



Press Release

Clear vision for growing children: ZEISS SmartLife Young lenses

ZEISS expands its successful premium product portfolio with lenses specially designed to meet the changing needs of children and teenagers.

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ZEISS SmartLife is the go-to lens portfolio for many eye care professionals around the world, but this premium portfolio is being expanded to include another age group. Eye care professionals can now offer lenses adapted to the needs of teens and children as young as six years with ZEISS Single Vision SmartLife Young lenses.

"By expanding the range to include lenses for children and young people we make the eye care professional's job easier: The ZEISS SmartLife premium lens portfolio is now suitable for everyone – for parents and their children. The portfolio is constantly updated based on the latest research and takes current viewing habits into account. ZEISS SmartLife lenses make it possible to have individualized, good vision," says Patrick Michel, Global Product Manager at ZEISS Vision Care.

ZEISS Single Vision SmartLife Young lenses at a glance:

- The design of the lenses is based on specific visual needs of children and young people. They therefore provide up to 60 percent wider fields of clear view.¹
- ZEISS SmartView 2.0 technology was adapted for children by incorporating an adjusted 3D-Object space model. Two central components have been adapted to physical changes children undergo as they grow: ZEISS Dynamic AgeFit takes into account the fact that the shape of a child's face, such as the distance between the pupils, changes as they get older. ZEISS Luminance Design 2.0 considers the change of the pupil diameter when children grow.
- ZEISS SmartLife Young lenses are robust and scratch resistant and come with full UV protection. It is also thin, lightweight and aesthetically pleasing.

¹ For smartphone and handheld device distance compared to conventional ZEISS Single Vision stock lenses for prescriptions between -4.0 and +4.0 D.



Lifestyle and visual behavior of children and young people

Children's eye health is important —especially in the wake of advancing digitalization. Generation Alpha, those born after 2010, are complete digital natives and well versed in technology.² 60 percent of children under the age of five are already interacting with smartphones.³ Another study found that children between the age of two and ten are already using and/or playing with a device that has a screen for more than 18 hours a week.⁴ But this does not only affect toddlers and young children. Young people also spend many hours watching screens, streaming content or using social media, for example.⁵ On top of that lessons in school have also become more digitalized, which increases screen time even more.

Lenses for children must therefore be adapted to these new demands on vision created by our current world. And it should not be forgotten that these daily habits alter as a child grows up. Younger children spend more time playing - both inside and outside - and explore their environment through many different activities, while older children spend more of their time doing their chosen hobbies, meeting friends, or completing homework.

“We have adapted the ZEISS SmartView 2.0 technology, on which all ZEISS SmartLife lenses are based, so that it is suitable for children and young people,” explains Patrick Michel. “When looking at a smartphone, for example, a child naturally holds it at a completely different reading distance than an adult.⁶ The proportions of the face also differ significantly. Factors such as this have to feature in the design of modern lenses.”

The changing anatomy of a growing child

The shape of the face, distance between the eyes, and other proportions gradually change as a child develops. This naturally has an influence on the position of lenses. Thanks to the so-called ZEISS Dynamic AgeFit technology, ZEISS Single Vision SmartLife Young lenses are specially

² Kotler et.al 2021 Marketing 5.0 Technology for Humanity: http://hozir.org/pars_docs/refs/452/451986/451986.pdf (accessed in July 2022)

³ <https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/> accessed in July 2022

⁴ <https://news.gallup.com/reports/214853/time-play-study-children-free-time-spent-prioritized-valued.aspx> , accessed in July 2022

⁵ Nagata JM, Cortez CA, Cattle CJ, Ganson KT, Iyer P, Bibbins-Domingo K, Baker FC. Screen Time Use Among US Adolescents During the COVID-19 Pandemic: Findings From the Adolescent Brain Cognitive Development (ABCD) Study. *JAMA Pediatr.* 2022 Jan 1;176(1):94-96. doi: 10.1001/jamapediatrics.2021.4334. PMID: 34724543; PMCID: PMC8561427.

