enovation® technology

Next Generation Hydrophobic IOL with 100% Glistening-Free Performance

- **100% Glistening-Free**
- **Next Generation Hydrophobic**
- **Dry-Packed**

100% Glistening-Free

Next Generation Hydrophobic

Dry-Packed

VSY BIOTECHNOLOGY
we inspire...

What are glistenings?

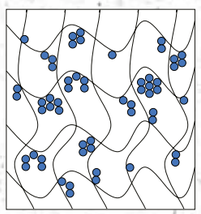
Glistenings are fluid-filled micro-vacuoles within the intraocular lens optic when the IOL (Intraocular lens) is in an aqueous environment; they cause light scattering and may affect the quality of vision by reducing the contrast sensitivity and inducing undesirable optical artifacts.

The unique composition of Enova®'s material shows **Zero Glistening** even under extreme conditions.

100%
Glistening-Free Vision

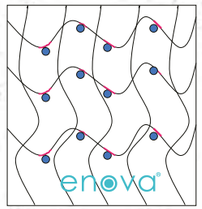
Glistening Formation in IOL

Water molecules bind to certain chemical groups through weak hydrogen bonds. Over time, more water molecules diffuse into the polymer network and bind preferably to other water molecules, which forms clusters referred to as "glistening."



ENOVA® 100% Glistening-Free IOL

The unique composition of Enova® material allows uniform hydration of specific sites to have controlled water uptake and resistance to glistening formation.



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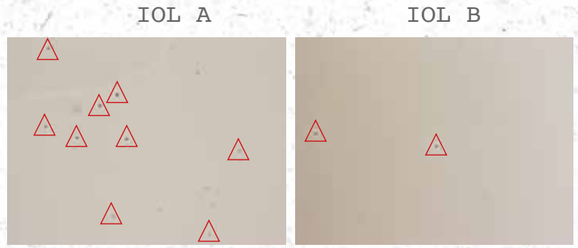
ZERO
Glistening

Glistening study was performed at the Intermountain Ocular Research Center (Mamalis/Werner Laboratory), John A. Moran Eye Center, University of Utah and the unique composition of Enova® hydrophobic acrylic IOL shows **Zero Glistening and Zero Haze** compared with other IOLs[1].



Enova® is the first 100% glistening-free hydrophobic acrylic IOL that does not require pre-hydration and storage in saline solution!

1. Glistening Analysis in Enova Hydrophobic Acrylic Intraocular Lenses / In-vitro Study Evaluating the Tendency of Different Intraocular Lenses to Form Intraoptical Glistenings by the University of Utah

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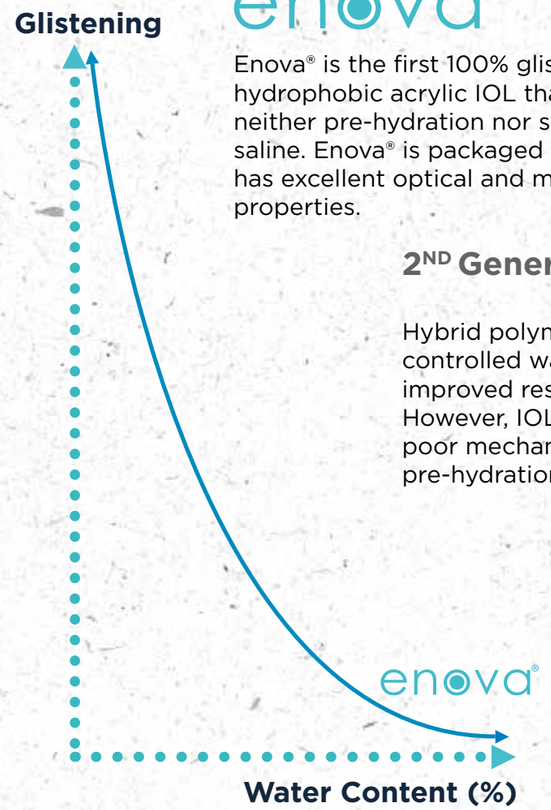
DRY-PACKED hydrophobic IOL with maximum controlled water intake



