

# All-day comfort for today's busy eyes



## **ZEISS SmartLife Progressive Lenses**



Today's mobile technology and on-the-move lifestyles are stressing our eyes. Frequent gaze changes to and from smart devices can lead to eyestrain. ZEISS SmartLife lenses are specially designed to support quick and easy peripheral vision for all-day comfort.

[www.zeiss.com/pro/SmartLife](http://www.zeiss.com/pro/SmartLife)



Seeing beyond

# Always connected. On the move. Our eyes have never been busier.

With digital devices being an integral part of our lives, we have access to more people, information and things. The ability to connect with the world lies in the palm of our hand and this has become **the new normal**.

While being constantly connected can be a blessing, it also means that we rarely switch off our devices – or rest our eyes.

As smart devices and apps have evolved so has the way we interact with them causing not only our screen time to increase but also creating new forms of visual stress that our eyes are not able to keep pace with.

Frequent gaze changes at multiple focal points through portions of a lens that was not designed for this kind of

visual behavior – especially while we are moving – calls for a radically different type of lens design thinking.

After conducting extensive research on modern habits and visual behaviors, ZEISS has developed an entirely new lens portfolio to help all spectacle lens wearers keep up with the times.

The first-of-its-kind ZEISS SmartLife Lens Portfolio is a complete all-day lens offering to address the daily visual needs of modern consumers. Broad enough to cover all age-related needs, it is specifically designed for today's connected and fast-paced lifestyles. Why ZEISS SmartLife? Because although technology has evolved, our eyes haven't. Therefore our lenses must.



## Past

Our daily interactions were mainly analog.

We read mostly static print media (at a reading distance of approximately 40cm) and tended to concentrate on a single visual task for a longer period of time.



## Over the last 10 years

The advent of digital devices has affected our visual behavior in several ways:

- There is a significant increase in downward gazing.\*
- Our body posture has also changed while our eyes use new movement patterns.\*

\*Data on file.



## Today

Using digital devices while on the move means we now increasingly rely on our peripheral vision to safely navigate the physical world. Without lenses specially designed for today's dynamic visual behaviors, all the frequent gaze changes can leave our eyes tired and strained.

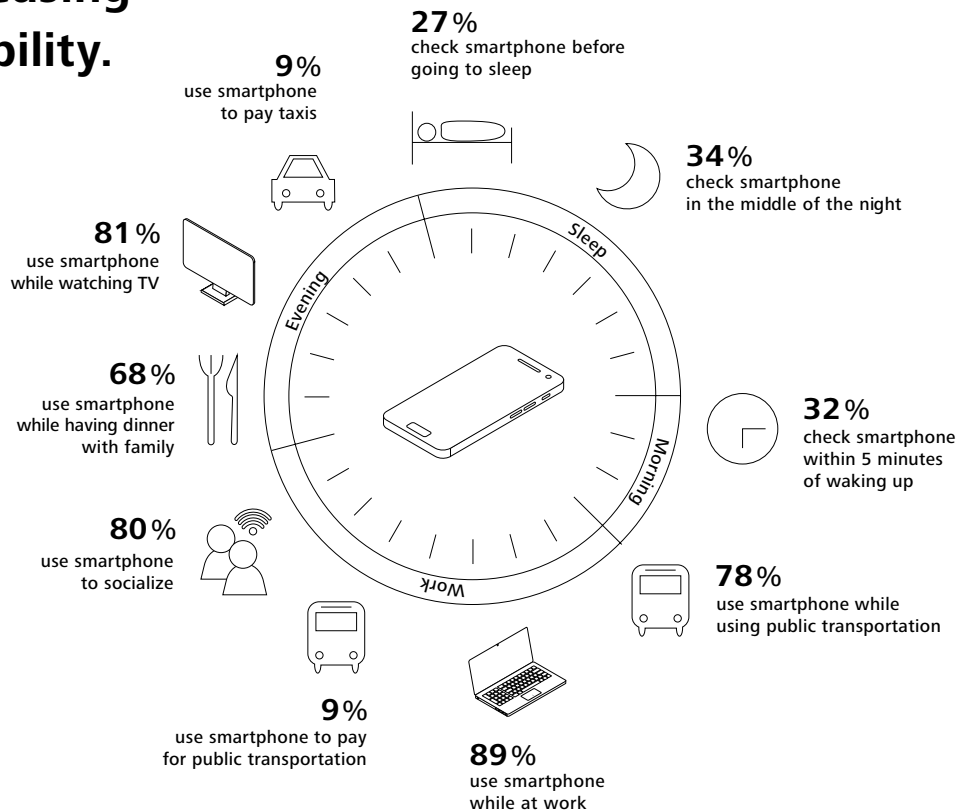




## Smartphones are increasing our mobility and flexibility.

Since 2014, the time we spend on mobile phones has **INCREASED** by **49%** - now averaging **3 hours** and fourteen minutes per day.

With smartphones, we're no longer tethered to a desktop computer or an office. Mobile devices - our constant companions - allow us to stay productive throughout the day, even when we are on-the-move.



### Did you know:

Multitasking is so prevalent, researchers are now studying 'distracted walking' and its link to pedestrian accidents.

