

CHN Patent number: ZL201110438971.0

E-FREE

Adapt easily, Live freely

First Time Pal Wearers Test

96%
Adaptated

84%
Wearers are reported to
easier adapted in 4 days



苏大明世®

Specially Suitable Crowd

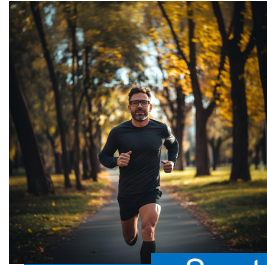
- People who require ADD higher than 1.5D to wear PALs for the first time
- Aberration sensitive wearers
- People who are not satisfied with peripheral aberration and swim effect



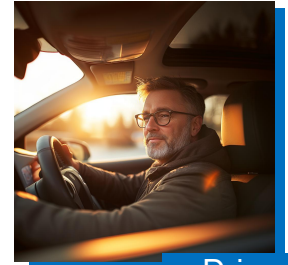
Indoor



Outdoor



Sport



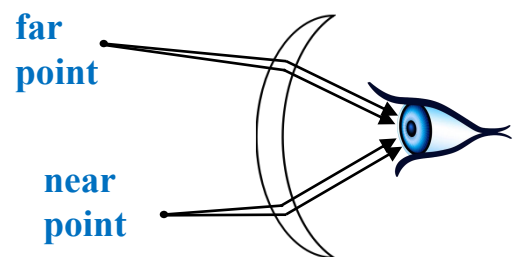
Drive

Ground breaking technology

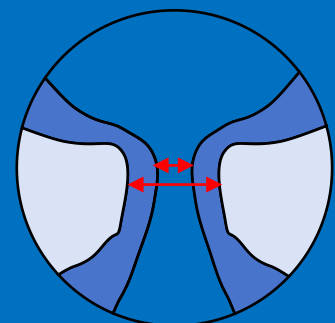


1. Ultra Low Distortion

It can optimize easily noticeable astigmatism into less noticeable astigmatism across the entire field of view, while optimizing non-linear interference astigmatism into linear astigmatism that is easily acceptable to the wearer.



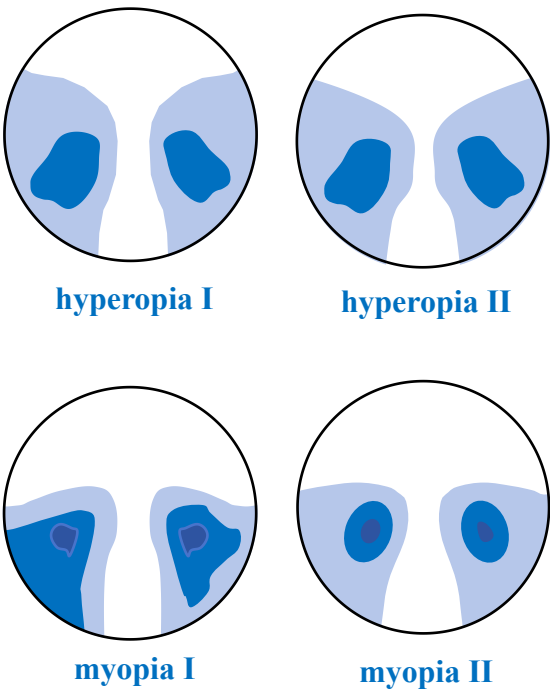
This technology can effectively improve the wearer's adaptability and fitting success rate, and is a reliable technical guarantee for 'sec-fit' progressive lenses.



Ground breaking technology

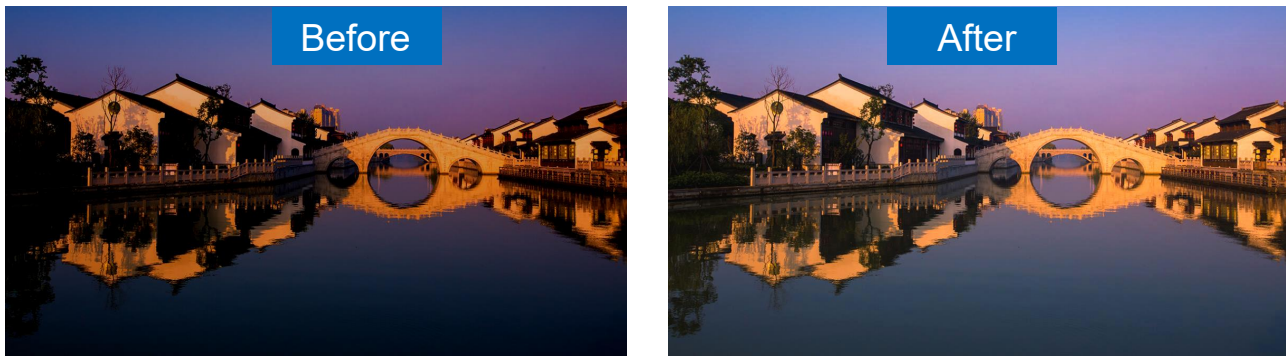
2. Refractive type optimization

E-FREE products leverage big data feedback to determine the optimal design balance points for different prescription powers across various zones. This involves detailed design segmentation for emmetropia, myopia, and hyperopia (low, medium, and high powers), as well as low, medium, and high ADD.



