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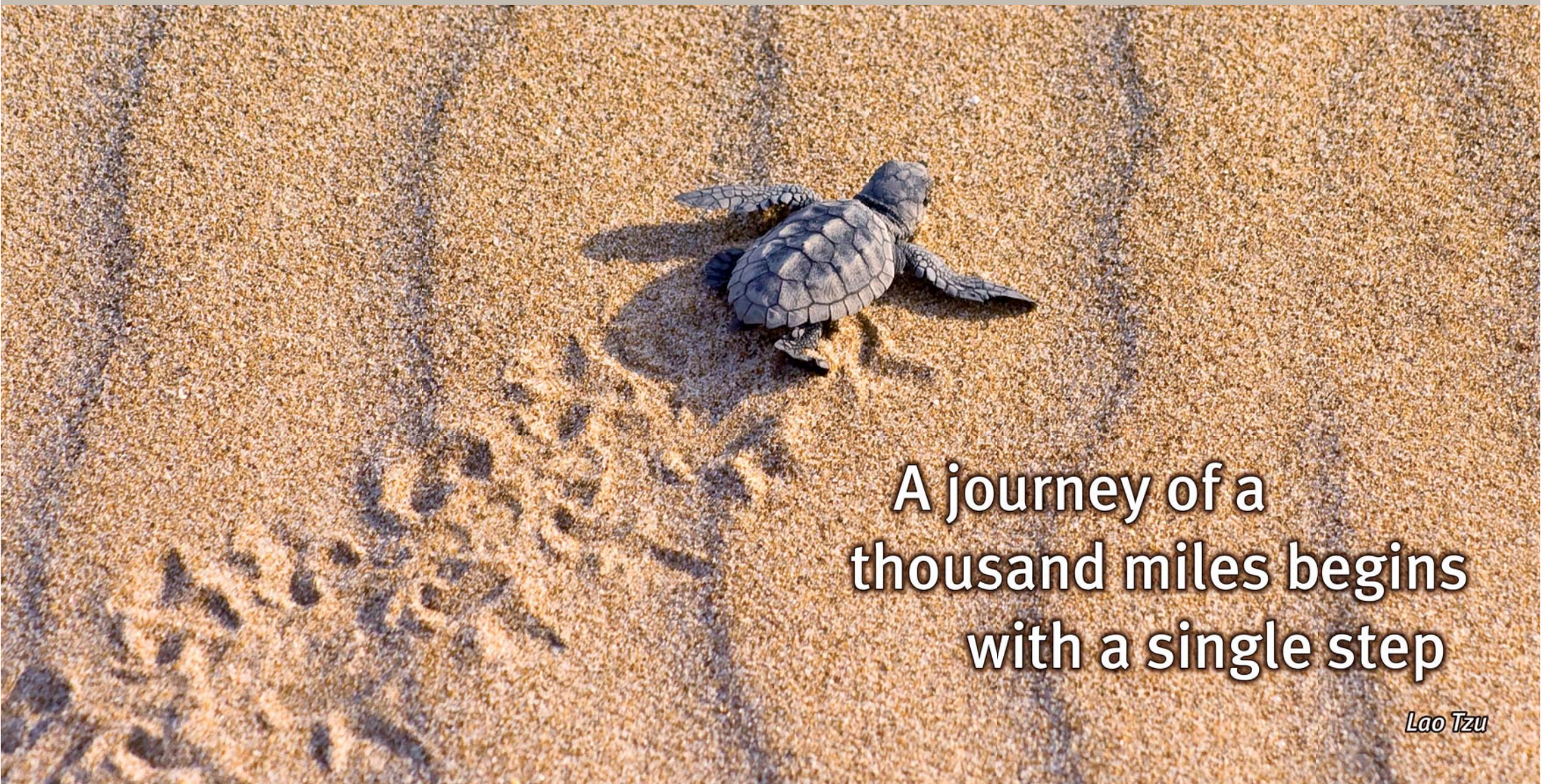
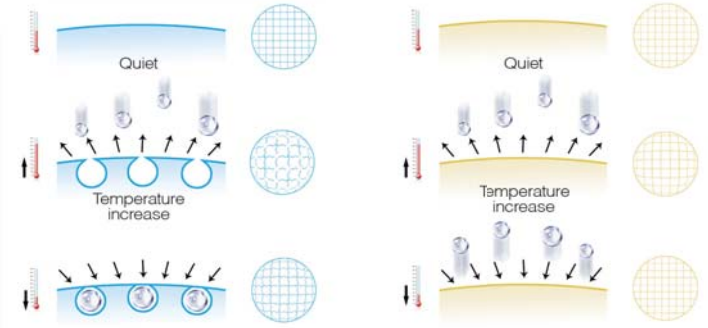
i-stream GL // Aspherical, natural yellow®, hydrophobic