# ZEISS SmartLife Progressive Lenses.

ZEISS Progressive SmartLife Individual

ZEISS Progressive SmartLife Superb

ZEISS Progressive SmartLife Plus

ZEISS Progressive SmartLife Pure

## Technology Availability Key

|                      |     |
|----------------------|-----|
| All                  | [A] |
| SmartLife Individual | [I] |
| SmartLife Superb     | [S] |
| SmartLife Plus       | [P] |

ZEISS SmartLife Progressive lenses are specially designed to meet the vision needs of people with presbyopia with a connected and on-the-move lifestyle. The optical performance in the lens periphery is designed for frequent changes of head and eye position driven by how people interact with their handheld devices.

This new design fingerprint provides a smoother

transition into the lens periphery with less perceived blur to enable peripheral vision in natural dynamic interaction.

ZEISS SmartLife Progressive lenses address each individual's unique pattern of vision, encompassing optics, visual habits, and lifestyle to provide the ultimate in personalized vision.

*ZEISS combines precision technologies to build the ideal lens for each patient.*

|                              |                                                                                   | ZEISS SmartLife Pure | ZEISS SmartLife Plus | ZEISS SmartLife Superb | ZEISS SmartLife Individual |
|------------------------------|-----------------------------------------------------------------------------------|----------------------|----------------------|------------------------|----------------------------|
| IndividualFit™ Technology    | Best natural vision for patient's main daily activities                           |                      |                      |                        | ✓                          |
| Face Fit™ Technology         | Optimization of the individual position of wear parameters to maximize lens zones |                      |                      | ✓                      | ✓                          |
| Adaption Control™ Technology | FrameFit Calculator for faster adaptation to new lenses                           |                      | ✓                    | ✓                      | ✓                          |
| FrameFit+® Technology        | Virtually unlimited choice of frame sizes and shapes                              |                      | ✓                    | ✓                      | ✓                          |
| Digital Inside® Technology   | Optimization of the near zone for better reading on digital devices               | ✓                    | ✓                    | ✓                      | ✓                          |
| Luminance Design® Technology | Best natural vision for day and night                                             | ✓                    | ✓                    | ✓                      | ✓                          |
| SmartView™ Technology        | Optimization based on today's connected & on the move lifestyle                   | ✓                    | ✓                    | ✓                      | ✓                          |
| Rx Customization             | Customized to the patient's Rx for wider fields of view                           | ✓                    | ✓                    | ✓                      | ✓                          |

Available with i.Scription® by ZEISS



# ZEISS SmartLife Lenses.

Developed with you and your patients in mind, to be:



## 1 Smart

- > Addressing relevant consumer needs and a broad target market.



## 2 Superior

- > Incorporating innovative new technology and optical expertise.



## 3 Simple

- > Saving you time by simplifying lens choice and selling.

# ZEISS SmartView Technology.<sup>[A]</sup>

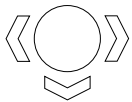
The superior science behind ZEISS SmartLife Lenses.

The foundation of the new ZEISS SmartLife Lens Portfolio - ZEISS SmartView Technology - is founded on consumer insights and scientific research of today's modern visual behavior and individual age-related vision needs.

Based on a unique combination of expertise in the structure, functions, and diseases of the eyes as well as knowledge in various fields of optics, it is the next evolution of the complete ZEISS Precision Technology portfolio.

## The four cornerstones of ZEISS SmartView Technology:

NEW



### 1 Smart Dynamic Optics

> State-of-the-art 3D object space-models and design fingerprints adapted to today's dynamic visual behaviors.

NEW



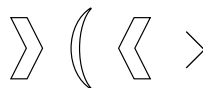
### 2 Age Intelligence

> Considers the evolution of vision needs at every stage of the lens wearer's life.



### 3 Clear Optics

> Provides precision in every step of the process: From advanced eye modeling & design calculation to freeform production & manufacturing.



### 4 Thin Optics

> ZEISS lens aesthetics with the best balance between optics and thin, light lenses.



# 1. Smart Dynamic Optics.

**NEW**

## The latest design optimization by ZEISS.

Smart Dynamic Optics is based on the simulation of binocular vision during dynamic visual behavior, related to a connected and on-the-move lifestyle (which affects everyone, independent of age).

