# Stellest<sub>®</sub>



Stellest® lenses



This material is for eye care professionals only, and should not be disclosed to the general public. ©Essilor® International - All Rights reserved - Do not copy or distribute - September 2024 Essilor® Stellest® lenses are currently not available in all countries



Myopia risk factor categorization is utilized under license from Myopia Profile Pty Ltd

	LOW RISK	MEDIUM RISK	HIGH RISK
Current age of child <sup>1-4</sup>	16 years or older	10 to 16 years	9 years old or younger
Family history of myopia <sup>1,5</sup>	No myopic parents	One myopic parent	Both parents myopic
Time spent outdoors <sup>1,5-7</sup>	2.5+ hours / day	1.5 to 2.5+ hours / day	0 to 1.5 hours / day
Time spent on near work (outside of school hours) <sup>1,6,8</sup>	0 to 2 hours / day	2 to 3 hours / day	3+ hours / day
Refractive error (for risk of myopia onset)°			<+0.75 at 6-7 years

# **ESSILOR® STELLEST® LENS**

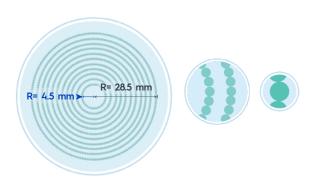
Essilor®'s latest generation of spectacle lenses, designed to control myopia progression and axial elongation while correcting refractive error in myopic children.

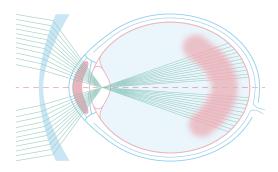
The Essilor® Stellest® lens comprises of a single vision zone and a myopia control zone made with Highly Aspherical Lenslet Target (H.A.L.T.) technology.

# **ESSILOR® STELLEST® LENSES MECHANISM OF ACTION**

H.A.L.T. technology comprises of 1021 contiguous highly aspherical lenslets, arranged over 11 rings.

Light rays passing through the aspherical lenslets create a volume of non focused light in front of the retina and which follows the shape of a child's theoretical myopic retina.





# LENSLET DISTRIBUTION & FEATURES

The Essilor® Stellest® lens comprises of a single vision zone and a myopia control zone made with H.A.L.T. technology.

The single vision zone ensures the correction of refractive error in all gaze directions.

The 1021 lenslets, which cover 40% of the lens front surface, provide a large myopia control zone that fits a large frame choice and offers the H.A.L.T. technology effect in all gaze directions from edge to edge of the lens.

# THE ESSILOR® STELLEST® LENS CLINICAL TRIAL

- Prospective, randomized, double-masked 2-year clinical trial in Essilor®'s joint research lab with the Wenzhou Medical University in China
- 104 myopic children in single vision lenses (50) or Essilor® Stellest® lenses (54)

#### YEAR 1 AND YEAR 2

Results demonstrate that there was a greater efficacy when Essilor® Stellest® lenses were worn more than 12 hrs/day, than when worn less than 12 hrs/day

#### AFTER THE FIRST AND SECOND YEAR

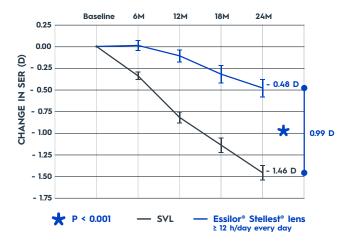
 The eye growth of 9 out of 10 children wearing Essilor® Stellest® lenses full time was similar or slower than non-myopic children.<sup>10</sup>

#### YEAR 2

# ESSILOR® STELLEST® LENSES SLOW DOWN MYOPIA PROGRESSION BY 67% ON AVERAGE\*11

Essilor® Stellest® lenses slowed down myopia progression by **0.80D (55%)** on average for all subjects<sup>11</sup>

Wearing Essilor® Stellest® lenses ≥12h/ day every day, increased efficacy to **0.99D** (67%)\*<sup>11</sup>

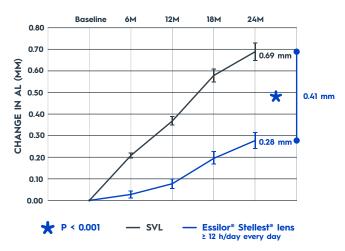


Change in unadjusted SER of OD. Error bars represent SEM.

# ESSILOR® STELLEST® LENSES SLOW DOWN AXIAL ELONGATION BY 60% ON AVERAGE\*11

Essilor® Stellest® lenses slowed down axial elongation by **0.35mm (51%)** on average for all subjects<sup>11</sup>

Wearing Essilor® Stellest® lenses ≥12h/ day every day, increased efficacy to **0.41mm (60%)**\*<sup>11</sup>



Change in unadjusted AL of OD. Error bars represent SEM.

