The new TECNIS® 1-Piece IOL

IT'S THE ONE

TECNIS®
A SpHERIC IOL

Abbott
A Promise for Life
THE NEW TECNIS® 1-PIECE IOL PROVIDES THE UNMATCHED BENEFITS OF TECNIS® TECHNOLOGY IN A NEXT-GENERATION ONE-PIECE DESIGN

OPTICS
The first and only FDA-approved wavefront-designed optic that rejuvenates vision by correcting spherical aberration to essentially zero.

MATERIAL
The proprietary hydrophobic acrylic material with the lowest chromatic aberration and highest optical throughput transmits healthy blue light and reduces the incidence of glistenings.

DESIGN
The only one-piece lens with the performance of a ProTEC 360° barrier edge, the stability of Tri-Fix 3-point design, and a frosted edge treatment.
“After 20 years in practice, my expectations for IOL performance are very high. The TECNIS® 1-Piece IOL has surpassed these expectations, especially for visual outcomes and optic clarity.

In addition, this new-generation one-piece design has responded to the issues associated with existing one-piece IOLs.”

— DONALD R. NIXON, MD, FRCSC
ONTARIO, CANADA
IT’S THE ONE TO CORRECT SPHERICAL ABERRATION TO ZERO

THE TECNIS® 1-PIECE IOL REJUVENATES VISION BY CORRECTING SPHERICAL ABERRATION TO ESSENTIALLY ZERO.

Mean spherical aberration measurements, 90 ± 15 days postoperatively. Lens Z9000: N = 25. Lens with spherical optic: N = 24.5

*The data as it appears here follows the OSA standard and has been changed from the original data to reflect a difference in sign (+ or −) that exists between the WASCA measurement and the OSA standard.

THE FIRST AND ONLY WAVEFRONT-DESIGNED IOL WITH CLAIMS APPROVED BY THE FDA FOR:

- Reduced spherical aberration
- Improved functional vision
- Improved night-driving simulator performance
  - Meaningful safety benefit for drivers and pedestrians with whom they share the road
  - Improved functional vision for other life situations under low-light conditions

The human cornea has on average +0.27 microns of spherical aberration throughout life, but spherical aberration of the natural lens increases with age.3

Clinical data show that correcting residual spherical aberration to zero results in better visual outcomes and the best depth of field.4

In a simulated night-driving study, the TECNIS® IOL provided an additional 14 m of identification distance and a ½ second of reaction time over a spherical IOL.6
**OPTICS**

In aviation-type visual performance testing, vision in low-light conditions (5 mm pupil) was superior with the complete spherical aberration correction provided by the TECNIS® IOL.3

<table>
<thead>
<tr>
<th>Lens</th>
<th>TECNIS® IOL</th>
<th>AcrySof® IQ IOL</th>
<th>B&amp;L LI61AO IOL</th>
<th>Spherical IOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Spread Function*</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
<tr>
<td>20/20*</td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
</tr>
<tr>
<td>Average Corneal SA</td>
<td>+.27</td>
<td>+.27</td>
<td>+.27</td>
<td>+.27</td>
</tr>
<tr>
<td>Lens SA Correction</td>
<td>-.27</td>
<td>-.17</td>
<td>0.0</td>
<td>+.15</td>
</tr>
<tr>
<td>Total Residual SA</td>
<td>0.0</td>
<td>+0.10</td>
<td>+0.27</td>
<td>+0.42</td>
</tr>
</tbody>
</table>

*Images simulated using ZernikeTool, created by George Dai, PhD.

**ZERO SPHERICAL ABERRATION = PEAK VISUAL PERFORMANCE.**

Residual Spherical Aberration of Monofocal Lenses (4 mm pupil)3

**HIGH-QUALITY VISION IN LOW-LIGHT CONDITIONS.**

In aviation-type visual performance testing, vision in low-light conditions (5 mm pupil) was superior with the complete spherical aberration correction provided by the TECNIS® IOL.3

**TECNIS® IOL**

**SIGNIFICANT IMPROVEMENT IN MTF OVER OTHER ASPHERIC LENSES.**

MTF Comparison of Lens Models (5 mm pupil)7

At 100 c/mm, the TECNIS® IOL shows improvement in modulation transfer function (MTF) over twice that of the AcrySof® IQ (SN60WF) and over three times that of the SofPort® AO (LI61AO).

