The smart way to manage myopia in children



HOYA
FOR THE VISIONARIES

This document is intended for Eye Care Professionals



Together we can tackle myopia in children

HOYA Vision Care is one of the frontrunners in the fight against myopia and as your partner we provide you with effective solutions to protect your young patients' vision today and in the future.

MiYOSMART, an innovative[2] spectacle lens designed to slow down myopia progression and its associated eyesight complications, was developed by HOYA Vision Care in collaboration with The Hong Kong Polytechnic University, so children can enjoy their lives more by seeing clearly.

MiYOSMART comes to market at a time when myopia is on the rise.[1] You play a crucial role in assisting parents in picking effective myopia management options for their children by providing innovative technology to reshape their future vision.

With MiYOSMART, you can continue to fuel your practice with innovative solutions, while helping improve future generations' vision.

An estimated **5 billion people, half of the global population,** could be myopic by **2050**.[1]

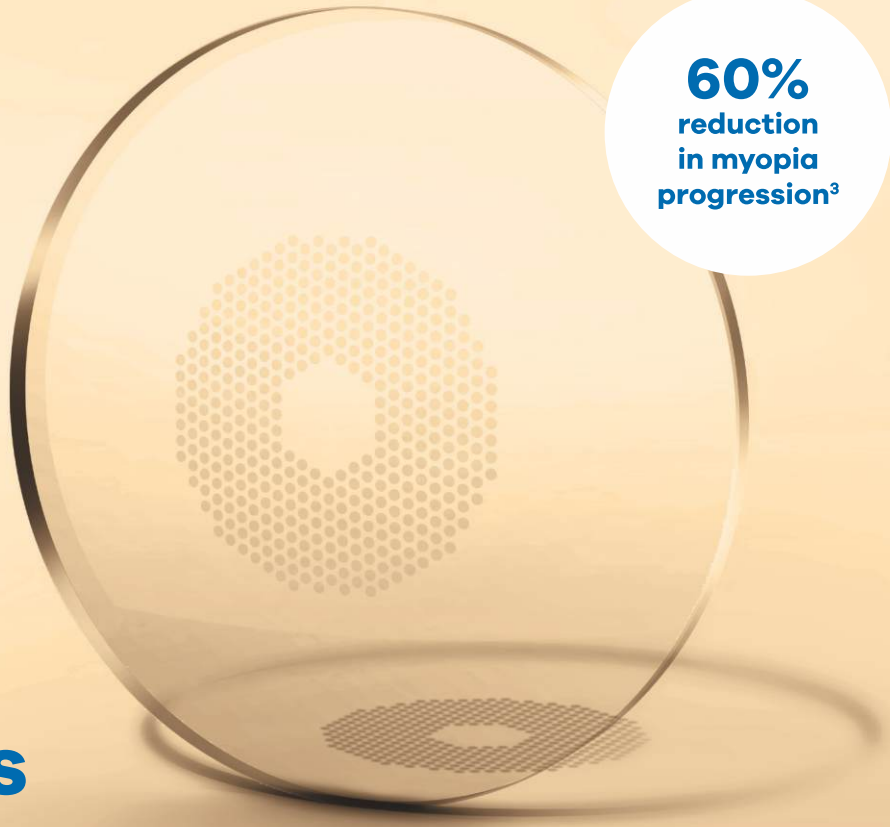
"MiYOSMART is an evolutionary spectacle lens, which demonstrates impressive efficacy in slowing down myopia progression. I am confident to recommend it as one of the first-line interventions to patients who need and seek myopia control."



Prof. Weizhong Lan

Professor of Ophthalmology at Aier Eye Hospital, China

60%
reduction in myopia progression[3]



Introducing: MiYOSMART spectacle lens

MiYOSMART is a non-invasive spectacle lens specifically designed to slow down myopia progression in a safe, easy and effective way.[3-7]

Safe[3-7]

Easy

Effective[3-5]

Non-Invasive

An award-winning myopia management solution[8,9]

Gold Prize, Grand Award & Special Gold Award Winner, International Exhibition of Inventions of Geneva 2018

Silmo d'Or Award in Vision category, Silmo Paris Optical Fair 2020

INTERNATIONAL MYOPIA INSTITUTE

Reported as an effective myopia management option by IMI.[10]



