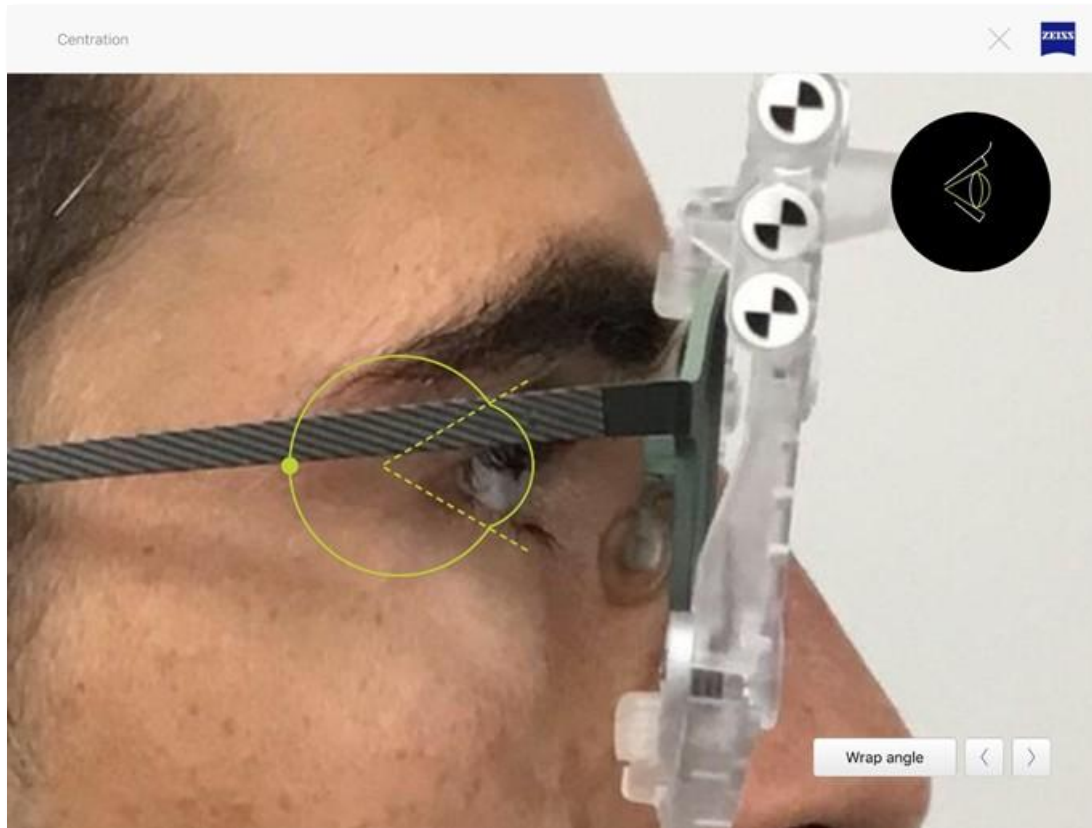
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05 | Generating the centration data

Back Vertex Distance and Wrap Angle (only if Side picture is taken)



