

Digital Surfacing Technology

IOT's digital surfacing technology uses advanced free-form manufacturing to create highly customised lenses with exceptional precision. Unlike traditional methods, this process optimises the lens surface point by point, enhancing clarity, reducing distortions, and improving visual comfort. It also allows for thinner, lighter lenses and smoother transitions in progressive designs, providing a superior wearing experience.

Main features:



Lens optimisation based on perceived power rather than vertex power.



Improved optical precision across the entire lens surface.



Customisation for different frame sizes, corridor lengths, and insets.



Enhanced wearer comfort and visual balance.

Benefits:

- Clearer, more accurate vision across all distances.
- Personalised lenses tailored to individual needs.
- Easier and faster adaptation for progressive lens wearers.
- Consistently sharp vision with reduced distortions.

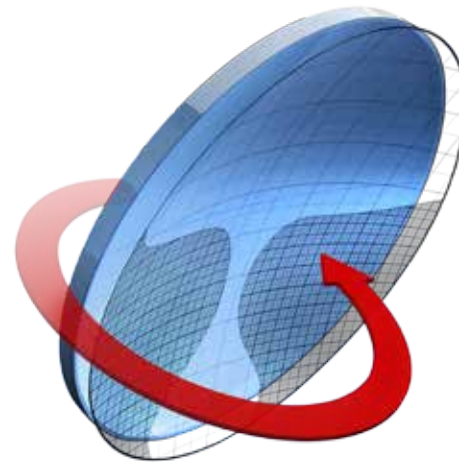
Precision in Lens Personalisation

By considering the true optical power at every point on the lens surface, IOT's digital surfacing technology enhances vision clarity and wearer comfort. It optimises lens geometry to maintain precise optical performance across all viewing zones.

Maximising Visual Comfort

IOT's digital surfacing technology adapts to each individual's visual needs by incorporating personalised design parameters, including corridor length, inset values, and frame dimensions. This level of customisation results in superior visual balance and ease of adaptation.

By prioritising how wearers actually perceive their vision, this technology sets a new standard in lens optimisation, ensuring a more comfortable and intuitive viewing experience.



Camber with IOT Intelligence

Innovation for your eyes

Camber Technology combines complex surfaces on both sides of the lens to provide excellent visual correction.

Main features:



Variable
base curve

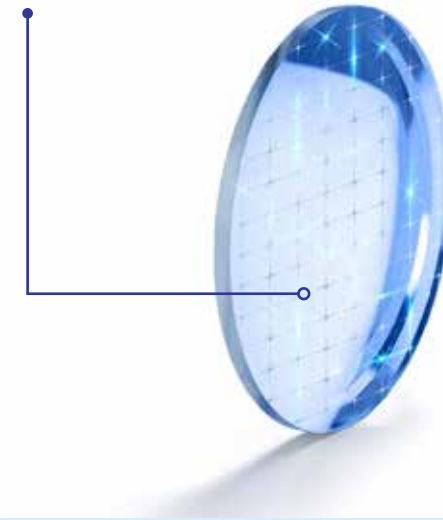
Flatter
lenses

Benefits:

- Better vision in all zones
- Improved reading area
- Easier adaptation
- Wider visual fields for all distances



Unique front surface



The components

The Camber blank

The Camber lens blank improves on the spherical lens blank, by offering a continuously increasing base curve that is better suited for progressive prescriptions.

The Camber Rx design computation by IOT

Camber lens designs are mathematically compensated for peripheral aberrations and include the intelligent use of the wearer's accommodation to reduced aberrations across the entire field of vision, as well as incorporate strict control of mean power to practically eliminate spherical error in lateral areas of the lenses.

Personalisation parameters

The Rx design computation is further enhanced by a complete set of individualisation parameters that take into consideration the unique attributes of the frame and the preferences of the wearer.

Technical Information →

IOT Digital Ray-Path 2

A real revolution in vision

In addition to mathematically compensating for oblique aberrations in personalised and compensated free-form lenses, IOT Digital Ray-Path 2 adds the intelligent use of the wearer's accommodation: the small power adjustments the eyes naturally make to view objects at different distances.

