



Fact Sheet

ZEISS SmartLife

What is ZEISS SmartLife?	<p>ZEISS SmartLife is a complete premium lens portfolio for consumers of all ages. In addition to offering tailor-made corrective solutions, the lenses are designed for modern, dynamic, connected and on-the-move lifestyles and the associated visual behavior.</p> <p>ZEISS SmartLife was designed using the latest scientific knowledge and innovations. The core technology used in the ZEISS SmartLife range is called ZEISS SmartView technology. These cutting-edge innovations can be attributed to ZEISS's know-how and tried-and-tested technologies.</p>
What is ZEISS SmartView technology?	<p>ZEISS SmartView technology consists of four cornerstones:</p> <ol style="list-style-type: none">1. Clear Optics = Maximum precision with an advanced eye lens system, point-by-point lens calculation and the latest freeform technology2. Thin Optics = Best balance between optics and thin and light lenses3. Smart Dynamic Optics = ZEISS uses state-of-the-art 3D object-space-models and design fingerprints adapted to today's dynamic visual behavior.4. Age Intelligence = considers the evolving vision needs in every age of the lens wearer
What is Age Intelligence?	<p>Age Intelligence means that different, mainly age-related aspects are considered in each lens design.</p> <ol style="list-style-type: none">1. The age of the wearer and the corresponding physiological and anatomical changes to the eye – mainly in the pupils (average pupil size of age) and eye lens (accommodation capability for each age) – are factored into the design.2. In addition, the visual needs that change with age, and which are sometimes subjective, also play a role in the design process. The visual needs of different age groups can be grouped into the following general categories: Age: 20 Clear vision, near and far



	<p>30 + Relaxed vision, especially after a long day</p> <p>40 + + Near vision support</p> <p>50 + + + Intermediate vision support</p>
<p>What is the benefit of customizing the lens to the age of the consumers?</p>	<p>Today's lifestyle is the same for people of all ages, just like the desire to see well. However, the eye and visual capabilities change continuously with age. There are two main factors:</p> <p>On the one hand, the eye lens gradually becomes less flexible with age, meaning that it loses its <i>ability to accommodate</i> – i.e. focus on near objects.</p> <p>Meanwhile, the <i>pupil is not able to dilate as effectively</i>, causing it to become smaller.</p> <p>In order to ensure optimal vision for all ages, these individual aspects need to be considered in the lens design. This is the aim of ZEISS SmartLife.</p>
<p>What is Smart Dynamic Optics?</p>	<p>Smart Dynamic Optics is the fundamental design concept used in ZEISS SmartLife Lenses. The design is based on binocular vision for today's dynamic visual behavior. The key consideration is the relationship between the inclination (today the lower lens area is used more often) and the object distance/ viewing distance (which has become increasingly closer for the lower lens area). A three-dimensional object-space model is used to design the lens, which takes into account the distance, direction and inclination in relation to the spectacle lens within.</p> <p>This is the first time that ZEISS has used this three-dimensional model for single vision lenses, too, enabling ZEISS SmartLife to provide optimal near <i>and</i> far-distance vision for this group of consumers.</p> <p>Next to the three-dimensional object-space-model, ZEISS SmartLife Digital and Progressive lenses use new design fingerprints (distribution of the vision zones). Both the three-dimensional object-space-model and the new design fingerprint takes the dynamic visual behavior from near to far into account which leads to a smoother transition into the lens periphery with less perceived blur.</p>
<p>What are the vision needs of today's consumers?</p>	<p>Our eyes are constantly switching between the on- and offline worlds. Meanwhile, in today's busy world, our eyes are always on-the-move. This means that our eyes aren't just moving between two worlds – they are also constantly moving in different directions and distances. As</p>



	<p>well as additional cognitive capacity, this places more demands on our eyes, which for example need to accommodate more often.</p> <p>For example, a study¹ conducted by the ZEISS Vision Science Lab in Tübingen, Germany, confirmed that the presence of a smartphone directs our gaze downwards – almost without accompanying head movement. This means that our gaze is increasingly directed at the lower area of the lens. Overall, a greater area of the lens is being used. The ZEISS SmartLife Lens design takes these new trends into consideration.</p>
<p>Why has ZEISS launched a new portfolio?</p>	<p>In today's world, consumers of all ages live a connected, on-the-move lifestyle that presents a number of visual challenges. Meanwhile, age-related factors continue to affect people's vision. Only a comprehensive portfolio can be an answer to all those facts. ZEISS SmartLife provides solutions for all age groups. Consumers of all ages want a personalized solution that meets their needs – whether that be lenses to correct short or long-sightedness, presbyopia or visual challenges in middle age. Consumers don't think in classic product categories. ZEISS SmartLife therefore avoids using categories such as progressive, digital or single vision lenses in the consultation and communication processes. Not matter the age – a consumer will receive just <i>his</i> ZEISS SmartLife Lens.</p> <p>Still, the ZEISS SmartLife portfolio consists of more than 1000 different products, which - as usual - are divided into categories for online orders, price lists and product comparisons. In optical stores, however, customers just need to know that ZEISS SmartLife Lenses are personalized for each consumer, without having to think about those different categories.</p>
<p>Are customization levels available for ZEISS SmartLife?</p>	<p>Yes, the ZEISS price tiers and customization levels are also available for ZEISS SmartLife.</p>
<p>Does ZEISS SmartLife plan to discontinue other ZEISS products?</p>	<p>Other ZEISS products and portfolios can remain on the market. However, this depends on the decisions made in individual markets and countries.</p>