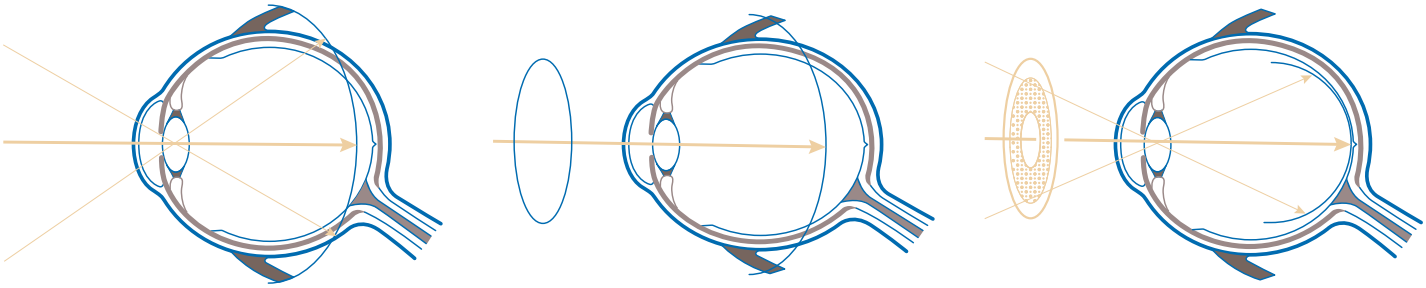
Managing myopia progression with innovative D.I.M.S. Technology[2]

Together with The Hong Kong Polytechnic University, Hoya Vision Care developed the first spectacle lens with Defocus Incorporated Multiple Segments (D.I.M.S.) Technology that manage myopia progression. This technology is based on the peripheral defocus theory.

In the uncorrected myopic eye, rays are focused in front of the central part of the retina and behind in the mid-peripheral and peripheral retina. By wearing a single-vision spectacle lens, rays are focused on the retina, in the central part of it, creating peripheral hyperopic defocus in the mid peripheral and peripheral retina.

In comparison, MiYOSMART spectacle lens with D.I.M.S. Technology creates a myopic defocus, focusing rays in front of the retina while correcting the myopic refractive error on its entire surface.

Managing Myopia with Myopic Defocus



Uncorrected Myopia

Traditional Single-Vision Correction

Ideal Correction

"D.I.M.S. Technology is my first choice to manage myopia – it's safe, effective and easy to use."



Prof. Hakan Kaymak

Professor of Universität des Saarlandes and leading researcher at the Internationale Innovative Ophthalmochirurgie in Düsseldorf, Germany



A myopia management solution backed by research

Many clinical trials have been undertaken to explore the effectiveness and safety of MiYOSMART in slowing myopia progression.

Myopia progression slowed by 60% over 2 years*[3]

- Myopia progression, defined as change in spherical equivalent effectiveness and safety of refraction, slowed by 59%
- Axial elongation decreased by 60%
- Myopia progression stopped in 21.5% of those wearing MiYOSMART

*The 2-year randomized controlled trial involved 160 children aged 8-13 years.

Sustained effect after 3 years*[4]

- MiYOSMART spectacle lenses restored the emmetropic eye growth in children aged 8-13 by reducing axial elongation

*The 3-year follow-up clinical study included 120 children aged 8-13 from the original 2-year RCT.

Sustained myopia control over 6 years and no rebound effects upon discontinuation*[5]

- Children had less than -1.00D cumulative myopia progression on average over the entire period

*Discontinuation measurements compared with the general age-matched non-treated population. The 6-year follow-up clinical study included 90 children aged 8-13 from the original 2-year RCT.