### In summary this entails:

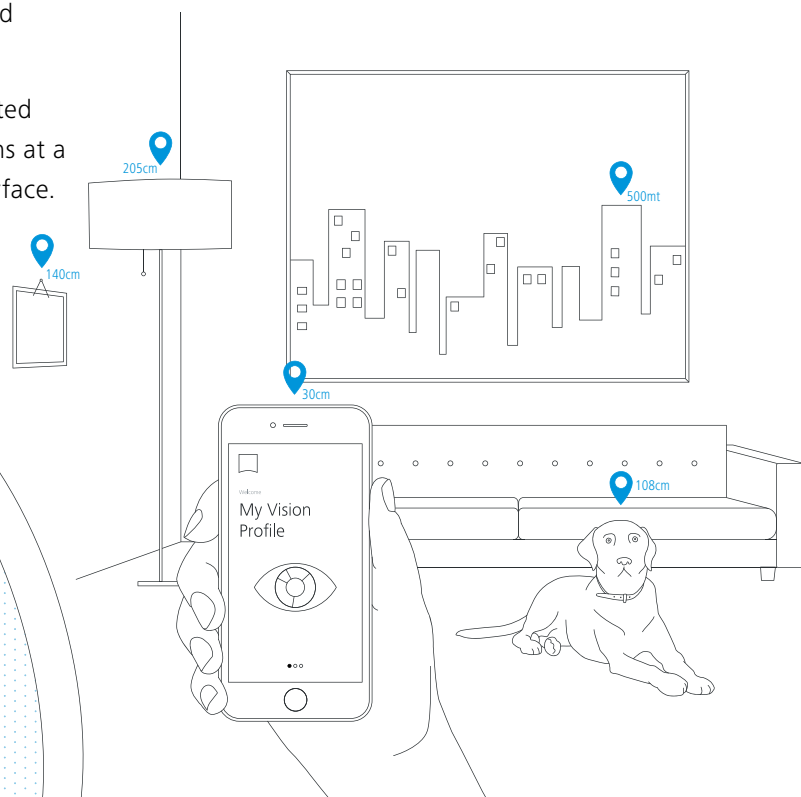
- A sophisticated 3D object-space-model, now also included in the next generation of ZEISS SmartLife Single Vision Lenses.
- New design fingerprints for ZEISS SmartLife Digital and Progressive Lenses.
- Both the 3D object-space-model and the new design fingerprints take the dynamic visual behavior from near to far into account, which lead to a smoother transition into the lens periphery with less perceived blur. This enables peripheral vision in a natural dynamic interaction, resulting in comfortable vision and ease of viewing in all distances and directions.\*



## The 3D object-space-model.

This describes the exact position of a specific object or point, within a 3 dimensional space according to its distance, direction and inclination in relation to the spectacle lens.

The path of light from this object through the lens is calculated binocularly. ZEISS engineers conducted numerous calculations at a multitude of distances and directions over the entire lens surface. They then took modern dynamic visual behaviors into account to optically optimize the lens.





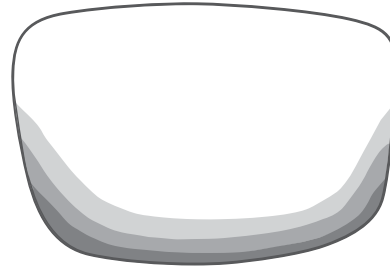


# The new design fingerprint.

**NEW**

## Single vision wearer's near point:

Based on reading behavior, the near point location is located higher than for progressive lens wearers.

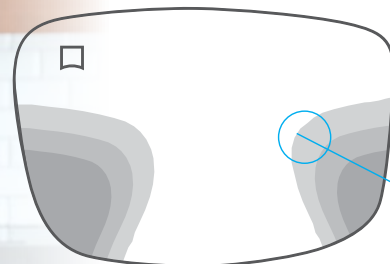


Standard Single Vision Lens



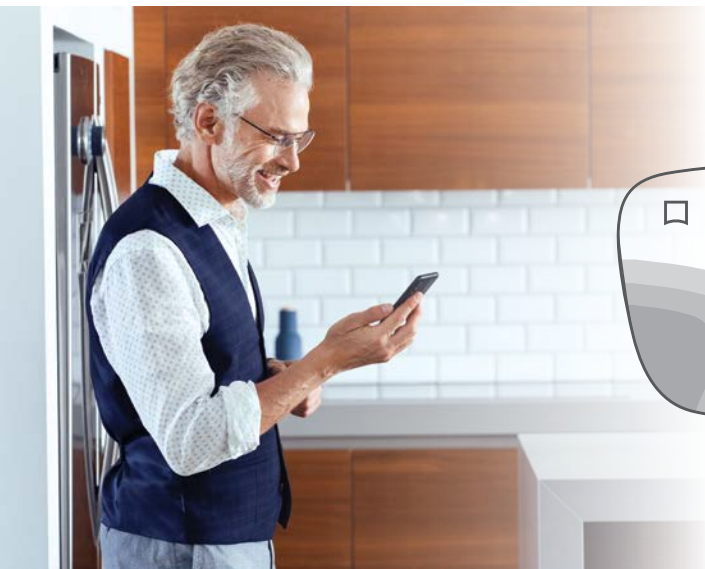
## Progressive Lens wearer's near point.

Due to higher addition powers, the near point for experienced progressive lens wearers is lower. This provides more comfort in the intermediate zone.

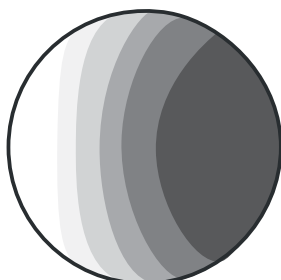


## Smoother transition into areas with more blur.

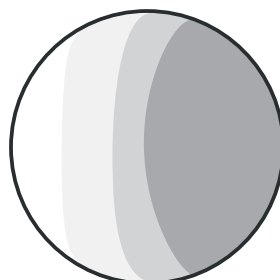
Reduced blur compared to current ZEISS Precision Progressive Lenses.