hard soft

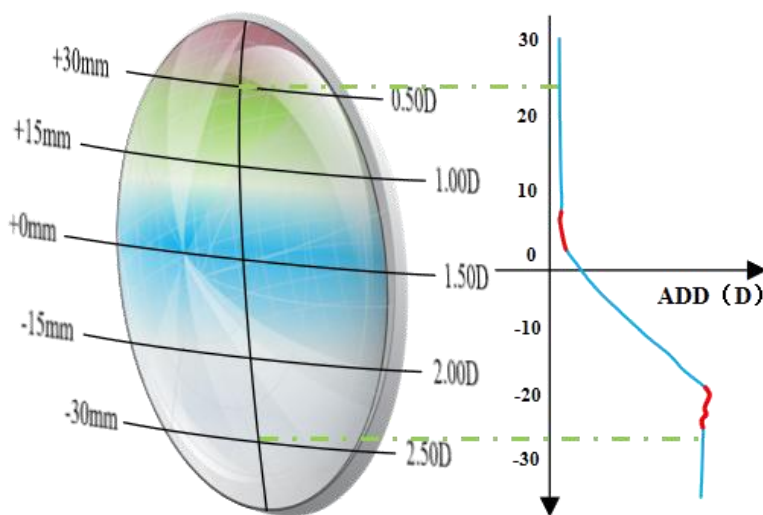
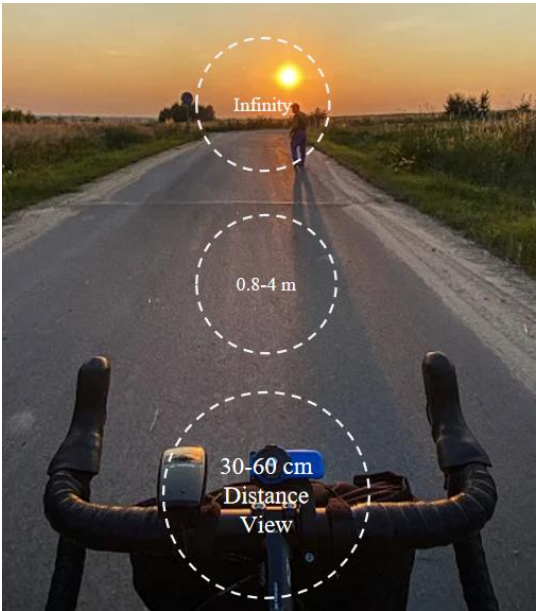
The design enhances the unique feature of near-instant adaptation with minimal interference, while optimizing for the varying visual field requirements of different refractive errors for distance and near vision.



Ground breaking technology

3. Stable-Gazing technology

E-FREE products utilize mirror-eye trajectory model data for analysis and apply adaptive optimization to the areas where the wearer is likely to gaze. This technology integrates several refined techniques, including meridional gradient design, smooth transition zones, stable-gazing area design, and smooth transition for reading inset.



This not only enhances wearing comfort but also greatly reduces the adaptation time for the wearer.

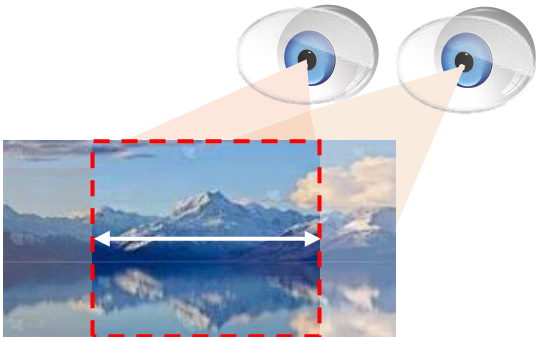
These features enable natural visual transitions between distant, intermediate, and near reading areas on the lens, eliminating abrupt changes. Systematically, it significantly alleviates traditional progressive lens issues such as magnification difference and peripheral swim effect caused by abrupt transitions.