¹ Dynamic Gaze Study – Changes in gaze behavior through digital devices. ZEISS Vision Science Lab, Institute for Ophthalmic Research, University of Tübingen, 2019. Data on file.



<p>Which coatings and extras are available for ZEISS SmartLife?</p>	<p>ZEISS SmartLife Lenses are compatible with all ZEISS coatings, tints and other extras like photochromatic features. This excludes special lens designs such as ZEISS EnergizeMe, ZEISS DriveSafe, ZEISS Sports Lenses and ZEISS Office Lenses.</p>
<p>How will ZEISS SmartLife benefit eye care professionals?</p>	<p>As well as enabling eye care professionals to stock the latest ZEISS lens portfolio, ZEISS SmartLife will also help them to provide a better service for consumers. Although the portfolio consists of more than 1000 new products, communicating the benefits to consumers has never been so simple. ZEISS SmartLife makes it easier for eye care professionals to advise their customers, as there is no need to use technical terms or discuss different lens categories.</p> <p>In addition, ZEISS SmartLife enables eye care professionals to serve a majority of their customers with one comprehensive portfolio. In other words, the target group includes a wide range of consumers. Meanwhile, the portfolio also offers numerous upselling options with different customization levels.</p> <p>ZEISS SmartLife was developed based on the latest scientific studies and insights into consumer behavior. Comprehensive tests were conducted to evaluate lens performance and consumer satisfaction. A ZEISS consumer study confirmed a high level of satisfaction with ZEISS SmartLife Lenses. Eye care professionals can therefore trust the quality of the product. Satisfied consumers and first-class products are the key to a good reputation.</p>
<p>How will ZEISS SmartLife benefit consumers?</p>	<p>ZEISS SmartLife Lenses provide consumers with a personalized solution designed for modern, on-the-move and connected lifestyles. Clear and simple communication enables consumers to come to an informed decision.</p> <p>Performance and consumer acceptance tests have also highlighted additional benefits for the whole portfolio or for single categories:</p> <ul style="list-style-type: none"> • <u>Portfolio:</u> • According to 84% of the asked consumers, ZEISS SmartLife provides all-day visual comfort to balance their connected and on-the-move lifestyle. ² • 9 out of 10 consumers rated the quality of vision as positive.²

² External consumer acceptance test on the ZEISS SmartLife Lens portfolio, n=182 study participants. Aston Optometry School, Aston University, UK, 2019.



	<ul style="list-style-type: none"> • At least 84% of all tested consumers reported relaxed vision in all directions and distances.² • <u>Single Vision:</u> • Thanks to Smart Dynamic Optics, ZEISS SmartLife can now provide wearers of single vision lenses with an all-in-one solution optimized for near and far-distance vision. This results in up to 88% larger clear fields of view.³ • <u>Digital Lenses:</u> • 73 % of the participants with digital lens designs from ZEISS SmartLife reported to not feel strained eyes at the end of the day.⁴ In addition, after completing a near work task, consumers had more accurate vision than wearers of single vision lenses.⁵ • <u>Progressive Lenses:</u> • 8 out of 10 consumers with presbyopia adapted to their new ZEISS SmartLife Lenses very fast, in less than one day. They also experienced smooth vision from near to far across all viewing zones. ⁶ • A performance test of the ZEISS SmartLife progressive gave proof, that they enable peripheral vision.⁷
<p>When will ZEISS SmartLife be launched?</p>	<p>The worldwide launch will start in October 2019. Asian countries will be among the first countries in which ZEISS SmartLife will be available to eye care professionals. The portfolio will be launched in other markets in due course.</p>

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³ Analyses by Technology & Innovation, ZEISS Vision Care, DE

⁴ External consumer acceptance test on the ZEISS SmartLife Lens portfolio, n=52 study participants. Aston Optometry School, Aston University, UK, 2019.

⁵ External performance test on ocular accommodation and blink rate comparing ZEISS single vision lenses to ZEISS SmartLife Digital lenses, n=39 study participants. Aston Optometry School, Aston University, UK, 2019

⁶ External consumer acceptance test on the ZEISS SmartLife Lens portfolio, n=82 study participants. Aston Optometry School, Aston University, UK, 2019.

⁷ Performance test on ZEISS SmartLife Progressive lenses, n=17 study participants. ZEISS Vision Science Lab, Institute for Ophthalmic Research, University of Tuebingen, 2019.