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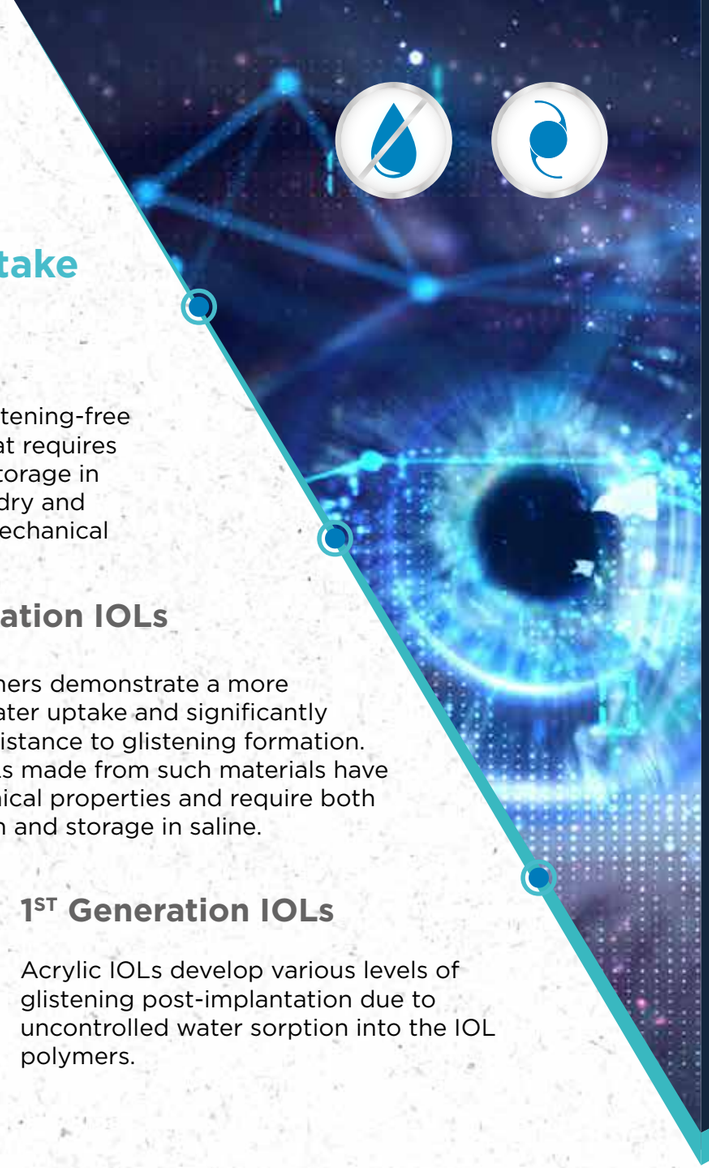
Enova® is the first 100% glistening-free hydrophobic acrylic IOL that requires neither pre-hydration nor storage in saline. Enova® is packaged dry and has excellent optical and mechanical properties.

2ND Generation IOLs

Hybrid polymers demonstrate a more controlled water uptake and significantly improved resistance to glistening formation. However, IOLs made from such materials have poor mechanical properties and require both pre-hydration and storage in saline.

1ST Generation IOLs

Acrylic IOLs develop various levels of glistening post-implantation due to uncontrolled water sorption into the IOL polymers.



Outstanding biomechanical properties

Glass transition temperature of a polymer is the temperature where the polymer changes from a rigid material to a soft material. Having a **Tg** of **−2.0°C**, Enova® IOL has gentle and controlled unfolding process below standard operating room temperatures. Thus, **no warming or special conditioning is required.**

Enova® IOL has low glass transition temperature (Tg −2.0°C) and optimized modulus of elasticity which provide a high level of flexibility and controlled unfolding.

IOL	Tg (°C)	Glistening	Packaging State
enova®	−2.0	No	Dry
IOL A	15	Yes	Dry
IOL B	14	Yes	Dry

THERMOSTABLE IOL

enova®

100%
Glistening-Free

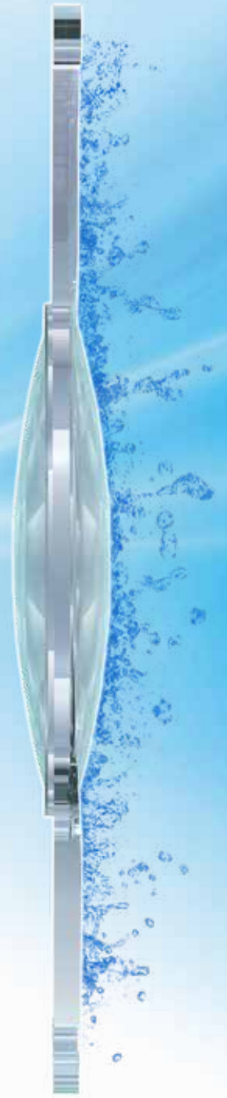
✔ Excellent optical performance with unique composition of 100% Glistening-free Enova® material.

Next Generation
Hydrophobic

✔ Next generation hydrophobic Enova® platform with outstanding biomechanical properties.

Dry-Packed

✔ Dry packed Enova® IOL with maximum controlled water intake.



Technical Features

Enova® GF3

- **Material**
  100% Glistening-Free Hydrophobic Acrylic
- **Optic Size**
  6.00mm
- **Optic Design**
  Biconvex Aspheric
- **Haptic Size**
  13.00mm
- **Haptic Design**
  C Haptic
- **Abbe Number**
  42
- **Haptic Angle**
  0˚
- **Square Edge**
  360˚
- **Water Content**
  7%
- **Recommended Constants**
  Ac A constant: 118.0
  SRK-II: 119.03
  SRK-T: 118.7
  Haigis a0, a1, a2: 1.11, 0.4, 0.1
  HofferQ pACD: 5.33
  Holladay sf: 1.55
  Barrett UniversalII LF: 1.73
- **Diopter Power Range**
  0.00D - 32.00D (0.50 D increments)
- **Tg (Glass transition temperature)**
  -2.0 °C
- **Photoprotection**
  UV Filtration
- **Refractive Index**
  1.53
- **Recommended Injector & Cartridge System**
  Acrijet Fly

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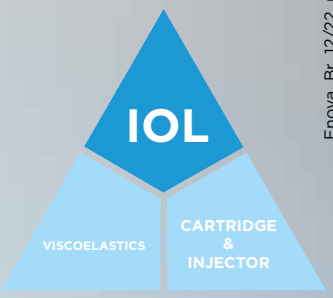

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