## Standard Progressive Lens



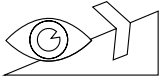
## ZEISS SmartLife Progressive Lens



## Patient benefits

- **Scientifically proven** to enable peripheral vision in natural dynamic interaction.\*
- **4 out of 5** experienced smooth vision from near to far across all viewing zones.\*
- **8 of out 10** consumers adapted very fast to their new lenses, (within 1 day).\*

\*Data on file.



## 2. Age Intelligence.

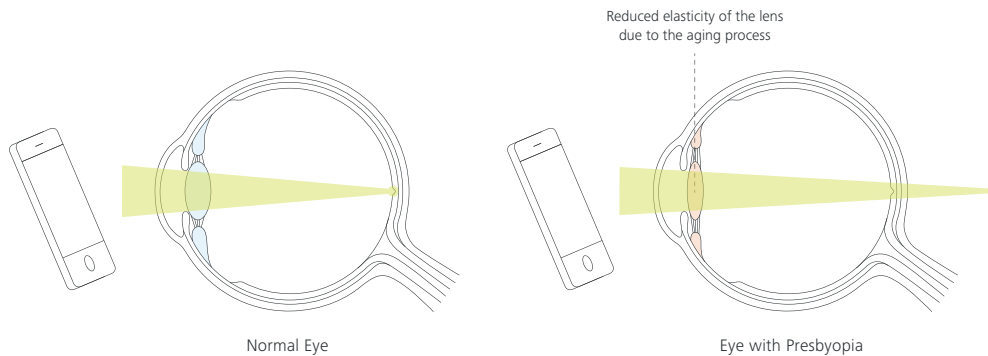
**NEW**

### Addressing the evolution of lens wearers' visual needs.

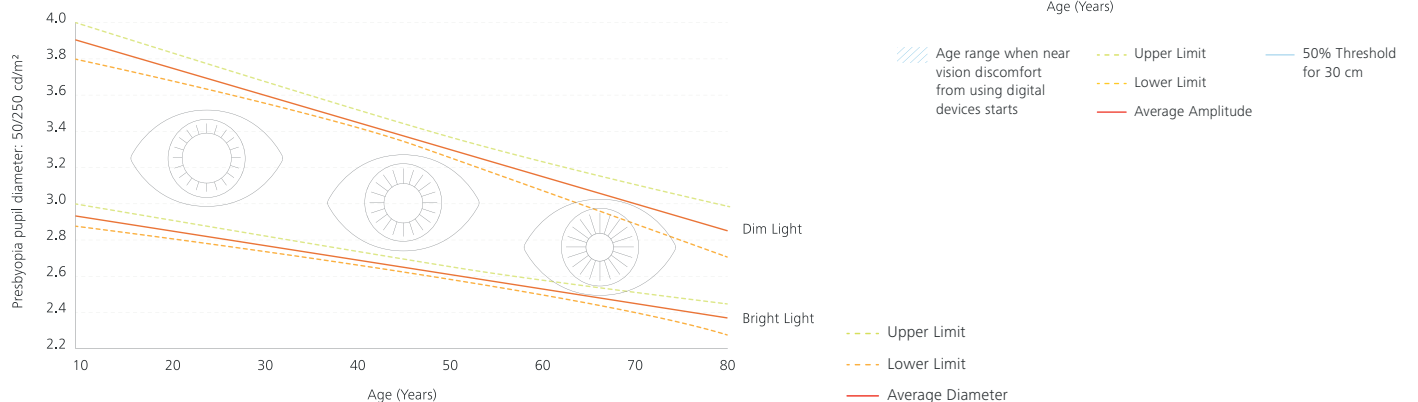
1. Lenses are adapted according to the eyes' accommodation ability, taking into account that this ability decreases significantly as we age. Therefore different lens types are offered for every stage of life – fulfilling evolving vision needs as people age.



*Our modern, connected lifestyle has an effect on our visual behavior.*  
***Our eyes also change with age.***



2. Further optical optimization is done based on the average pupil size of a person's age group. As we age our pupils' ability to dilate decreases. For optimization of the lens surface, ZEISS factors in the age-specific pupil size to determine average luminance throughout the day - this is called **ZEISS Luminance Design Technology 2.0**.







## 3. Clear Optics.

**The ZEISS promise of precision throughout the complete design and production process.**

**This is achieved with:**

- High precision in an advanced lens-eye-system.
- High precision with the point-by-point lens calculation.
- High precision & leading edge in advanced freeform production.