NEW GENERATION HYDROFOBIC MATERIAL

i-stream GL is made of a new generation hydrophobic material which elasticity has been maximized and water content has been minimized[1]. A better elasticity can absorb thermal contraction and dilatation due to increase or decrease of the temperature. This characteristic avoids IOL's material fragmentation and microvacuoles formation that could degenerate into glistening developing[2,3].



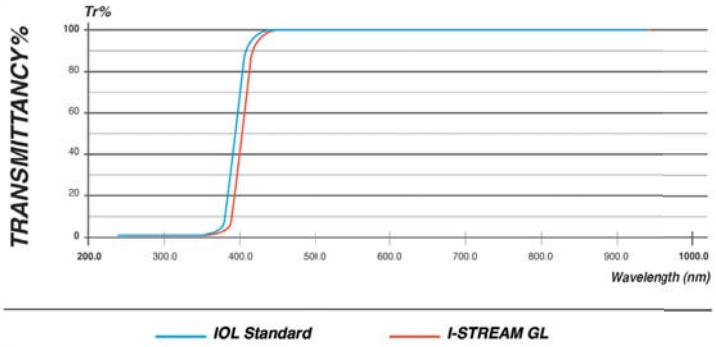
STANDARD HYDROFOBIC MATERIAL
Microvacuoles formation

NEW GENERATION HYDROFOBIC MATERIAL
Regular surface

NATURAL YELLOW®

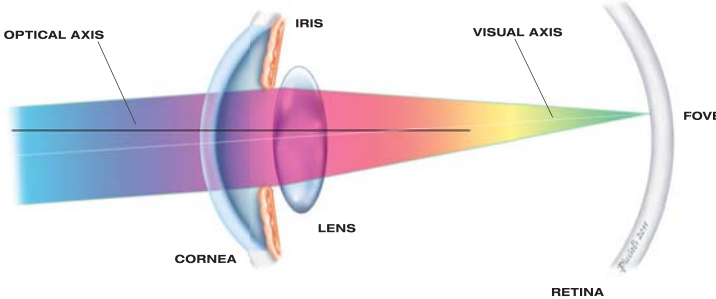
i-stream GL has an innovative filter called NATURAL YELLOW. The IOL is light yellow pigmented, less brilliant compared with traditional ones. This new filter guarantees an efficient filtration of the harmful blue light that doesn't reach the retina[4,5,6], without altering color[7] perception and contrast[8] sensivity as occurs in a young emmetropic eye.

NATURAL YELLOW FILTER
For a balanced protection of the macula from UV[9] and blue light in any illumination condition, without altering colors perception.



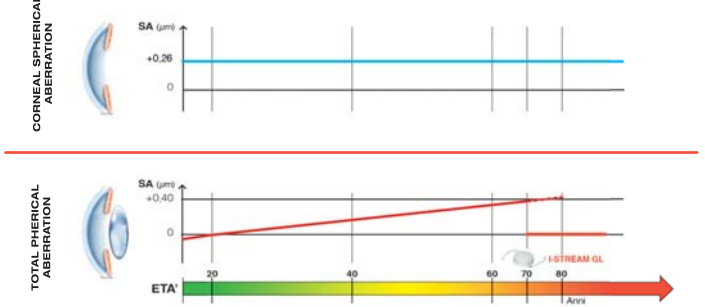
THE PERFECT EYE

Human eye is an extraordinary whole of fine compensations and correction between lens and optics of incredible precision[10]. IOL implantation has not only the goal to provide a new clear artificial lens but it could also guarantees a better vision quality. In addiction the IOL has to provide long life safety and stability.