⁶ This is also linked to arm length, for example, that changes as a child grows. Source: Lee, Tian-Shing & Chao, Ting & Tang, Ren-Bin & Hsieh, Chia-Chang & Chen, Shu-Jen & Ho, Low-Tone. (2005). A Longitudinal Study of Growth Patterns in Schoolchildren in One Taipei District II: Sitting Height, Arm Span, Body Mass Index and Skinfold Thickness. *Journal of the Chinese Medical Association: JCMA.* 68. 16-20. 10.1016/S1726-4901(09)70126-1.



adapted to the anatomy of growing children. Individual, continuously changing parameters, such as the distance between the lenses, are thus integrated into the lens design.

Another aspect is the pupil size: the pupil diameter increases in children and young people, while it shrinks again in adults. A critical part of ZEISS SmartLife Young lenses, ZEISS Luminance Design 2.0 technology takes the change in pupil size into account. "That's how ZEISS SmartLife Young lenses provide up to 60 percent wider fields of clear view for the under 20s compared to conventional ZEISS Single Vision stock lenses⁷," says Michel.

UV protection, blue light protection, and robustness for children's lenses

All ZEISS SmartLife lenses come with full UV protection thanks to ZEISS UVProtect technology. "Of course, UV protection is even more important for children because, although they spend a lot of time in front of screens, they also like to be outside," says Michel. Moreover, the lenses can be ordered with [ZEISS BlueGuard](#) material that will block up to 40 percent of the potentially harmful blue light.⁸ A special ZEISS DuraVision Kids coating also adds three times more scratch resistance than standard hard-coated ZEISS lenses. The thin, lightweight look of the lens is another important criterion especially for older kids who choose their own lenses.

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About ZEISS

ZEISS is an internationally leading technology enterprise operating in the fields of optics and optoelectronics. In the previous fiscal year, the ZEISS Group generated annual revenue totaling 8.8 billion euros in its four segments Semiconductor Manufacturing Technology, Industrial Quality & Research, Medical Technology and Consumer Markets (status: 30 September 2022).

For its customers, ZEISS develops, produces and distributes highly innovative solutions for industrial metrology and quality assurance, microscopy solutions for the life sciences and materials research, and medical technology solutions for diagnostics and treatment in ophthalmology and microsurgery. The name ZEISS is also synonymous with the world's leading lithography optics, which are used by the chip industry to manufacture semiconductor components. There is global demand for trendsetting ZEISS brand products such as eyeglass lenses, camera lenses and binoculars.

With a portfolio aligned with future growth areas like digitalization, healthcare and Smart Production and a strong brand, ZEISS is shaping the future of technology and constantly advancing the world of optics and related fields with its solutions. The company's significant, sustainable investments in research and development lay the foundation for the success and continued expansion of ZEISS' technology and market leadership. ZEISS invests 13 percent of its revenue in research and development – this high level of expenditure has a long tradition at ZEISS and is also an investment in the future.

⁷ For smartphone and handheld device distance and prescriptions between –4.0 and +4.0 D.

⁸ Inhouse measurements and calculations based on the BVB (Blue-Violet-Blocking) metric. Analysis by Technology and Innovation, Carl Zeiss Vision International GmbH, DE, 2020.



With over 38,000 employees, ZEISS is active globally in almost 50 countries with around 30 production sites, 60 sales and service companies and 27 research and development facilities (status: 30 September 2022). Founded in 1846 in Jena, the company is headquartered in Oberkochen, Germany. The Carl Zeiss Foundation, one of the largest foundations in Germany committed to the promotion of science, is the sole owner of the holding company, Carl Zeiss AG.

Further information at www.zeiss.com

ZEISS Vision Care

ZEISS Vision Care is one of the world's leading manufacturers of eyeglass lenses and ophthalmic instruments. The unit is allocated to the Consumer Markets segment and develops and produces offerings for the entire eyeglass value chain that are distributed globally under the ZEISS brand.