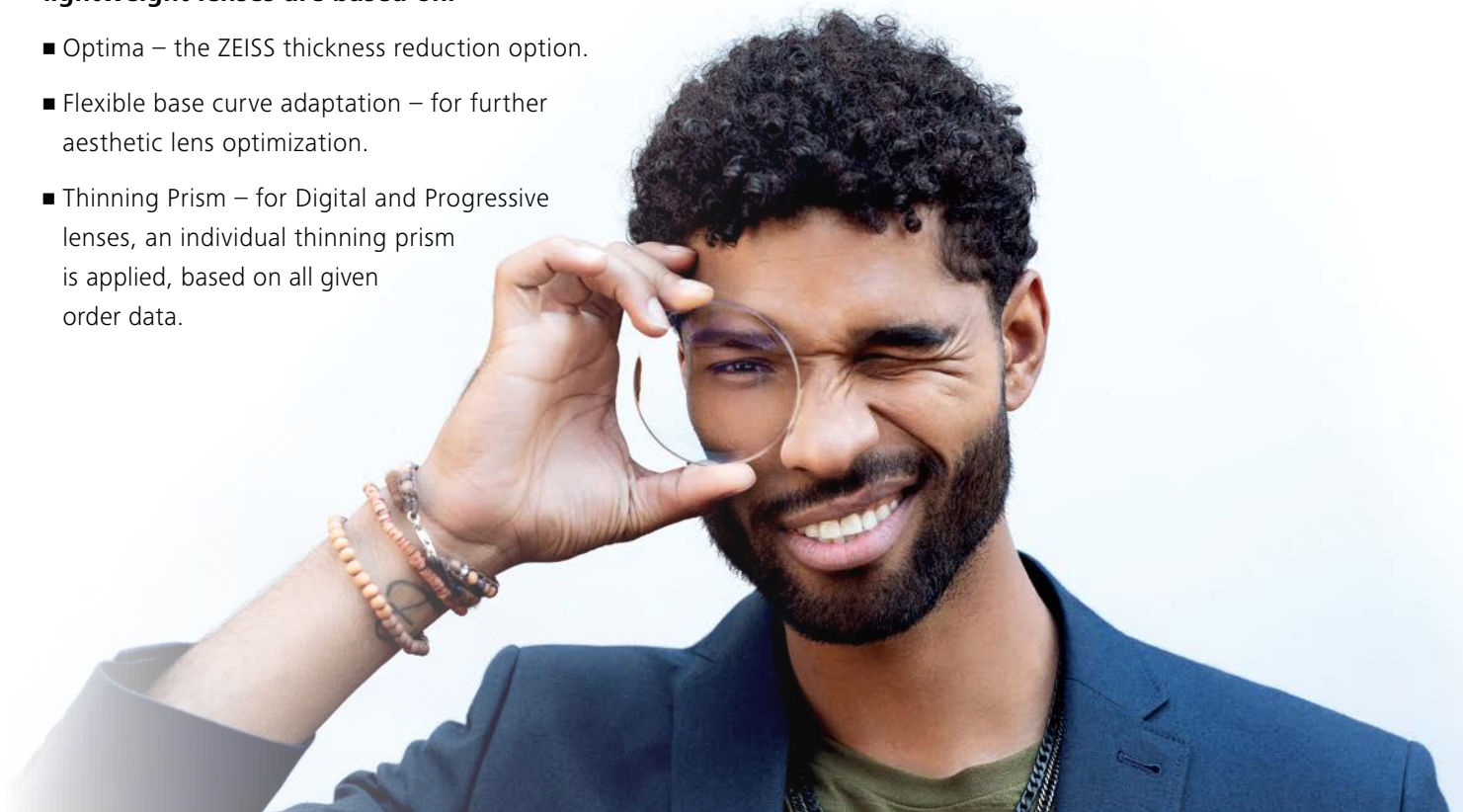


## 4. Thin Optics.

**ZEISS lens aesthetics with the best balance between optics and thin, light lenses.**

**Enabled by the ZEISS thickness optimization algorithm, thin & lightweight lenses are based on:**

- Optima – the ZEISS thickness reduction option.
- Flexible base curve adaptation – for further aesthetic lens optimization.
- Thinning Prism – for Digital and Progressive lenses, an individual thinning prism is applied, based on all given order data.



# Digital Inside technology.<sup>[A]</sup>

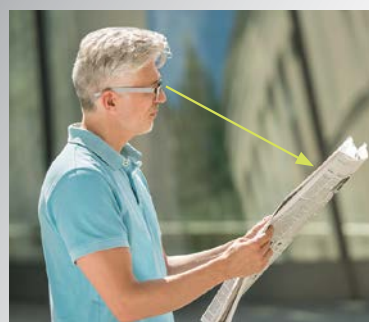
Enhanced vision for digital and print media.

**Mobile digital devices make our eyes work harder.** We hold digital screens higher and closer to our eyes than print media, and our eye movements when reading them are fast, dynamic, and continuous. Standard progressive lenses are not designed for the specific reading distance and dynamic near and far vision switching unique to digital devices. As a result, many progressive wearers experience symptoms of **Digital Eye Strain**.

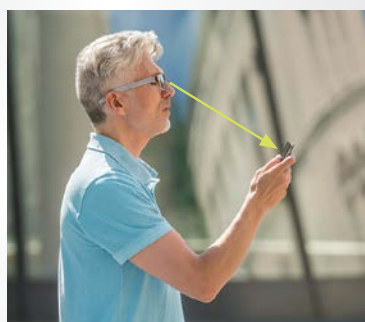


## ZEISS SmartLife Progressive lenses ensure comfortable viewing of both digital and print media.

Digital Inside technology is a new approach to lens design that accounts for the typical reading position of digital devices. The near zone is extended vertically and horizontally for comfortable reading of any media, whether print or digital.

