



USA Patent application number: 17/659,941

CHN Patent number: 202210240675.8

# **MyoEase**

New For Children Myopia Management Solution



# Retinal Peripheral Defocus Principle

The Retinal Peripheral Defocus Principle was established by studies from the Brien Holden Vision Institute and the University of Houston College of Optometry, as well as many other research institutes all over the world through ten years of lab studies, eyewear design, and eyeglass wearing trials.



# Weaken Contrast, Slow down myopia progression

Reading high contrast of black and white may be a factor of myopia progression which was proposed by the famous Optometry expert, Frank Schaeffe. Therefore, the right mechanism of myopia progression may be due to the contrast while reading.



Low Contrast

**High Contrast** 

This research shows, the contrast is the main reason that causes the myopia progression. The higher the contrast of the environment, the more the eyes feel tired, the greater the degree of myopia.

Schaeffel in his laboratory has recently discovered that reading black letters on a white background may also be a possible factor in myopia development.<sup>6,7</sup> So the precise mechanism responsible for myopic progression when reading could be both driven by hyperopic defocus and contrast clues.

-Excerpt from the study by Schaeffel in Argentina



It would only be necessary to generate lenses with a clear "distance vision" central zone for the necessary myopic correction, a small annular transition zone and a peripheral plus-add or hyper aspheric zone that would produce a myopic blur similar to that produced by the design of the special glasses previously tested.

Argentine ophthalmologists proposed that ensuring the clear central optical zone, and adding the microlens defocused area surrounding can effectively slow down the growth of the eye axis which plays a role in defering myopia.



# Multi-pinhole micro-transparent lens defocus design

Through digital and precise micro-engraving, the high-precision micro-transparent pinholes are evenly arranged in a ring shape to form an optical defocus area, which is integrated into the physiological curvature of the retina to slow down the growth rate of the eye axis.



Compound eye mircotransparent lens technology: Compound eyes are the main visual receptors of insects. Each ommatidium belongs to a separate photosensitive unit, so each ommatidium will form a separate image point, and a ring-shaped optical defocus area is formed through compound eye bionic technology. Digital precision microengraving technology: each micro-lens is precisely engraved with nanometer -level precision, while ensuring clear vision in the central area. The annular optical defocus area can form a visual barrier to ease the growth of the eye axis. Physiological aspherical multi-point defocusing design: we integrate the physiological aspherical design into the lens on the front surface, and the retinal curvature is reduced outside the central light area, which improves the safety and comfort of use as a whole.

# Annular pinhole design P.F.T

According to the innovative theory of "pinhole effect" by Dr. William Holly Showbes, the visual contrast of the micro-transparent area is reduced through the micro-transparent pinholes, and the abnormal light is filtered to achieve the state of "weak contrast pin-hole vision". The scientifically designed pinhole allows the positive light source to enter the cornea through the small hole, and the light source is corrected to enter, so that the eye muscles can easily function, improve and filter the abnormal light, and focus through the crystal refraction, similar to the principle of a telescope.





The digital and precise engraving realizes the annular pinhole design.

Pinhole vision state annular

pinhole technology

Each MyoEase control micro-transparent pinhole defocus professional edition children relief lens . At the same time, the concave design ensures the combination of micro-transparent lens has a pinhole vision state, which can help the eyes better delay the progression of myopia.

# Has been applied a patent of invention

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Annular pinhole technology with a micro- transparent lens, provides more assurance for the wearer. Utilizing global technology and scientific research, along with Conant digital and precise micro-engraving, MyoEase is working to protect children's eyesight.

Annular pinhole design





## Aspheric design, Impact resistance, Blue Light Filtering, Multi-protection in a pair of glasses

### **New Materials**

Imported MR-8Plus Material from Mitsui Chemicals.

#### Impact resistance

Our lenses made with the MR-8Plus material have been tested at Colts and NSL for superior impact resistance that is greater than standard High Index materials.

## **Blue Light Blocking**

In line with international standards of blue light blocking (or filtering), our UV++ lenses filter out some of the most harmful blue light waves.

## Aspherical lens

Aspherical lenses improve visual comfort







## Improved Layers of Films and Coatings















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