For additional MiYOSMART studies please scan the following QR code or visit:

www.hoyavision.com/about-hoya/hoya-vision-care-news/summary-of-all-the-miyosmart-studies-and-scientific-documentation/

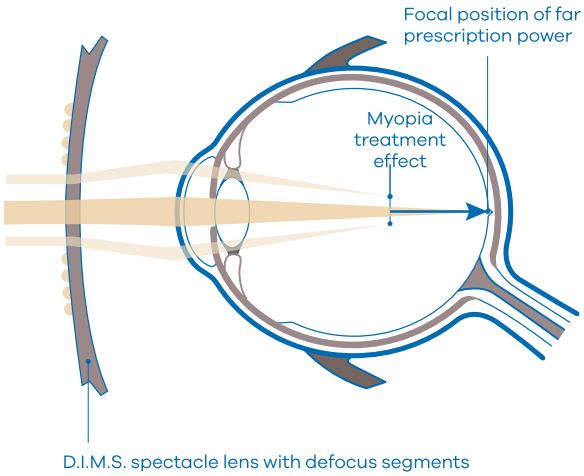
How D.I.M.S. Technology works in MiYOSMART

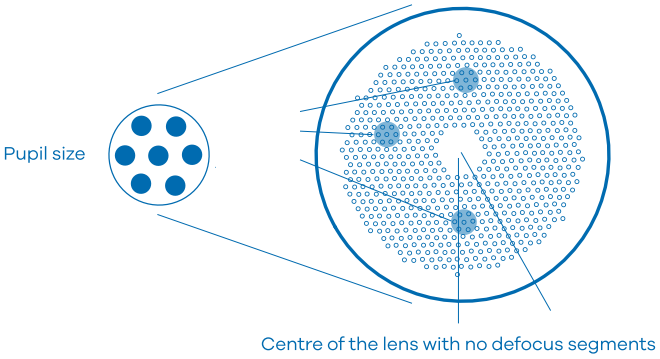
To effectively slow down myopia progression, myopic defocus must be continuously presented, even during eye movements. This requires a significant quantity of defocus segments to be evenly distributed on the lens surface.

With decades of experience in ophthalmic lens development and production, HOYA Vision Care developed the D.I.M.S. Technology, executed in a honeycomb-shaped defocus segment zone to slow down myopia progression.

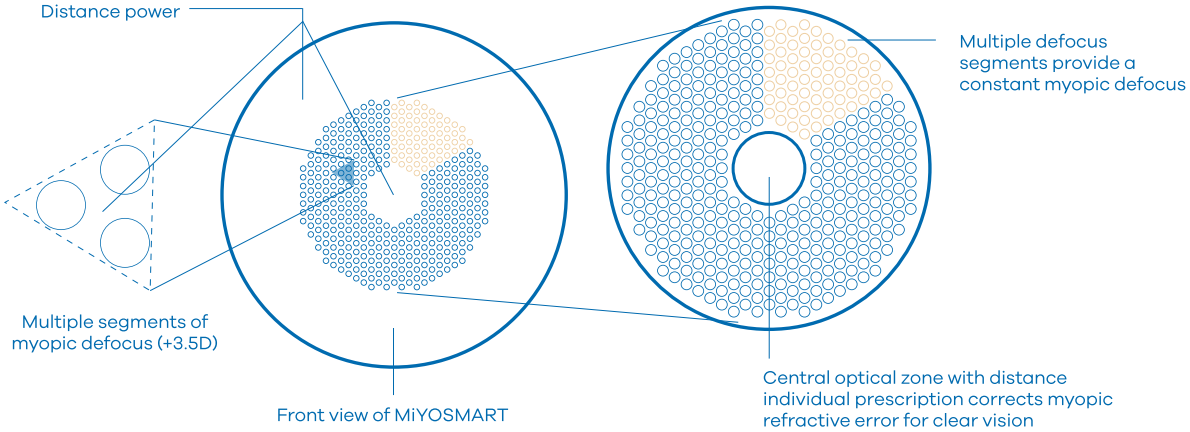
The 9.4mm central optical zone of the lens is a segment-free zone, designed to make it possible to measure lens power and correct the myopic refractive error to meet clear vision needs. Using the focus-defocus zones provides clear vision and manages myopia progression simultaneously.

Furthermore, the cosmetic appearance of the MiYOSMART spectacle lenses is the same as regular single-vision spectacle lenses.