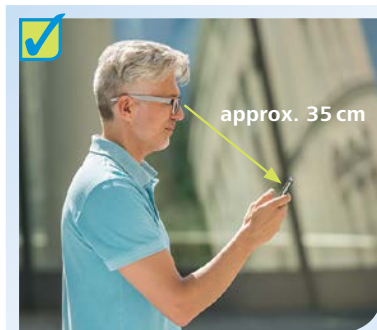


*Optimized for reading print materials only.*



*Not optimized for reading digital devices.*

**CONVENTIONAL PROGRESSIVES**



**ZEISS SmartLife Progressive lenses with Digital Inside technology optimizes vision for both conventional and digital reading needs.**

## Rx customization.<sup>[A]</sup>

Up to **50%** wider fields of view.

The customization process for ZEISS SmartLife Progressive lenses creates a unique design for every combination of sphere, cylinder, axis & add.

By eliminating the compromises presented by standard base curve designs, this process delivers up to **50% wider fields of view\*** compared to ordinary progressives.

\*Data on file.

# Luminance Design Technology 2. <sup>[A]</sup>

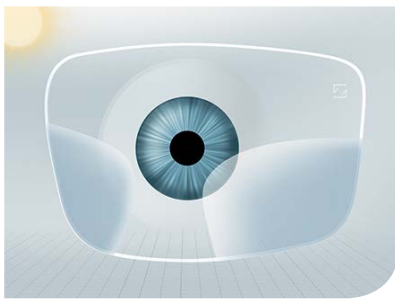
Greater clarity for both day and night.

Using **patented Luminance Design technology**, ZEISS factors in patient pupil size in varying light conditions to optimize the design for all-day wear.

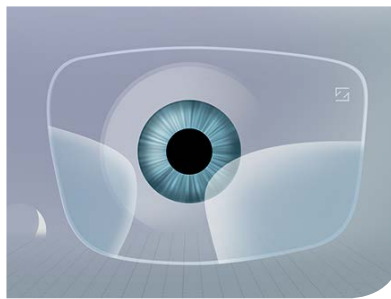
Unlike conventional progressives, ZEISS SmartLife Progressive Lenses incorporates ray-trace calculations for entire bundles of light rays across the pupil, thereby delivering more complete data for perfecting the lens design.

The result is a more natural vision experience and greater clarity for lens wearers, whether in bright or low light conditions.

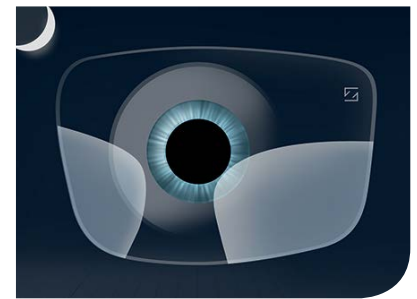
| Technology Availability Key |     |
|-----------------------------|-----|
| All                         | [A] |
| SmartLife Individual        | [I] |
| SmartLife Superb            | [S] |
| SmartLife Plus              | [P] |



*Small pupil during the day*



*Mid-size pupil in mesopic conditions*



*Large pupil at night*

**Sunglass-  
Level UV  
Protection in  
all ZEISS  
clear lenses**



Trust **ZEISS** to elevate the standard of care for your patients.

All clear **ZEISS SmartLife** lenses include **ZEISS UVProtect Technology**.

Advanced technologies have made it possible to deliver a truly personalized vision experience, as individual as each of your patients.



# FrameFit+ technology.<sup>[P,S,I]</sup>

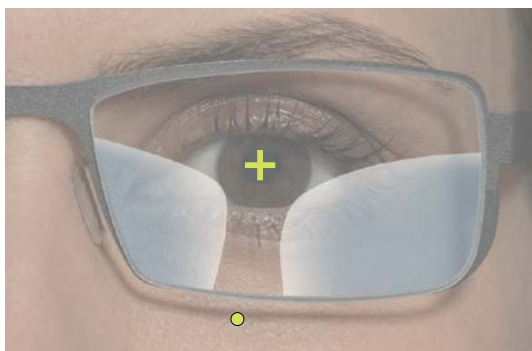
Better vision in any frame.

Patients' tastes in frames can be as individual as their facial features. But the same lens design won't work equally well in every frame. Changing the length of the corridor can adjust the lens optics for the frame's height – but this is not enough to ensure the best optics in all frame shapes.

ZEISS FrameFit+ technology customizes the lens design for both the **height** and **shape** of the frame to ensure maximum compatibility with the frame architecture.

