Intensity®

Vision Redefined

CHANITA Lenses

INSIGHTFUL INNOVATION

Intensity® Pentafocal Lens

Hanita Lenses' Intensity® is a groundbreaking intraocular lens developed with a patented design that establishes a new category in presbyopia correction: the pentafocal IOL.

By maximizing light intensity, this technology offers seamless vision across all distances; reduces halos and glare; and optimizes night vision. [1] [2]

With over four decades of experience in cataract and refractive surgery, Hanita Lenses remains committed to delivering innovative solutions that redefine vision care.

"A patient that gets these lenses enjoys a life that is uncompromised. With Intensity® Pentafocal IOL, the patient forgets about his lenses because vision is a non-issue".

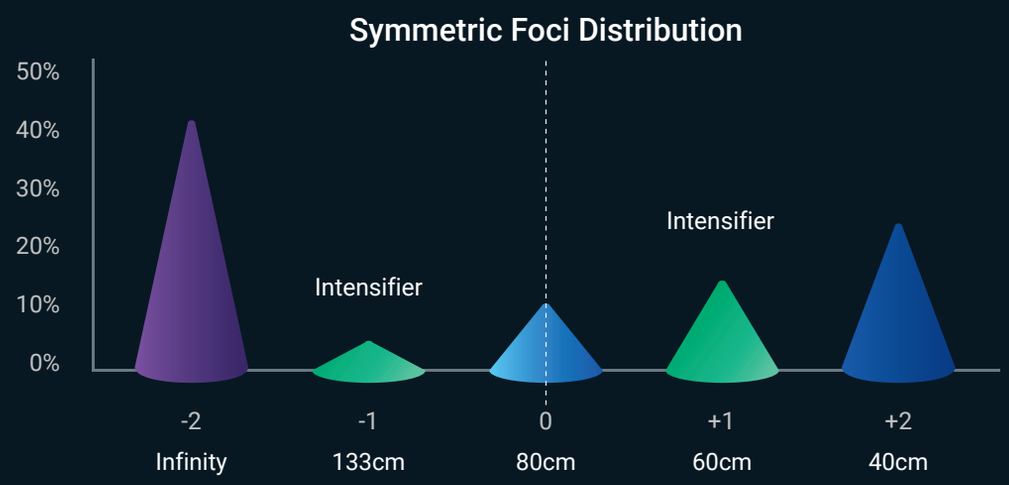
– Prof. Dr. Med. Gerd Auffarth

Innovative Technology

The Intensity® Pentafocal IOL is the only lens of its kind, featuring an advanced optical design powered by **Dynamic Light Utilization (DLU) technology.** Using a hologram-based algorithm to enhance the modulated transfer function (MTF), it enables seamless vision at all distances.