The result: smooth-surfaced spectacle lenses that both correct and slow down myopia progression.[3-5]



Availability Chart and Product Information

Index	1.59	**Treatment Zone**	Around 33mm in diameter
Power	SPH: 0.00D to -10.00D	**Defocus Power**	3.5D
	CYL: -4.00D	**Prescribed Prism**	3Δ Dioptre per lens
	Highest minus power: -10.00 with +4.00 CYL	**Diameter**	Up to 75mm, depending on the prescription power
Central Clear Zone	Around 9.4mm in diameter		

With MiYOSMART's features and your care, we can give children better vision and better protection

MiYOSMART Eye Shield

The impact-resistant material with UV protection

We recognise that children are active and always on the go. That's why we use polycarbonate 1.59 – a highly impact-resistant, yet thin and light material – to offer young eyes the protection they need, at all times.



Strong and safe

Optical clarity

Thin and light

UV protection

MiYOSMART Coating

MiYOSMART comes with an easy-to-wipe, anti-reflective coating to fit into any active child's lifestyle.



Water repellent
Prevents water stains

Special anti-reflective coating
Less prone to scratches

MiYOSMART Sun Range

- The MiYOSMART sun spectacle lenses range adapts the same innovative D.I.M.S. Technology as MiYOSMART clear spectacle lenses to slow myopia progression.
- We offer photochromic and polarized lens options for protection from intense sunlight, without compromising on the children's eyesight and staying active outdoors.[3,11-13]



Recommendations for your new MiYOSMART wearers

Adaptation Recommendations

During the adaptation period (1-2 weeks), it is recommended that your patient is cautious during the following activities while wearing their MiYOSMART spectacles:

Intensive sport activities e.g. football

Physical activities or physical education lessons at school

Operating any kind of vehicle e.g. cycling, scootering

Walking up or down high staircases or participating in height activities, e.g. climbing

MiYOSMART spectacle lenses with D.I.M.S. Technology are generally well-tolerated and accepted by children.[14]

However, if the child feels any discomfort following the adaptation period of 1-2 weeks, they should contact their Eye Care Professional.

The child-friendly, easily adaptable and non-invasive method to slow down myopia progression

Care goes beyond the lens

Spending more time outdoors
Some evidence shows that spending more time outdoors delays the onset of myopia and may reduce myopia progression.[16] It is recommended to spend at least 2 hours of outdoor activity a day.

Give eyes a break
Reduce the child's eye strain by reminding them to take breaks from intensive screen time and near work activities. Remember the 20:20:20 rule – they should take breaks every 20 minutes to look at a distance of 20 feet for 20 seconds or more.[17]

Seek regular eye care
The child's eyesight should be checked regularly to ensure myopia progression or other vision problems are detected and treated early. Some children may downplay their vision problems.

Supporting you to support your patients

To ensure MIYOSMART benefits are maximised, it is recommended to follow the protocol below.[18]

First visit

During the first visit, use cycloplegic refraction to diagnose myopia and assess visual functions of the child to get a clear overview of baseline status. Determine if the wearer is suitable for MiYOSMART (no systematic or other eye diseases should be present e.g. keratoconus, strabismus).

Take the child's and their parents' ocular and optical history.

Conduct the following examinations[18,19]:

- Distance and near visual acuity
- Subjective and/or objective refraction
- Binocular vision and accommodation assessment
- Ocular health examination
- Cycloplegic refraction (every 6 months)
- Axial length measurement (every 6 months)
- Dilated fundus examination (annually or on indication)

Aftercare visit

This should be scheduled 2 weeks following first use of MiYOSMART.

During the aftercare visit, evaluate how the child is getting on with his/her MiYOSMART spectacle lenses. Ask the child or his/her parent to fill in an adaptation and performance questionnaire to understand their experience and highlight any adaptation issues.

Follow-up visits

It is recommended that the wearer has follow-up visits for the visual functions assessment and to monitor myopia progression at least every 6 months.

By acting today, we give our kids more opportunities tomorrow

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Disclaimers

MiYOSMART has not been approved for myopia management in all countries, including the U.S., and is not currently available for sale in all countries, including the U.S.

MiYOSMART spectacle lenses may not be able to address individuals' conditions due to natural deficiencies, illness, pre-existing medical conditions and/or advanced age of consumers. The information contained herein is general information and is not intended to constitute medical advice.

This brochure includes recommendations for Eye Care Professionals. The Eye Care Professional is responsible to ensure that using the recommended procedure is allowed to be conducted in the country where they practice. Suitability of each recommended procedure for the patient shall be evaluated by the Eye Care Professional based on their personal professional judgment.

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