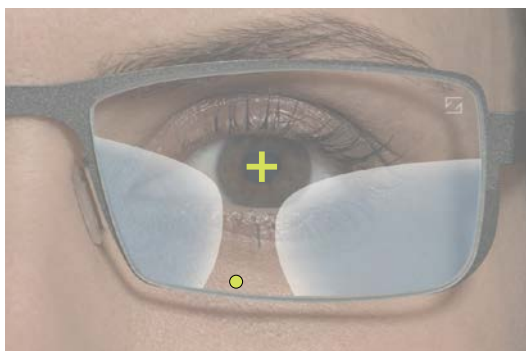


## Special frame shapes.



### Without FrameFit+ Technology:

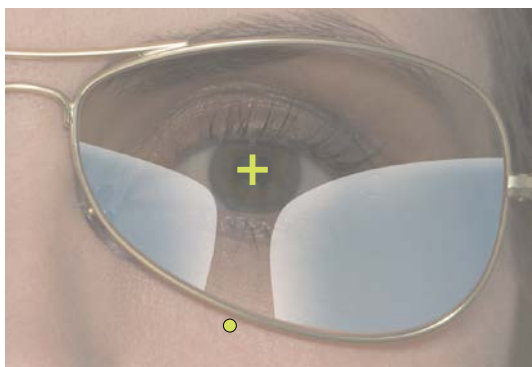
Near vision zone is cut off when fit within a small frame.



### With FrameFit+ Technology:

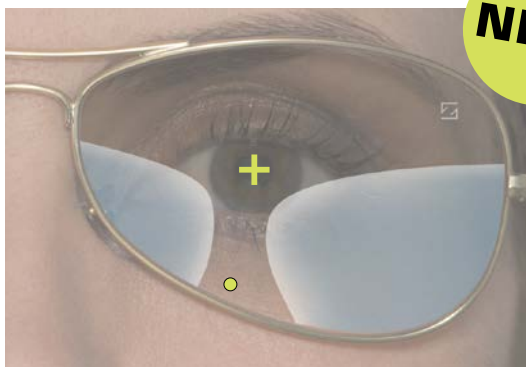
Viewing corridor is shortened so the wearer enjoys maximum range of vision – even in smaller frames.

## Special frame shapes.



### Without FrameFit+ Technology:

Near vision zone is cut out.



### With FrameFit+ Technology:

Viewing corridor is automatically adjusted so near zone fits within any frame shape.

**NEW**

● Near point location

+ Distance point location



# Face Fit+ technology.<sup>[S,I]</sup>

Supports faster adaptation to new lenses.

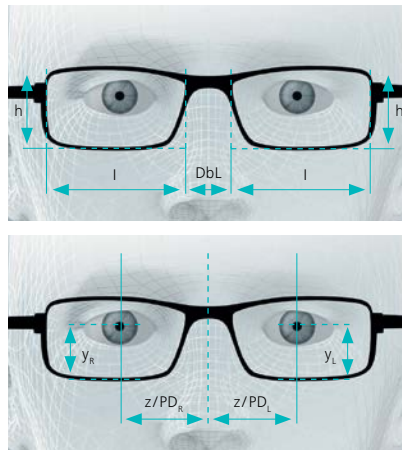
Research shows that many progressive wearers experience limitations in clear distance vision and 3D vision, and may also have difficulty judging distances.

Using **Face Fit+ technology**, ZEISS optimizes viewing zones based on data for the frame, wrap angle, the position of the eyes behind the frame, and the fit of the frame on the nose and ears. The result is a lens precisely fitted to the face, maximizing 3D vision and supporting quick adaptation.

## Technology Availability Key

|                             |            |
|-----------------------------|------------|
| <b>All</b>                  | <b>[A]</b> |
| <b>SmartLife Individual</b> | <b>[I]</b> |
| <b>SmartLife Superb</b>     | <b>[S]</b> |
| <b>SmartLife Plus</b>       | <b>[P]</b> |

## Position of the pupil behind the lens.



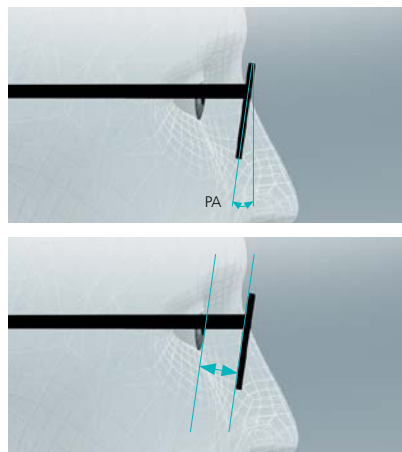
### Frame data

Frame data provides essential details for customizing the lens design during production to balance viewing zone sizes for optimal vision, including wrap angle of the frame.

### Fitting height and pupil distance

The correct fitting height allows any frame size and enables the lens to be designed accordingly. A precise measurement of the pupil distance ensures the perfect location of the near zone.

## Fit of frame on the nose and ears



### Pantoscopic tilt

The pantoscopic tilt of the frame is considered in the lens design calculation in order to minimize optical errors and blurred vision.

### Back vertex distance

Measuring the back vertex distance is the basis for simulating eye movement behind the lens and optimizing and sharpening the horizontal fields of view.

All fitting measurements can be taken in a fast, simple and precise manner with i.Terminal® 2, by ZEISS.

# IndividualFit technology.

Different design options for different lifestyles.

Vision is all about how individuals use their eyes – and everyone uses them differently. Why should they all get the same proportion of distance, intermediate and near vision?