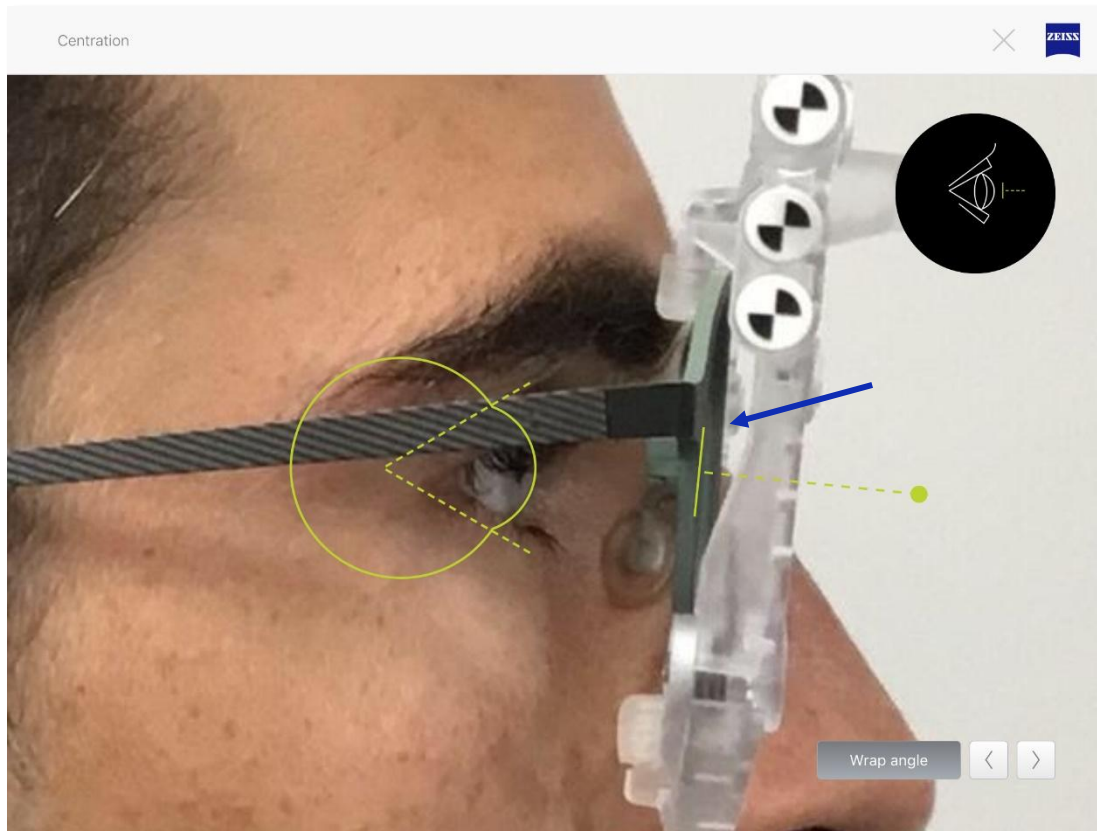
Back Vertex Distance:

Adjust the rounded edge of the eyeball to the patient's cornea

If patient's cornea is not visible, and you are unable to visualize its location, measure it manually.

05 | Generating the centration data

Back Vertex Distance and Wrap Angle (only if Side picture is taken)



Back Vertex Distance:

Adjust the rounded edge of the eyeball to the patient's cornea

If patient's cornea is not visible, and you are unable to visualize its location, measure it manually.

Wrap Angle:

Position the yellow T-shaped marking on the front side of the outer rim of the frames, in line with the patient's cornea.