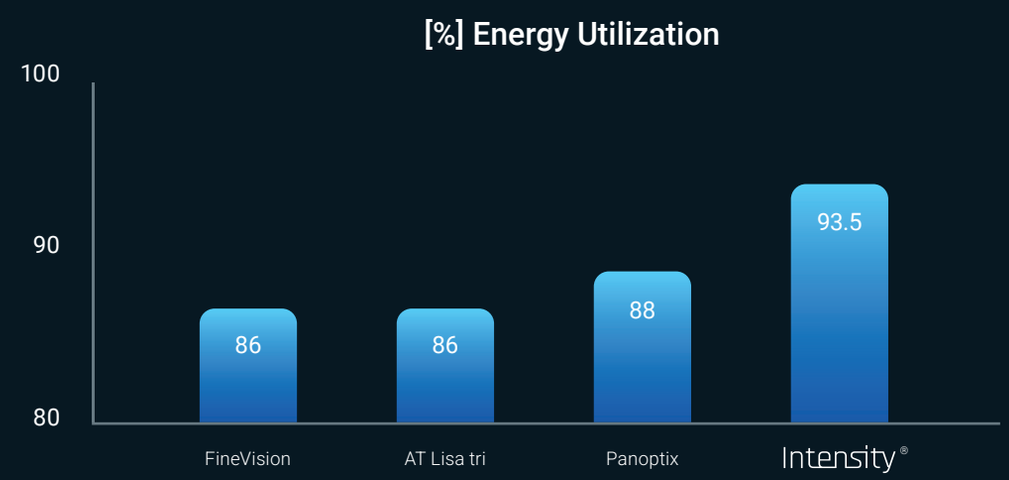
Symmetric Foci Distribution

Uniquely designed with five symmetrically distributed foci, the Intensity® lens optimizes vision across critical ranges, ensuring seamless transitions between far and intermediate, as well as intermediate and near vision. The base curve is specifically targeted at the intermediate focus, with the remaining foci symmetrically positioned around it to deliver smooth, continuous functional vision.



Light Efficiency

Engineered for maximum light efficiency, the Intensity® Pentafocal IOL utilizes 93.5% of available light, significantly reducing visual disturbances, improving contrast and clarity, and helping patients achieve sharper, more reliable vision in their daily lives. [3] [4] [5] [6] [7]

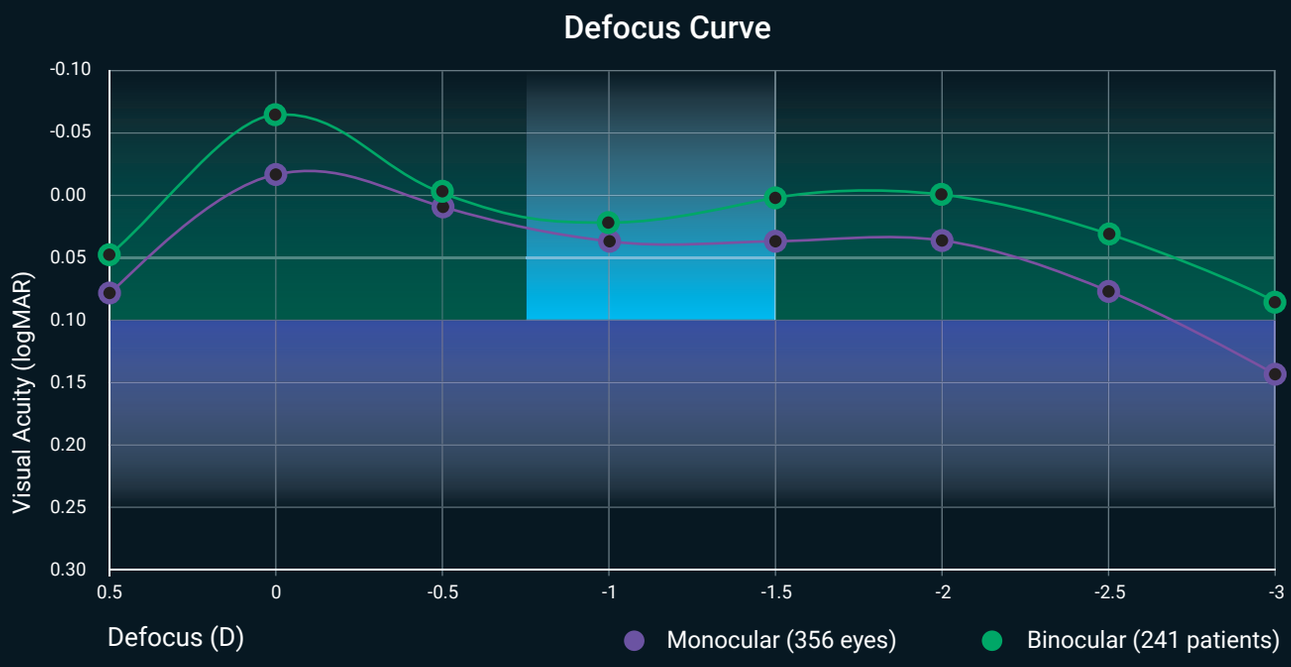


Real World Data

Clinical evidence highlights the exceptional performance of the Intensity® Pentafocal IOL. Its precision-engineered design delivers the consistent refractive accuracy, enhanced visual performance, and predictable outcomes surgeons depend on for their practice.