Main features:

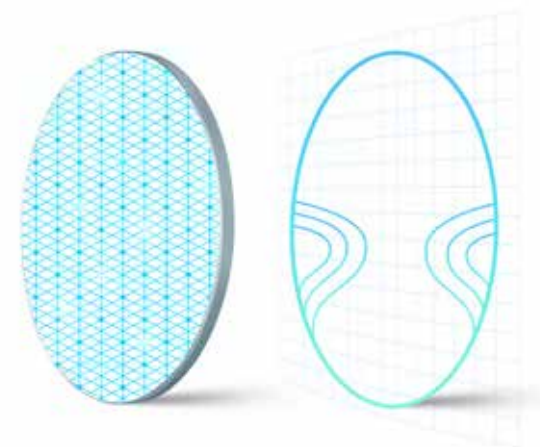
-  Personalisation
-  Compensated power
-  Optimised for accommodative object space
-  Consistency

Benefits:

- Wider visual fields
- Precise and comfortable vision
- A more consistent wearer experience
- Near elimination of peripheral blur
- Superior visual quality with digital devices

Pushing the limits of geometry in lens personalisation

IOT Digital Ray-Path 2 pushes the limits of geometry in lens personalisation by incorporating the wearer's accommodative capacity in the final lens calculation to further minimise oblique aberrations.



Accommodation as a key factor

Accommodation is the wearer's natural ability to focus on different distances, without moving their eyes or head, by stimulating or relaxing the lens within the eye. IOT Digital Ray-Path 2 incorporates this factor into each individual lens and considers the accommodative object space, the volume defined by the points within the clear visual range, for each gaze direction.

IOT Digital Ray-Path 2 works in synergy with nature. It utilises the innate power of the human eye to refine the optimisation process for personalised lenses.

Technical Information →

Steady Methodology

A great technological advance in free-form digital lenses

Steady Methodology is a technological breakthrough in free-form digital lenses since it allows strict control of mean power, which translates into progressive lenses with high levels of wearer satisfaction.

Main features:



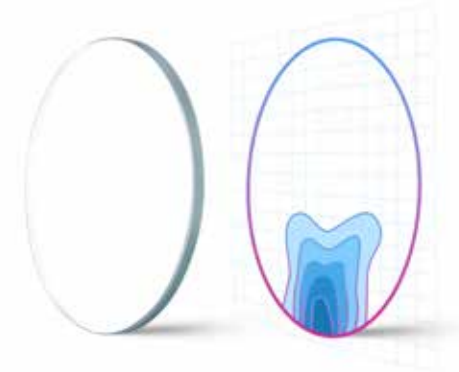
Strict control of mean power in distance area of the lens

Benefits:

- Higher image stability for reduced swim effect.
- Improves peripheral visual acuity in the distance.

A new vision

Steady Methodology carefully controls the mean power (spherical equivalent) of progressive lenses. Steady Methodology dramatically reduces unnecessary mean power in the periphery, especially on both sides of the fitting cross.



Bye swim effect. Hello stability

Swim effect is a non-stable perception of the surroundings that causes discomfort, and reduces overall lens satisfaction, making adaptation more difficult. Lenses designed with Steady Methodology provide wearers with more stable and natural vision.

Results



96% wearers enjoyed **excellent distance vision.**



92% wearers experienced **an improved visual comfort.**

Technical Information →

Steady Plus Methodology

Beyond Steady Methodology

Only available in Camber progressive lens designs, Steady Plus Methodology carefully balances the mean power required for intermediate and near vision, achieving a perfectly symmetrical and smooth distribution.

Main features:



Strict control of mean power in distance area of the lens



Binocular balance improvement

Benefits:

- Higher image stability for reduced swim effect.
- Improves peripheral visual acuity in the distance.
- Improved visual performance in intermediate and near.

A visual evolution

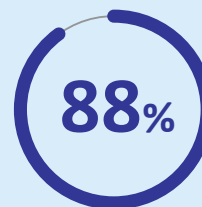
Steady Plus Methodology adds a substantial improvement in the wearer's binocular performance and provides a smoother visual experience as both eyes perceive identical powers for each gaze direction.



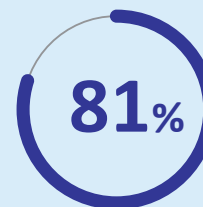
Stability, stability, and more stability

Swim effect is a non-stable perception of the surroundings that causes discomfort, and reduces overall lens satisfaction, making adaptation more difficult. Lenses designed with Steady Methodology provide wearers with more stable and natural vision.

Conclusions



88% wearers enjoyed **improved near vision.**



81% wearers experienced **great near and intermediate vision.**

Technical Information →