05 | Generating the centration data

Pupillary Distance and Fitting Height

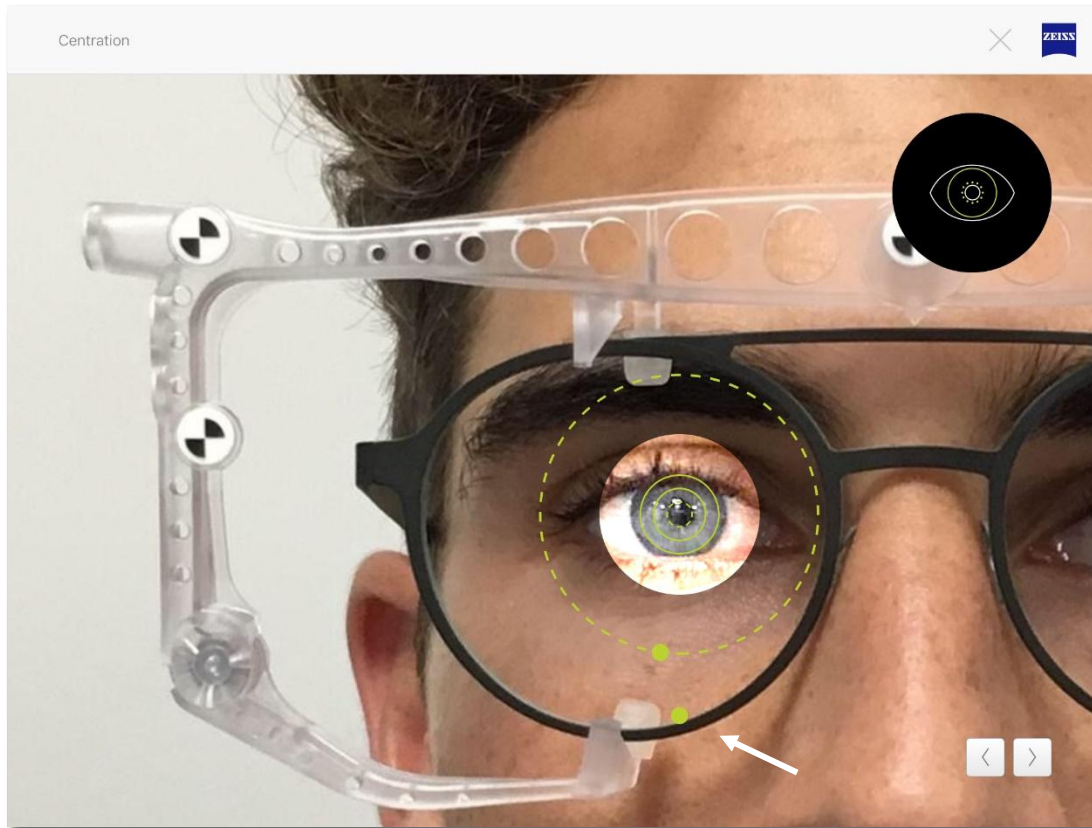


Pupillary Distance (PD / z) :

Adjust the box dimensions of the lenses to inner rim of the frame

05 | Generating the centration data

Pupillary Distance and Fitting Height



Pupillary Distance (PD / z) :

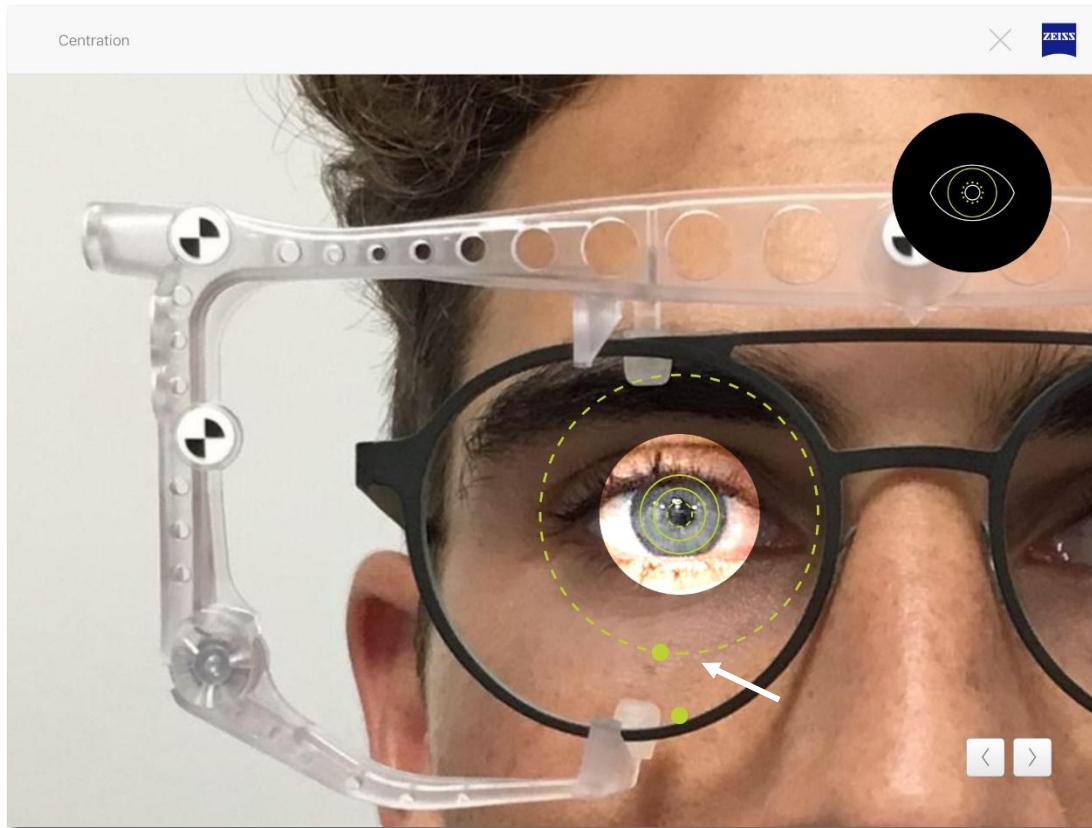
Adjust the box dimensions of the lenses to inner rim of the frame

