



## Fact Sheet

### ZEISS ClearView Finished Single Vision at a Glance

<b>What is ZEISS ClearView Finished Single Vision (FSV)?</b>	ZEISS introduces a new premium freeform lens design for finished single vision lenses designed to achieve clear vision from the lens centre to the periphery, in a thin and flat lens without compromising optics.
<b>What is a single vision lens?</b>	Single vision is by far the most sold ophthalmic lens design, with the vast majority of these lenses being finished single vision “stock” lenses (FSV). They work best for people without complex visual impairments which should be corrected by individualized respectively prescription lenses.
<b>What is a FSV stock lens?</b>	Finished single vision lenses are the most common type of single vision lenses sold. These single vision lenses are kept in stock and can therefore be made available quickly.
<b>What is the difference between stock lenses and surfaced lenses?</b>	There are basically two different processes behind: Individualized surfaced lenses – also known as made-to-order lenses – are created using freeform technology. Stock lenses are normally created in a casting process using moulds. Unlike surfaced lenses, these are manufactured in larger quantities and not individually.
<b>What is the current challenge for single vision stock lenses?</b>	Stock lenses are ideal for standard vision correction but do not offer the same level of performance as individualized precision lenses.  Typically, finished single vision lenses are rated by the material and coating or how thin and flat they are, often leading to a compromise in the optics of the lens.
<b>Why freeform customization for single vision stock lenses?</b>	ZEISS has recognized the existing challenges in single vision lenses as an opportunity and developed a new product that overcomes these limitations. The result is ZEISS ClearView lenses.  As an innovation leader, ZEISS has found a way to transfer complex freeform technology to the production of single vision lenses. To do this, ZEISS has developed a new, optimized design for this type of lens that is realized with the help of ZEISS' cutting-edge ClearForm



	<p>technology. The result is a single vision lens that is very thin and flat and offers very good clarity across the entire lens.</p>
<p><b>How many calculation parameters are included in the new ZEISS ClearView lens design?</b></p>	<p>ZEISS's optical lens design experts used complex mathematical simulation tools to design the sophisticated freeform optics in ZEISS ClearView lenses.</p> <p>Surface shapes are optimized using over 700 free calculation parameters producing much more complex lens surface shapes than those used in spherical or aspherical single vision designs. The complex ZEISS ClearView lens surface design is – using freeform technology – transferred into mould designs required in the FSV manufacturing process.</p>
<p><b>What are the benefits of ZEISS ClearView FSV lenses for the ECP and the spectacle wearer?</b></p>	<p>With the new ZEISS ClearView lenses, ECPs can offer their customers lenses with excellent optical performance, thereby differentiating from their competitors. The eyeglass wearer benefits from clearer vision with, on average three times larger zones of excellent vision clarity when compared to previous aspherical FSV lenses.<sup>1</sup> Additionally, they benefit from greater overall comfort and improved lens aesthetics. Across the entire power range assessed, ZEISS ClearView FSV lenses are 34 percent flatter and up to 16 percent thinner compared to typical spherical single vision lenses, while delivering the highest level of vision clarity.<sup>2,3</sup></p> <p>In summary: ZEISS ClearView lenses allow to offer lenses combining the advantages of stock lenses with the advantages of freeform technology. This is a great benefit for both eye care professionals and consumers.</p>
<p><b>Availability</b></p>	<p>Availability depends on market. Not all markets stock all variants.</p> <p>The FSV (stock) variants in total include in ZEISS UVProtect and ZEISS BlueGuard materials</p> <p>Available in 1.50, 1.56, 1.60, 1.67, 1.74</p>

<sup>1</sup> Based on a visual clarity simulation on a 50 mm diameter lens area for 1.60 index ZEISS ClearView FSV lenses compared to 1.60 ZEISS AS FSV lenses. Average of +5 D, +3 D, +1 D, -1 D, -3 D, -5 D, and -7 D with and without a cylinder of -2 D. Quantitative analyses by Technology & Innovation, Carl Zeiss Vision GmbH, DE, 2020.

<sup>2</sup> Measurements of lens flatness (base curve) on 1.60 ZEISS ClearView FSV lenses compared to ZEISS Spherical FSV lenses. Average of -5, -3, -1, +1, +3, +5 D with and without cyl -2 D. Maximum reduction of 49% of -5.00 D with and without -2 D cyl for minus lenses. Maximum reduction of 25% of 5.00 D with and without -2 D cyl for plus lenses. Quantitative analyses by Technology & Innovation, Carl Zeiss Vision GmbH, DE, 2020.

<sup>3</sup> Measurements of lens thickness on 1.60 ZEISS ClearView FSV lenses compared to ZEISS spherical FSV lenses over a range of prescriptions (-5, -3, -1, +1, +3, +5 D with and without cyl -2 D). Maximum reduction of 16% for center thickness of +5.00/-2.00. Quantitative analyses by Technology & Innovation, Carl Zeiss Vision GmbH, DE, 2020.



	<p>Available with regular DuraVision Platinum UV, DuraVision BlueProtect UV, DuraVision Silver UV, and DuraVision Chrome UV.</p> <p>Also coming in ZEISS PhotoFusion X</p> <p>Also available as a surfaced lens, to supplement the FSV where the prescription is beyond the FSV range offered, or a specialty coating or treatment which is required but not available in FSV (e.g. Polarized).</p>
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ClearForm is a registered trademark of Carl Zeiss Vision GmbH.

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