Ground breaking technology

4.Binocular vision balance

Binocular vision balance technology simulates binocular vision for scenario-based analysis, ensuring a smooth vertical transition from distance to near vision while optimizing and balancing the nasal and temporal lateral visual fields to accommodate the eye's downward rotation capability.

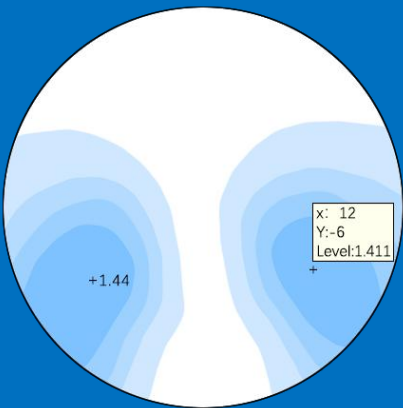
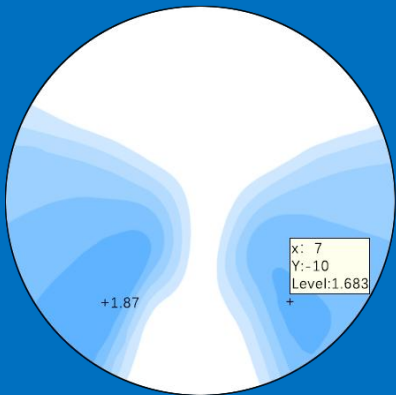
This technology allows for unobstructed vertical movement of the line of sight within the lens corridor and significantly reduces the sense of pressure and blurriness during lateral viewing. Consequently, it alleviates visual fatigue caused by prolonged visual tasks.



Conventional PALs

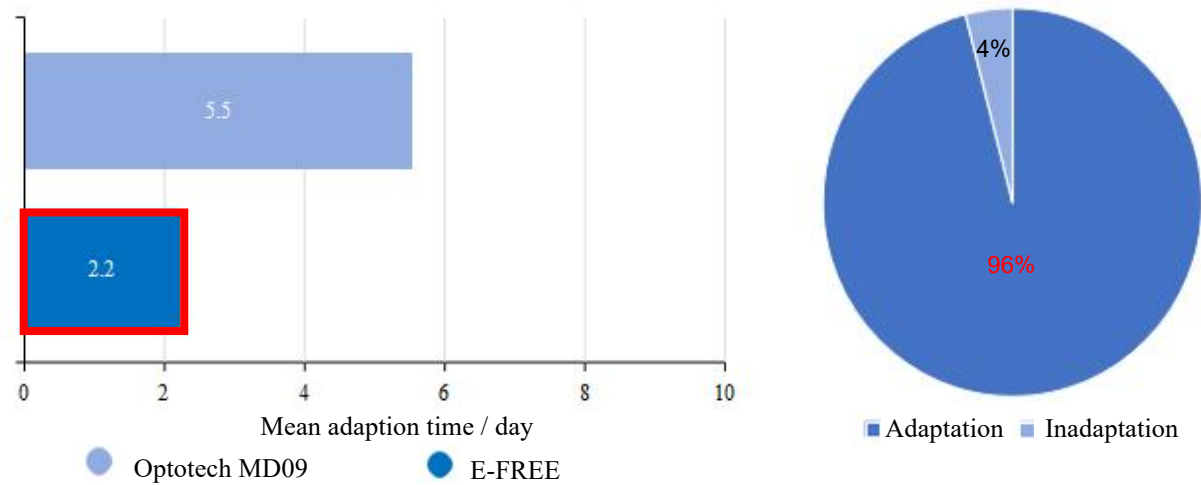


E-FREE



The maximum interference difference between the nasal and temporal sides of products is greatly reduced.

Application Test



Obviously reduce the adption time a survey on the adaption time and adaption rate comaprison between E-FREE and Optotech MD09 freeform lens. (all first time pal wearers

Appendix_A: Semi-finished parameters

Base Curve			Back Curve		Semi-Finished CT	Prescription Range	
Nominal	Actual (dpt)	Radius (mm)	Actual (dpt)	Radius (mm)		Sphere power	Cylinders
1.50	1.48D	378.378	6.60	84.848	10.0	-3.25~-6.00	≤-4.00
3.50	3.59D	155.989	6.60	84.848	7.5	-0.00~-3.00	≤-4.00
4.50	4.59D	122.00	6.60	84.848	10.4	+0.25~+3.00	≤-4.00
5.70	6.02D	93.02	6.60	84.848	14.3	+3.25~+5.00	≤-4.00
7.00	8.21D	68.21	6.60	84.848	9.0	+5.25~+8.00	≤-4.00