Fitting height (FH / y) :

Use the lower yellow button to re-position the dotted circle towards the patient's pupil.

05 | Generating the centration data

Pupillary Distance and Fitting Height



Pupillary Distance (PD / z) :

Adjust the box dimensions of the lenses to inner rim of the frame

Fitting Height (FH / y) :

Use the lower yellow button to re-position the dotted circle towards the patient's pupil.

The contrast of the picture can be further increased by rotating the upper yellow button clockwise.

(akin to using a pen torch *virtually*)

05 | Generating the centration data

Final centration adjustments

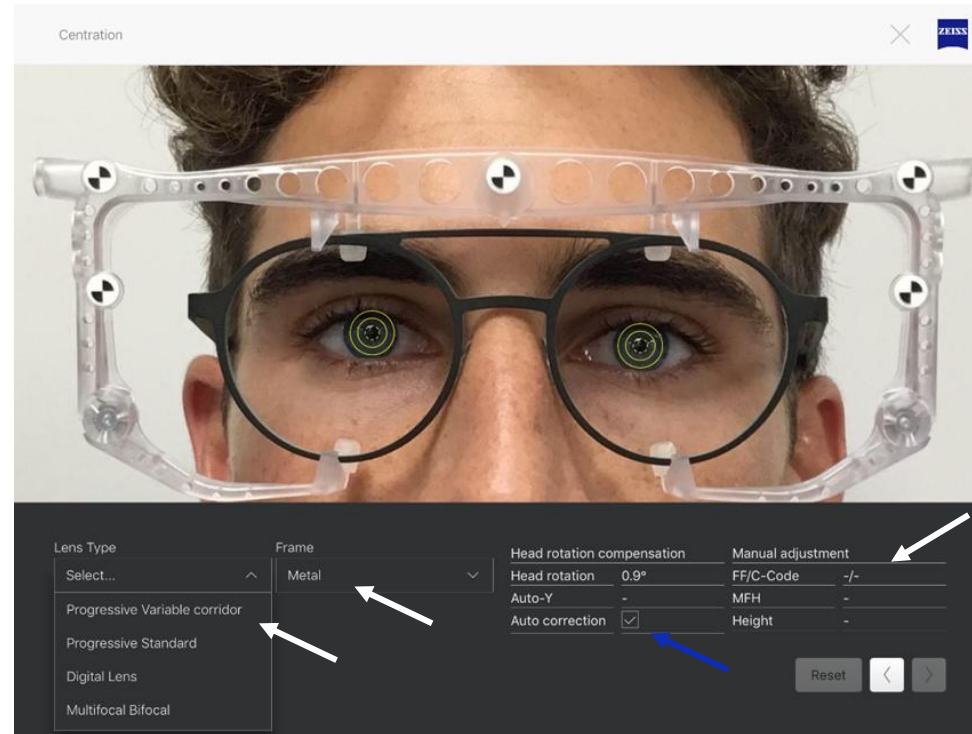


Select the Lens type to prescribe

- Progressive Variable corridor
- Progressive Standard

Select the correct Frame Type

- Plastic
- Metal
- Groove mount (aka. Rimlon)
- Drill hole (aka. Rimless)



Corridor length of the progressive lenses will be shown here.