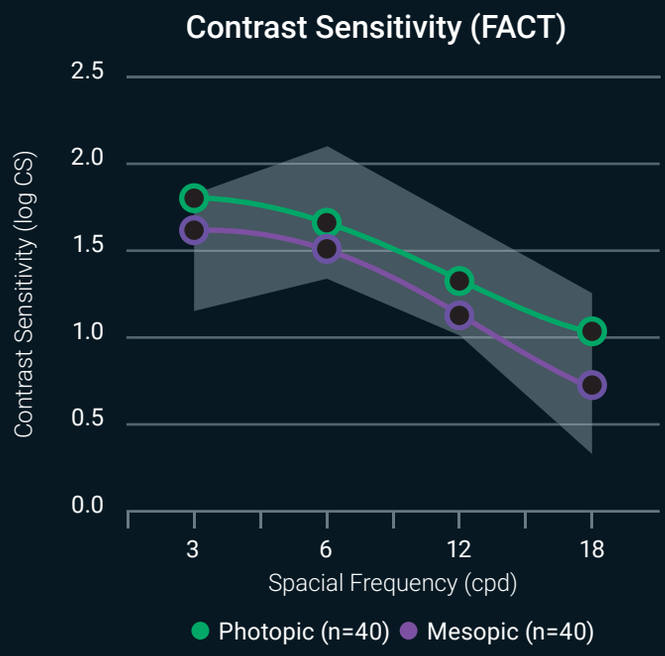
Defocus Curve

Data showcases exceptional visual acuity across near, intermediate, and far distances, with smooth and consistent performance through the defocus range. The Intensity® Pentafocal IOL achieves a balanced and seamless visual experience that enhances patients' quality of life. [8]



Contrast Sensitivity

Clinical results underline improved contrast sensitivity and reduced visual disturbances like halos and glare, prevalent in conventional trifocal lenses. These outcomes affirm the Intensity® Pentafocal IOL's capability to address the visual demands of today's patients with outstanding consistency. [2]



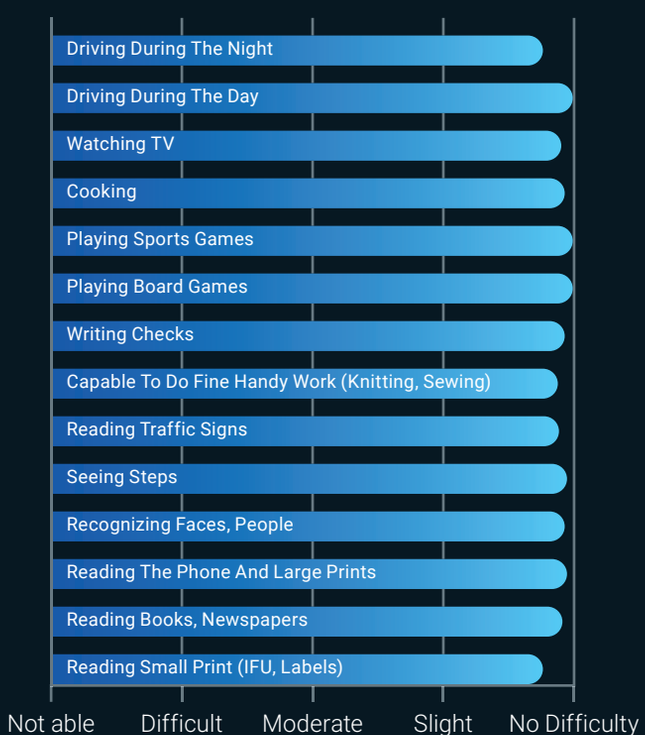
"Patients were highly satisfied with the implantation of this lens since it provided minimal photic phenomena together with excellent near vision."