#### **YEAR 3 TO 5**

- Essilor® Stellest® lenses remained effective in slowing myopia progression during the third<sup>12</sup>, fourth and fifth vear<sup>13,14</sup>
- Essilor® Stellest® lenses were effective in slowing myopia progression & axial elongation in older children (10-18 years old)<sup>12,14</sup>
- Over five years, Essilor® Stellest® lenses slowed myopia progression by 1.75D and axial elongation by 0.72mm on average for all subjects\*<sup>14</sup>

# **VISUAL PERFORMANCE**

All children wearing Essilor<sup>®</sup> Stellest<sup>®</sup> lenses had vision as clear as those children wearing single vision lenses.<sup>15</sup>

Essilor® Stellest® lenses offer clear vision at all viewing distances, including far vision and near vision.

# RELATIONSHIP BETWEEN EFFICACY AND OTHER PARAMETERS

Efficacy results are not influenced by other parameters such as age, gender, initial myopia or axial length, myopic parents, lag of accommodation or near phoria.<sup>15</sup>

# ADAPTATION TO THE ESSILOR® STELLEST® LENS



of children adapted within 3 days after first dispensing§15



of children adapted within 1 week after first dispensing§15

# **RECOMMENDED WEARING TIME**

The more a child wears Essilor® Stellest® lenses the better the efficacy." Hence, children should wear Essilor® Stellest® lenses during waking hours:



at least per day, every day

## **ESSILOR® STELLEST® LENS RANGE AVAILABILITY**

TECHNOLOGY	H.A.L.T.
SPHERE / CYLINDER POWER	SPH [0.00; -10.00]; CYL [0.00; +4.00]
EXTENDED RANGE <sup>®</sup>	SPH [+2.00; -12.00]; CYL [0.00; -4.00] depending on sphere (SER must be ≤0 for sphere [0.00; +2.00])
PRISM	up to 2 Δ/lens
DIAMETER	ø65 MM, ø70 MM
COATING	Crizal® Rock™
MATERIAL	Airwear® 1.59
UV CUT OFF	100% UV Protection#

Essilor® Stellest® lenses are now available with sun tints, to continue to wear Essilor® Stellest® lenses for outdoor activities with UV protection, glare reduction and comfortable vision.<sup>5</sup>

## **ESSILOR® STELLEST® LENS RECOMMENDATION**

#### **CENTRATION & FITTING**

The position of the reference point is the centre of the rings of the lenslets. It is the point where the prescription is measured and controlled.

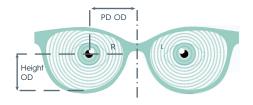
This marking (dot) is the reference point for the centering of the lens.

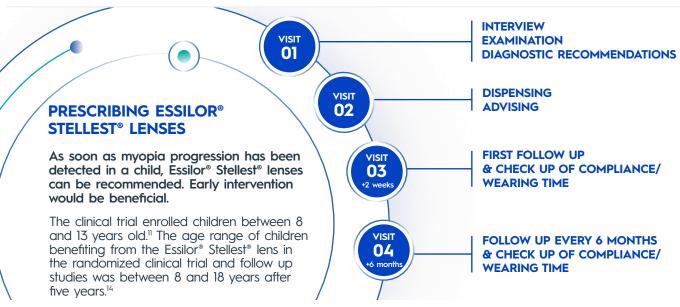
#### **HORIZONTALLY**

Monocular pupillary distances OD and OS

#### **VERTICALLY**

Monocular heights OD and OS





- H.A.L.T, Highly Aspherical Lenslet Target

  \* Two-year prospective, controlled, randomized, double-masked clinical trial results on 54 myopic children wearing Essilor® Stellest® lenses compared to 50 myopic children wearing single vision lenses in Wenzhou China.

  Results based on 32 children from the Test Group wearing Essilor® Stellest® lenses of least 12 hours per day every day for two consecutive years

  \* Compared to combined single vision lens groups SVI((M-24M)+SVL/2(24M-35M))

  \* Compared to the 60-month progression of the extrapolated control group (predicted average annual decrease in SER by 9.7%, Smotherman C, et al. IOVS 2023;64:ARVO E-Abstract 811 and predicted average annual decrease in AL by 15%.