FF = Frame Eit Value

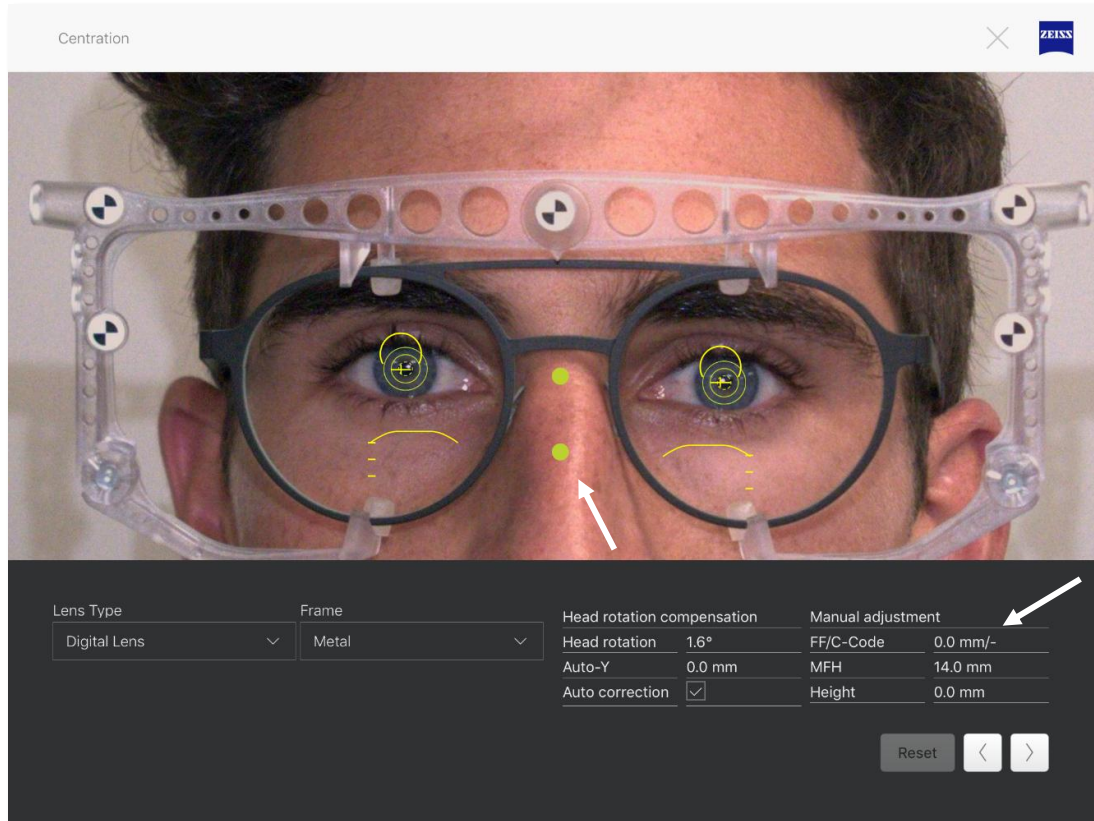
Alterations to the progression length can be made here if necessary.

Auto correction compensates for a slight rotation of the patient's head (if checkbox is selected.)

likewise if Default Auto-x is enabled.