Professor Jorge Alió *("Clinical outcomes with a new diffractive multifocal intraocular lens optimized by the Dynamic Light Utilization algorithm" 2024)*

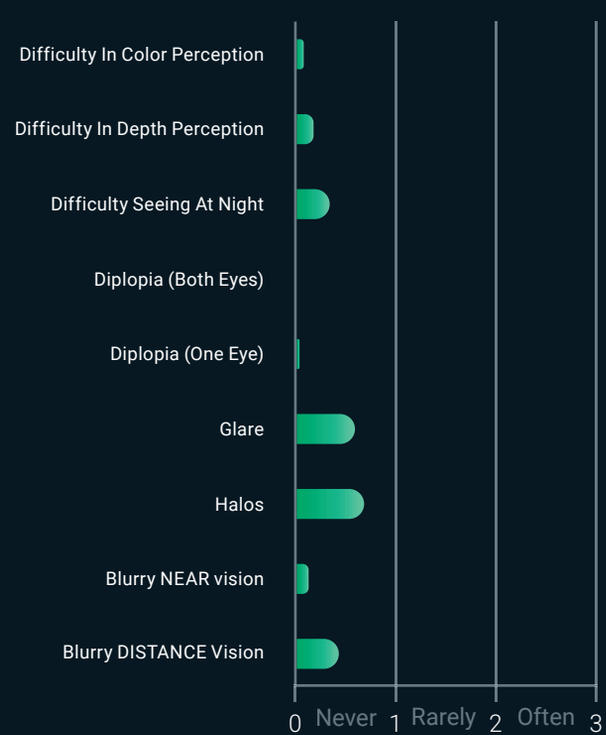
DLU and Patient Satisfaction

The Intensity® Pentafocal IOL incorporates Dynamic Light Utilization technology to maximize light efficiency and visual clarity under various conditions. Its innovative design ensures patients experience superior satisfaction, achieving seamless functionality in daily life. [9] [10] [11] [12]

Visual Function Questionnaire VF14

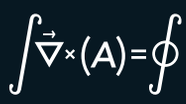


Visual Phenomena



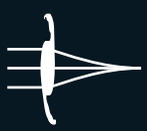
50 patient survey [2] [13] [14]

The First Pentafocal



Dynamic Light Utilization Technology:
The lens is designed with an innovative hologram-based algorithm (DLU), which enhances the modulated transfer function (MTF) enabling a smooth and elevated defocus curve.

Smooth & Symmetrical
5-Foci Distribution:
Features a proprietary smooth diffractive pattern of 12 steps varying heights, ensuring high contrast and visual acuity at all distances.

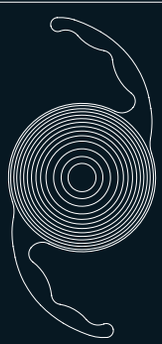
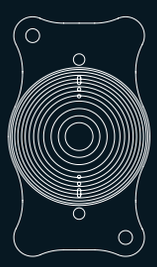
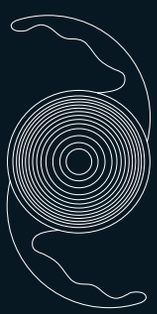
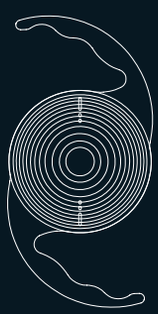


Maximum Light Intensity Utilization:
With an unparalleled light efficiency of 93.5%, the Intensity® enables smooth and crystal-clear vision across all distances.

Pupil Aperture Optimization:
The lens profile incorporates three optimized diffractive patterns, ensuring superior performance across diverse pupil sizes and lighting conditions.

Exceptional Contrast Sensitivity:
Minimizes halos and glare while providing contrast sensitivity comparable to the normal phakic population. Ensures clear vision and minimizes visual disturbances under both daylight (photopic) and low-light (mesopic) conditions.

