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Hong Kong launches new generation of myopia control spectacle lenses

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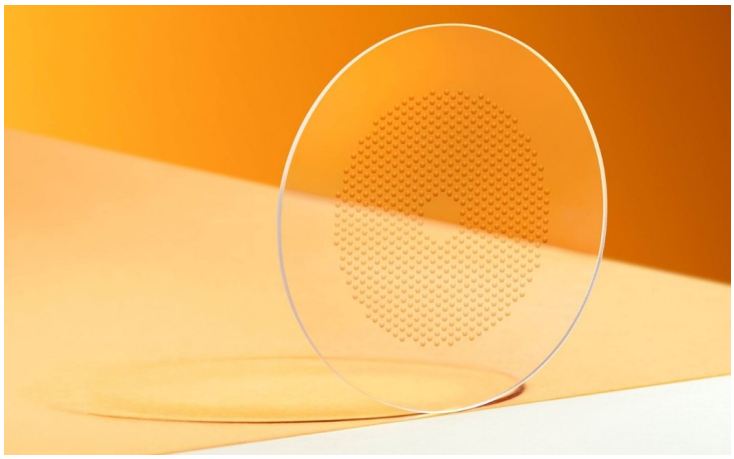
To strengthen industry-research-academia collaboration and further advance myopia control technologies



The School of Optometry at The Hong Kong Polytechnic University (PolyU) and HOYA Vision Care have long been committed to developing myopia control spectacle lenses to help safeguard public eye health. Building on more than a decade of collaboration, the two parties have achieved another breakthrough in advancing their patent-protected Defocus Incorporated Multiple Segments (DIMS) technology to launch a new generation of myopia control spectacle lenses featuring the Triple Enhanced Design (DIMS TED).

The three key features of DIMS TED are: (1) Defocusing segments positioned closer to the geometric centre of the spectacle lens to activate the near-peripheral retina, identified as highly responsive to the myopic defocus signal that can regulate myopia progression, thereby enhancing myopia control efficacy; (2) Higher defocus power to enable a stronger myopic defocus signal; and (3) an Extended treatment zone that covers a wider peripheral visual field.

Clinical studies have confirmed the effectiveness of this innovation. In a randomised controlled clinical trial involving 196 myopic Hong Kong children aged 4 to 12, the average results from the first 12 months of the study demonstrated that children wearing DIMS TED spectacle lenses on average showed no myopia progression, while excessive eye growth was considerably slowed. The main cause of myopia progression was effectively addressed.

The study also showed that DIMS TED spectacle lenses are HOYA's first spectacle lens with reported clinical evidence for effective control of myopia progression from the age of 4 years, as a monotherapy. The findings demonstrate significant benefits for early-onset myopia and underscore the importance of early intervention.

This breakthrough sets a new benchmark for myopia control lenses and marks a milestone in the long-standing industry-research-academia collaboration between HOYA Vision Care and PolyU.