05 | Generating the centration data

Final centration adjustments

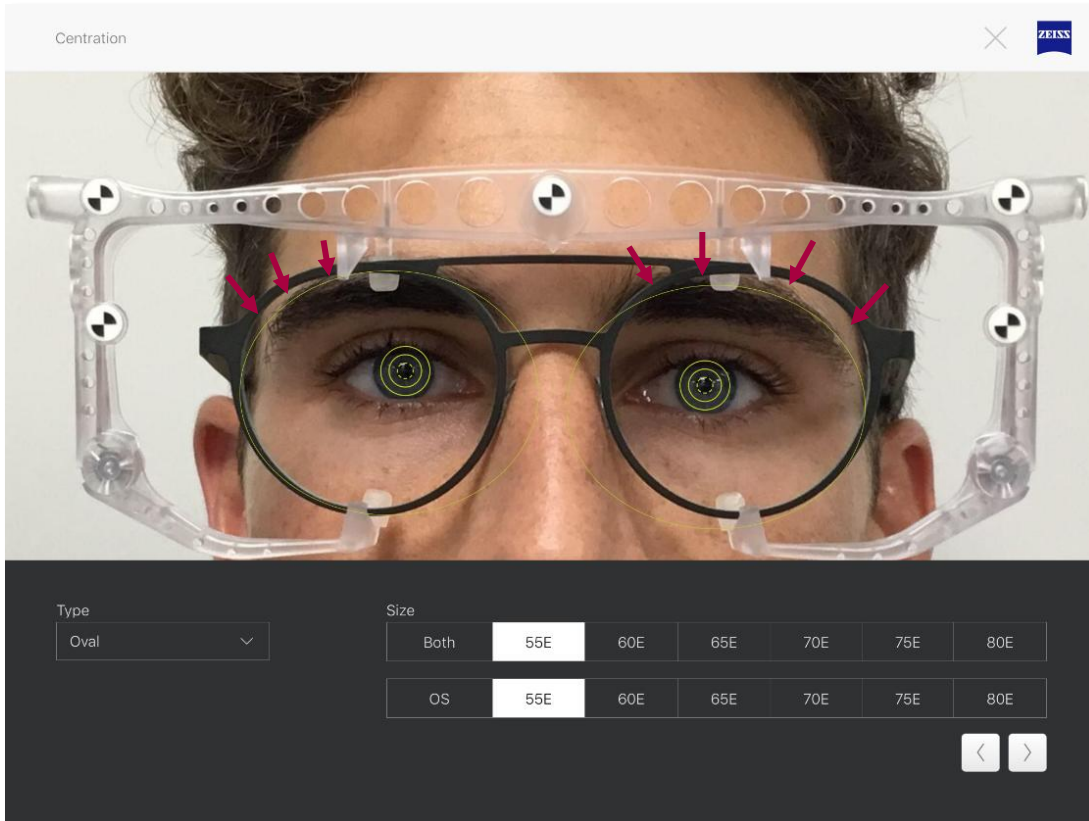


For progressive lenses,

- ✓ Centration cross will appear on the pupil centre of the patient.
- ✓ Centration cross may be shifted sideways slightly due to compensation because of measured head rotation.
- ✓ For Progressive Variable Corridor, the new Frame Eit Value (FF) will automatically be reflected if the lower yellow button is adjusted vertically.

05 | Generating the centration data

Lens diameter estimations



(As shown here, 55E is *too small* for customer's Frame.)

For progressive lenses,

- ✓ Default shape is always **Oval**.
- ✓ Select the lens diameter that is large enough to prevent unwanted cut-off(s) and **remember the Size***.

*Needed after Frame Tracing during VISUSTORE order processing.

Why recommend ZEISS?