Lens Specification

	Lens model	Intensity SL	Intensity BN*	Intensity Toric*	Intensity SL HP*	Intensity Toric HP*
Optical	Diopter range (SE)	+5 D to +34 D				
	Diopter increment	0.5 D (+5.0 to +30.0 D); 1.0 D (+30.0 to +34.0 D)				
	Cylinder range	N/A	N/A	1.0, 1.5, 2.25, 3.0, 3.75, 4.5 D	N/A	1.0, 1.5, 2.25, 3.0, 3.75, 4.5 D
	Additional power	Intermediate vision: +1.5 D; Near vision: +3.0 D				
	Spherical aberration	-0.13µm				
	Drawing					
Geometry	Optic diameter	6 mm				
	Total diameter	13 mm	11 mm (≥10D) 11.5 mm (<10D)	11 mm (>16D) 11.5 mm (≤16D)	13 mm	13 mm
	Haptic configuration	C-loop	4-loop	Plate loop	C-loop	C-loop
	Edge design	Square edge				
	Haptic angulation	5°	5°	0°	5°	5°
Material	Material	Hydrophilic acrylic			Hydrophobic acrylic	
	Refractive index	1.46 (@ 35°C)			1.48 (@ 35°C)	
	Filtration	UV and violet light filter				
Biometry	SRK/T A-constant Non-contact biometry	118.4	118.4	117.45	118.9	118.9
	SRK/T A-constant Contact biometry	118.06	118.06	117.11	118.4	118.4

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References

1. Bellucci et al., 2024. Comparison of Objective and Subjective Visual Outcomes Between Pentafocal and Trifocal Diffractive Intraocular Lenses. Journal of Refractive Surgery, 40(9), e604-e613.
2. Nov et al., 2022. Visual performance of a novel optical design of a new multifocal intraocular lens. Journal of Refractive Surgery, 38(3), 150-157.
3. Data on File, DHF102, Hanita Lenses
4. Kohnen et al. Visual performance of a quadrifocal (trifocal) intraocular lens following removal of the crystalline lens. Am J Ophthalmol. 2017;184:52-62.
5. Sudhir et al. AcrySof IQ PanOptix intraocular lens versus extended depth of focus intraocular lens and trifocal intraocular lens: a clinical overview. Asia Pac J Ophthalmol (Phila). 2019;8(4):335-349.
6. Gatinel et al. Design and qualification of a diffractive trifocal optical profile for intraocular lenses. J Cataract Refract Surg. 2011;37(11):2060-2067.
7. Carballo-Alvarez et al. Visual outcomes after bilateral trifocal diffractive intraocular lens implantation. BMC Ophthalmology. 2015;15:26
8. Assia, E. (2024, September 6–10). Real world outcomes of Intensity IOL [Conference presentation]. 42nd congress of the ESCRS, Barcelona, Spain.
9. Goldman, G. (2024). Clinical results with a multifocal intraocular lens with a novel optical design. BMC ophthalmology, 24(1), 269.
10. Alió et al., 2024. Clinical outcomes with a new diffractive multifocal intraocular lens optimized by the dynamic light utilization algorithm. Eye, 1-7.
11. Bianchi, G. R. (2022). A prospective study of a new presbyopia pseudophakic intraocular lens: Safety, efficacy and satisfaction. Indian Journal of Ophthalmology, 70(9), 3305-3310.
12. Balparda et al., 2024. Short-Term Visual Outcomes After Bilateral Pentafocal Intraocular Lens Implantation. A Pilot Study. Highlights of Ophthalmology, 52(4ENG), 29-36.
13. Agarwal, A. Assessing the Visual Performance of Hanita Lenses “Intensity SL” Intraocular Lens 2022. Clinical study. Data on file, DHF102, Hanita Lenses.
14. Knyazer, B. (2022) Clinical experience with Intensity SL and Intensity Toric Multiufocal IOLs. Annual meeting of the Israeli Ophthalmological Society, IOS 2022.

Intensity® PENTAFOCAL

5-Focal Point Technology
For Continuous Vision

For clinical research results,
please scan the QR code.

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