With **ZEISS IndividualFit Technology**, the patient's visual activity profile is matched to one of three unique lens design options – **Balanced**, **Intermediate** or **Near** – to ensure the lens is an ideal fit for each wearer's individual lifestyle and activities.

## ZEISS Progressive SmartLife Individual

### Balanced (SmartLife Individual)

Balanced distance, intermediate, and near zones



SIMULATED FIELDS OF USABLE VISION

#### Visual profile: B

|                   |      |
|-------------------|------|
| Distance zone     | •••• |
| Intermediate zone | •••  |
| Near zone         | •••  |

#### WEARER'S PROFILE

- Would like the best vision possible for all-day, all-distance use
- Daily activities do not emphasize a particular viewing zone
- Default choice when I or N is not specified



### Intermediate (SmartLife Individual I)

Up to 25% larger intermediate zone and enhanced dynamic\*



SIMULATED FIELDS OF USABLE VISION

#### Visual profile: I

|                   |      |
|-------------------|------|
| Distance zone     | •••• |
| Intermediate zone | •••• |
| Near zone         | ••   |

#### WEARER'S PROFILE

- Often requires the middle viewing range (60-90cm, e.g., computer work)
- Needs dynamic vision for activities like driving and sports
- Higher add patient who emphasizes intermediate/dynamic vision in daily visual activities



**Eye Care Professionals love the personalization and flexibility that IndividualFit technology allows.**

#### Technology Availability Key

|                      |     |
|----------------------|-----|
| All                  | [A] |
| SmartLife Individual | [I] |
| SmartLife Superb     | [S] |
| SmartLife Plus       | [P] |

### Near (SmartLife Individual N)

Up to 30% larger near zone\*



SIMULATED FIELDS OF USABLE VISION

#### Visual profile: N

|                   |      |
|-------------------|------|
| Distance zone     | ...  |
| Intermediate zone | ...  |
| Near zone         | .... |

### WEARER'S PROFILE

- Frequently engaged in tasks focused within 60cm (reading, hobbies, precise work)
- Activities emphasize sustained rather than dynamic vision
- Needs larger computer-distance area located higher in the lens



\*Data on file.

## Determining the right design option is easy.

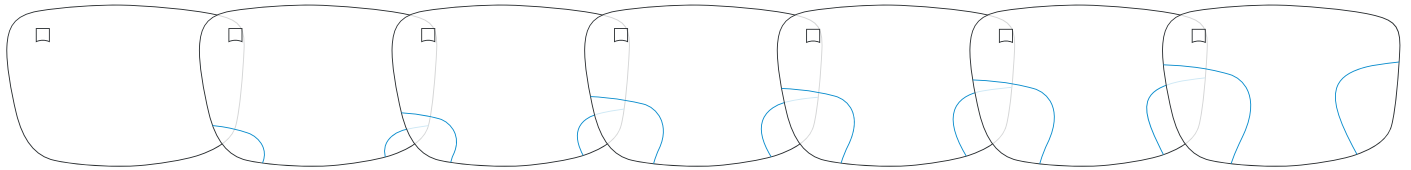
### ■ Simply use the questions you are already asking your patients:

- ✓ What are your most common visual activities?
  - Work
  - Leisure
- ✓ Which visual activities are most important to you? Which ones seem to challenge your vision the most?
  - Reading
  - Computer/Handheld devices
  - Driving
  - Sports/outdoor
- ✓ If you could change one aspect of your current progressive lenses, what would it be?



# ZEISS SmartLife: the smart choice.

The ZEISS SmartLife Lens Portfolio caters to all connected, on-the-move consumers, independent of age – providing clear, comfortable vision to balance their modern lifestyle.



FULL UV  
Protection  
in all ZEISS  
clear lenses

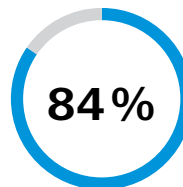


## One go-to lens portfolio to address today's consumer needs.

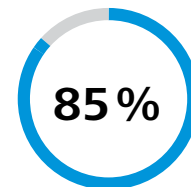
ZEISS's in-depth understanding of visual behavior and visual habits has been incorporated into the design philosophy of the ZEISS SmartLife Portfolio. The portfolio is divided into three categories: ZEISS SmartLife Single Vision, ZEISS SmartLife Digital and ZEISS SmartLife Progressive Lenses, all with further optimization based on age-related visual needs.

This complete portfolio serves a wide range of consumers (20 years and up), addressing their visual needs now and in years to come.

A comprehensive consumer acceptance test was conducted by the Aston University's School of Optometry in the UK. Results show a high level of customer satisfaction with ZEISS SmartLife lenses.



Experienced all-day visual comfort to balance their connected and on-the-move lifestyle.\*



Experienced ease of viewing in all directions.\*

9/10

Rated the quality of vision with ZEISS SmartLife Lenses as positive.\*

8/10

Consumers adapted very fast to their new lenses, (within 1 day):\*

\*Data on file.

  
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BIRMINGHAM UK

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[www.zeiss.com/lenses](http://www.zeiss.com/lenses)

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Seeing beyond