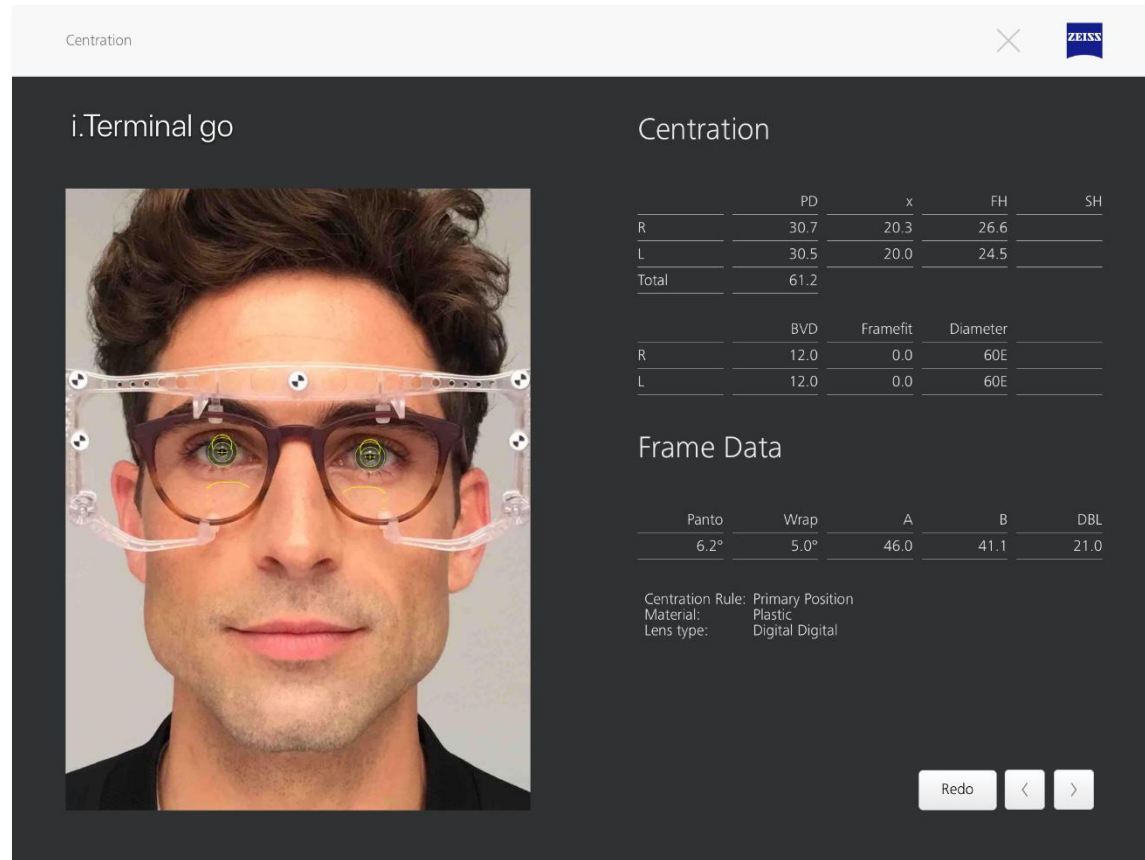
Professionalism & Workflows



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-

06 | Data Output

Final Review page



- ✓ Provides all important Centration Data information
- ✓ ECP can decide if they want to screenshot this page on their iPad (if needed)

i.Terminal go does **not** store any centration data locally on the device.

06 | Data Output

Reports and Ordering page



Identical centration data can be directly sent to VISUSTORE with the click of this button.

A separate pop-up notification within the application will inform if it is successful.

Click here to save an auto-generated Report by the i.Terminal go application

Complete with all prior centration data from the Final Review page from earlier.