• 1. TPI, Test Results. MD Tech. 2011. • 2. Werner L. Glistenings and surface light scattering in intraocular lenses, J Cataract Refract Surg. 2010 Aug; 36(8):1398-420. • 3. Akira Miyata, MD, Shigeo Yaguchi, MD. Equilibrium water content and glistenings in acrylic intraocular lenses. J Cataract Refract Surg. 2004 Aug; 30(8):1768-72. • 4. Kernt M, Hirneiss C, Neubauer AS, Lackerbauer CA, Eibl KH, Wolf A, Ulbig M, Kampik A. [Protective effect of blue light-absorbing IOLs on the human retinal pigment epithelium]. Ophthalmologe. 2010 Feb;107(2):150-7. • 5. Wohlfart C, Tschuschnig K, Fellner P, Weiss K, Vidic B, El-Shabrawi Y, Ardjomand N. [Visual function with blue light filter IOLs]. Klin Monbl Augenheilkd. 2007 Jan;224(1):23-7. • 6. Chew EY, Sperduto RD, Milton RC, Clemons TE, Gensler GR, Bressler SB, Klein R, Klein BE, Ferris FL 3rd.Risk of advanced age-related macular degeneration after cataract surgery in the Age-Related Eye Disease Study: AREDS report 25. Ophthalmology. 2009 Feb;116(2):297-303. Epub 2008 Dec 16. • 7. Hammond BR, Renzi LM, Sachak S, Brint SF. Contralateral comparison of blue-filtering and non-blue-filtering intraocular lenses: glare disability, heterochromatic contrast, and photostress recovery. Clin Ophthalmol. 2010 Dec 8;4:1465-73. • 8. Gray R, Perkins SA, Suryakumar R, Neuman B, Maxwell WA. Reduced effect of glare disability on driving performance in patients with blue light-filtering intraocular lenses. J Cataract Refract Surg. 2011 Jan;37(1):38-44. • 9. Artigas JM, Felipe A, Navea A, Artigas C, García-Domene MC. Spectral transmittance of intraocular lenses under natural and artificial illumination: criteria analysis for choosing a suitable filter. Ophthalmology. 2011 Jan;118(1):3-8. • 10. Artal, P., Benito, A., & Tabernero, J. The humaneye is an example of robust optical design. Journal of Vision, 6 (1) :1, 1–7, 2006. • 11. Atchison, D. A., & Markwell, E. L. (2008). Aberration of emmetropic

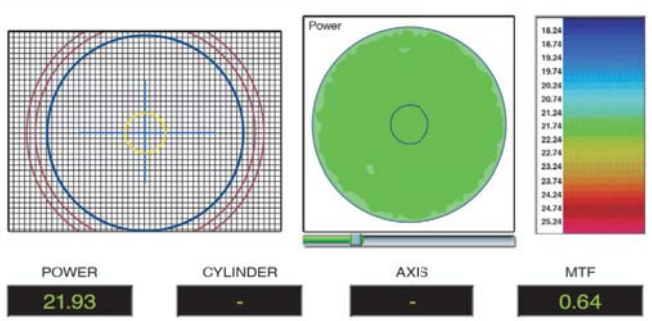
CORNEAL SPHERICAL ABERRATION
the mean CSA is +0,26µm, this value remains the same during life without significant variations. (Pupil Ø 6mm).



HUMAN LENS
modifies its spherical aberration during life, this value change from negative +0,26µm (20 years) to positive +0,13µm (70 years)[17,18,19]. (Pupil Ø 6 mm).

SPHERICAL ABERRATION: -0,26µm

i-stream GL's design has been made to maximize your patient's visual performances. The IOL has biconvex optic with a precise negative spherical aberration: -0,26µm[1]. This amount is exactly needed to compensate the positive spherical aberration of the cornea[11,12], bringing back your patient's eye to ideal condition: the one of young and emmetropic eye[13,14,15,16].



QUALITY CONTROL

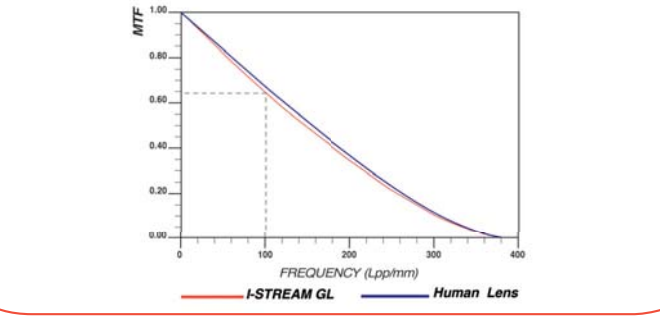
Each **i-stream GL** is singly checked, not only sample checked. At the end of the production process each **i-stream GL** has to face a strictly quality control procedure in order to respect high standard quality. This procedure guarantees safety and success.