  \* Shamp W, et al. IOVS 2022;63:ARVO E-Abstract A0111)

- Subject to availability and launch timelines. By absorption. Additional UV back side reflection reduction when combined with Crizal\* coating Parsisher O, Kauppinen M, Vilginen A. The progression of myopia from its ones at a gee 8-12 to adulthood and the influence of heredity and external factors on myopic progression. A 23-year follow-up study. Acta Ophthalmol. 2014;92:730-739 Chua SY, Sabanayagam C, Cheung YB, Chia A, Valenzuela RK, Tan D, Wong TY, Cheng CY, Saw SM. Age of onset of myopia predicts risk of high myopia in later childhood in myopic Singapore children. Ophthalmic Physiol Opt. 2016;36:388-394 Matsumura S, Lanca C, Hloon HM, Brennan N, Tan C-S, Kathrani B, Chia A, Tan D, Sabanayagam C, Saw S-M. Annual Myopia Progression and Subsequent 2-Year Myopia Progression in Singaporean Children. Ophthalmic Physiol Opt. 2016;36:388-394 Matsumura S, Lanca C, Hloon HM, Brennan N, Tan C-S, Kathrani B, Chia A, Tan D, Sabanayagam C, Saw S-M. Annual Myopia Progression and Subsequent 2-Year Myopia Progression in Singaporean Children. Ophthalmic Physiol Opt. 2016;36:388-394 Matsumura S, Lanca C, Hloon HM, Brennan N, Tan C-S, Kathrani B, Chia A, Tan D, Sabanayagam C, Saw S-M. Age of onset of myopia progression and Subsequent 2-Year Myopia Progression in Singaporean Children. Ophthalmic 2016;36:388-394 Matsumura S, Lanca C, Hloon HM, Brennan N, Tan C-S, Kathrani B, Chia A, Tan D, Sabanayagam C, Hu A, Hall M, Saw S, Sabanayagam C, Hu A, Matsumura S, Lanca C, Hoon HM, Brennan N, Tan C-S, Kathrani B, Chia A, Tan D, Sabanayagam C, Saw S-M. Age of onset of myopia in Children Ophthalmol 2008;18:1299-1285 Janes LA, Sinnoth LT, Mutti DO, Mitchell P, Utdonik K. Parental History of Myopia, Sports and Outdoor Activities, and Future Myopia. Invest Ophthalmol 2008;18:1299-1285 Janes LA, Sinnoth LT, Wang Y, Zhan J, Liu H, Wang YP, Zhan SY, Gopinath B, Mi
- 2015;10:E013-614
  Schnott LT, Cotter SA, Jones-Jordan LA, Kleinstein RN, Manny RE, Twelker JD, Mutti DO, Collaborative Longitudinal Evaluation of E, Refractive Error Study G. Prediction of Juvenile-Onset Myopia. JAMA Ophthalmol. 2015;133:683-689;
  Wong YL, Li X, Huang Y, Yuan Y, Ye Y, Lim EW, Yang A, Spiegel DP, Drobe B, Bao J, Chen H. Eye growth pattern of myopic children wearing spectacle lenses with aspherical lenslets compared with non-myopic children. Ophthalmic Physio
  Obi: 2024-44(71):2026-213
- 1. J. Hung Y, Li X, Yang A, Zhou F, Wu J, Wang C, Li Y, Lim EW, Spiegel DP, Drobe B, Chen, H. Spectacle lenses with aspherical lenslets for myopia control vs single-vision spectacle lenses a randomized clinical trial. JAMA ophthalmology 22;14(5):472-8
- Judge Y. Was Live C., Zhang S., Yang A., Drobe B., Chen H., Bao J. Myopia Control Ecacy of Spectacle Lenses with Aspherical Lenslets: Results of a 3-year Follow-up Study. Am J. Ophthalmol. 2023;253:160-168.
  B., Xue L., Huang Y., Lim EW., Bao J. Spectacle lenses with highly aspherical lenslets for myopia control: 4-year clinical trial results, Investigative Ophthalmology & Visual Science. 2023;64(8):4162. Presented at the 2023 ARVO Annual Meeting,
- Text of circuits Li C, Yin Z, Cui Z, Lim EW, Drobe B, Chen H, Bao J. Myopia control efficacy of spectacle lenses with highly aspherical lenslets: results of a 5-year follow-up study. Investigative Ophthalmology & Visual Science. 2024 Jun
- Boo J, Yang A, Huang Y, Li X, Pan Y, Ding C, Lim EW, Zheng J, Spiegel DP, Drobe B, Lu F, Chen H. One-year myopia control efficacy of spectacle lenses with aspherical lenslets. Br J Ophthalmol. 2022;106(8):1171-1176
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