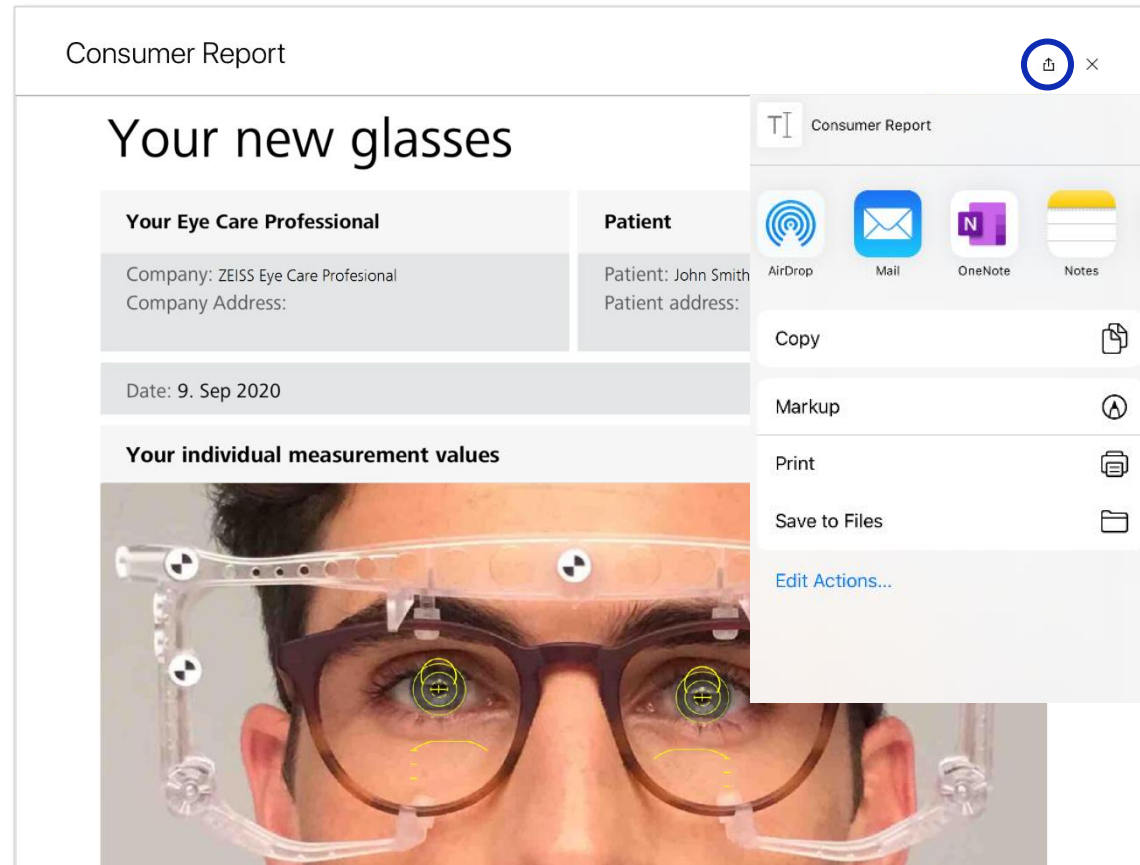
An Order ID will be auto-generated after the Incomplete order* is sent to VISUSTORE.

*Order is considered 'Incomplete' as it has not been processed for lens production yet, until the order has been directly processed through VISUSTORE.

Changes to the centration data can still be made directly on the ordering platform.

06 | Data Output

Open Consumer Report page



The auto-generated Consumer Report can be sent to nearby devices through multiple options.

- Email
- Printer
- AirDrop etc.

06 | Data Output

Reports and Ordering page



Centration

Reports and Ordering



Send to
VISUSTORE



Open Consumer
Report

Patient



ID (Auto generated)
2020-09-21_C38

Enter patient name Optional

<

Done

Clicking on 'Done' will return the practitioner to the home page of the application.

Current centration data will not be stored on the device locally.

A separate notification will be prompted within the application warning the practitioner that the current centration data cannot be retrieved after navigating away from this page.

Why recommend ZEISS?

Professionalism & Workflows



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07 | FAQ + Hands-on Experience

Frequently asked questions



1. What are the key criterias to be considered when doing an image capture?

- ✓ Distance 40 to 50cm
- ✓ iPad is lifted to the same height as the patient's eyes
- ✓ Ideally both the patient and the practitioner should be standing in a place with sufficient brightness.
- ✓ iPad is held perpendicular to the floor and not tilted or twisted in any way.
- ✓ Patient's head is closely aligned with the head contour.

2. What needs to be checked after the image capture?

- ✓ Are the black and white calibration markers correctly detected?
- ✓ Is the head rotation smaller than 3° ?
- ✓ Is the pantoscopic tilt acceptable?

3. Why is it important to define the lens type as Progressive Lens at the end of the workflow?

- ✓ Depending on the Lens Type, different centration rules are applied to determine the correct position-of-wear.



Hands-on Experience

Feel free to ask any questions you have during this period and we will address them individually.



Seeing beyond