VISUAL INSPECTION with 12x magnifying (not only conventional 8x)

SURFACE EVALUATION with BRASSIOLA by ROTLEX

DIOPTER & MTF CHECK with IOLA-PLUS by ROTLEX

DIOPTER & MTF CHECK
with IOLA-PLUS by ROTLEX.
Each I-STREAM GL is checked for refractive power, MTF and surface regularity.



MTF

i-stream GL's MTF graph is the result of such a fine geometry study[20,21,22]. **i-stream GL** has the following MTF graph: clinical laboratory studies demonstrate that the high quality of the optics lead to a better depth of field and excellent contrast sensivity in each illumination contest.

subjects at different ages. Vision Research, 48, 2224–2231, 2008. • 12. Atchison, D. A., Markwell, E. L., Kasturirangan, S., Pope, J. M., Smith, G., & Swann, P. G. Age-related changes in optical and biometric characteristics of emmetropic eyes. Journal of Vision, 8(4):29, 1–20, 2008. • 13. Berrio E, Tabernero J, Artal P. Optical aberrations and alignment of the eye with age. Journal of Vision (2010) 10(14):34, 1–17. • 14. Athaide HV, Campos M, Costa C. Study of ocular aberrations with age. Arq Bras Oftalmol. 2009 Sep-Oct;72(5):617-21. • 15. Amano S, Amano Y, Yamagami S, Miyai T, Miyata K, Samejima T, Oshika T. Age-related changes in corneal and ocular higher-order wavefront aberrations. Am J Ophthalmol. 2004 Jun;137(6):988-92. • 16. Wang L, Dai E, Koch DD, Nathoo A. Optical aberrations of the human anterior cornea. J Cataract Refract Surg. 2003 Aug;29(8):1514-21. • 17. Myron Yanoff, Jay S. Duker, James J. Augsburger - 2008 Ophthalmology - Pagina 53. • 18. Jahnke M, Wirbelauer C, Pham DT. [Influence of age on optical aberrations of the human eye]. Ophthalmologe. 2006 Jul;103(7):596-604. • 19. Fujikado T, Kuroda T, Ninomiya S, Maeda N, Tano Y, Oshika T, Hirohara Y, Mihashi T. Age-related changes in ocular and corneal aberrations. Am J Ophthalmol. 2004 Jul;138(1):143-6. • 20. Ramkumar Sabesan, Scott MacRae, and Geunyoung Yoon. Role of native spherical aberration in the extended depth of focus J Vis December 22, 2010 10(15): 74; doi:10.1167/10.15.74. • 21. Nanavaty MA, Spalton DJ, Boyce J, Saha S, Marshall J. Wavefront aberrations, depth of focus, and contrast sensitivity with aspheric and spherical intraocular lenses: fellow-eye study. J Cataract Refract Surg. 2009 Apr;35(4):663-71. • 22. Tognetto D, Sanguinetti G, Sirotti P, Cecchini P, Marcucci L, Ballone E, Ravalico G. Analysis of the optical quality of intraocular lenses. Invest Ophthalmol Vis Sci. 2004 Aug;45(8):2682-90.

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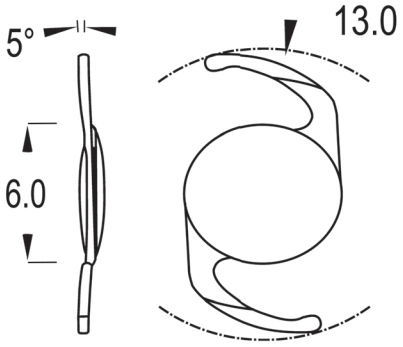
i-stream GL // Aspherical, natural yellow®, hydrophobic

Model no:	ISP60GL
Optic body diameter:	6.0 mm
Total diameter:	13.0 mm
Angle:	5°
Anterior lens geometry:	Aspherical edge profile to reduce disfotopsia
Posterior surface:	360° Square Edge on the optic and on the haptics
Injection:	from 2.2 a 2.6 mm with disposable injector
Material:	hydrophobic acrylic with UV filter and natural yellow (blue filter)
Sterilization method:	ETO
Diopter range:	Aspherical: from +9.0D to +10.0D from +10.5D to +30.0D with increases of 0.5D
Recommended A Constant:	119.0
Refraction index:	1,49



Manufactured by:
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