*Average cornea eye model

**IOL With Residual Spherical Aberration**

Actual images as seen in an eye model through the TECNIS® IOL and an IOL with residual spherical aberration.2
HEALTHY BLUE LIGHT TRANSMISSION IS NECESSARY FOR OPTIMAL SCOTOPIC VISION.\(^6\)

- Scotopic vision declines with age, even in healthy eyes without cataract or retinal disease.\(^6\)
- Driving, mobility and peripheral vision problems have all been associated with reduced scotopic vision.\(^7\)

**Blue light provides 35% of scotopic sensitivity.\(^6\)**

[Graph showing the Luminous Efficiency of different wavelengths with scotopic vision highlighted at 35%]

- Blue-blocking IOLs reduce scotopic sensitivity up to 21%\(^6\)

**Blue-light is essential for healthy circadian rhythms.\(^6\)**

- Circadian rhythms are normal 24-hour cyclic activities in the body that influence sleep patterns, mood, alertness, and body temperature.
- Blue light helps regulate melatonin levels which influence circadian rhythms.\(^6\)
- Blue light has been shown to enhance alertness even in blind persons.\(^8\)

**There is no reason to block blue light**

- Blocking blue light does not provide any proven benefit and increases the risk of compromising scotopic vision and normal circadian rhythms.\(^6\)
- Furthermore, multiple peer-reviewed studies have failed to find a link between age-related macular degeneration (AMD) and blue light exposure.\(^6\)
**Better Material Reduces Chromatic Aberration.**

- Chromatic aberration is the uneven focusing of an optical system that causes different wavelengths of light to have different focal points.⁹
- Chromatic aberration of optical materials can be expressed by their Abbe number. A higher Abbe number is associated with less chromatic aberration and better optical performance.¹⁰,¹¹
- Materials with low Abbe numbers and high chromatic aberration negatively impact contrast sensitivity.¹⁰

**Higher Abbe Number Means Less Chromatic Aberration and Better Photopic Performance.**

- TECNIS® IOLs demonstrate lower chromatic aberration than AcrySof® IOLs.¹⁰

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**Better Material Not Associated with Glistenings and Calcification.**

- Glistenings in IOLs may decrease visual acuity¹² and contrast sensitivity.¹³
- Temperature fluctuations of other IOLs have been shown to cause glistening formation.¹⁴
- TECNIS® IOLs are made with a proprietary cryo-lathing method that limits microvoid formation and high temperature fluctuations for reduced glistenings.¹⁴
- The TECNIS® 1-Piece hydrophobic acrylic material is not associated with calcification and opacification found in hydrophilic acrylic IOLs.¹⁵,¹⁶
IT'S THE ONE WITH THE NEXT-GENERATION DESIGN

PROTEC 360° EDGE DESIGN INCREASES PROTECTION.

360° square edge for uninterrupted contact at the haptic-optic junction

Frosted edge designed to minimize unwanted edge glare

Limits LEC migration at the haptic-optic junction

AcrySof® one-piece IOL  TECNIS® 1-Piece IOL
**TECNIS® 1-PIECE IOL INCREASES EASE OF IMPLANTATION.**

- Bag-friendly, coplanar delivery
- Proprietary surface treatment for ease of unfolding
- Polished haptic loops enable controlled, gentle unfolding in capsular bag

**Reduction center thickness for slim lens profile facilitates implantation**

**TRI-FIX 3-POINT FIXATION DESIGNED TO INCREASE STABILITY.**

- Haptics offset to allow three points of capsular bag contact
- Designed to provide refractive predictability, long-term stability, and centration

**TECNIS® 1-PIECE IOL DESIGN**

- Bag-friendly, coplanar delivery
- Proprietary surface treatment for ease of unfolding
- Polished haptic loops enable controlled, gentle unfolding in capsular bag
OPTIMAL VISUAL OUTCOMES ARE 1-PIECE AWAY.

“TECNIS® 1-Piece IOL’s innovative ProTEC 360° edge design and Tri-Fix stability combine with the proven TECNIS® optic and material to deliver the next generation in one-piece lens performance.”

— Y. RALPH CHU, MD
EDINA, MINNESOTA

TECNIS® 1-Piece IOL Specfications

<table>
<thead>
<tr>
<th>Measure</th>
<th>TECNIS® 1-Piece IOL</th>
<th>AcrySof® IQ IOL</th>
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<tbody>
<tr>
<td><strong>OPTICS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrects spherical aberration to essentially zero</td>
<td>✔</td>
<td>✗</td>
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<td><strong>MATERIAL:</strong></td>
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<td></td>
</tr>
<tr>
<td>Transmits healthy blue light</td>
<td>✔</td>
<td>✗</td>
</tr>
<tr>
<td>Not associated with glistenings</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td><strong>DESIGN:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ProTEC 360° barrier edge</td>
<td>✔</td>
<td>✗</td>
</tr>
<tr>
<td>Tri-Fix 3-point fixation</td>
<td>✗</td>
<td>✗</td>
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</table>

TECNIS® 1-Piece IOL

Refractive Index 1.47

Lens Model Number ZCB00

A-Constant 118.8 *

*Standard biometry

TECNIS® IOLs Are Approved for NTIOL Designation.

DISCOVER THE NEW TECNIS® 1-PIECE IOL


• TECNIS® IOL corrects spherical aberration to essentially zero5
• ProTEC 360° barrier edge for superior protection
• Tri-Fix 3-point fixation designed to increase stability
• Transmission of healthy blue light6
• Lowest chromatic aberration of IOLs tested10
• Reduced incidence of glistenings15

For more information, contact your AMO representative or visit www.TECNISIOL.com

Part of the AMO® Complete Refractive Solution

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