



НАНОПТИКА

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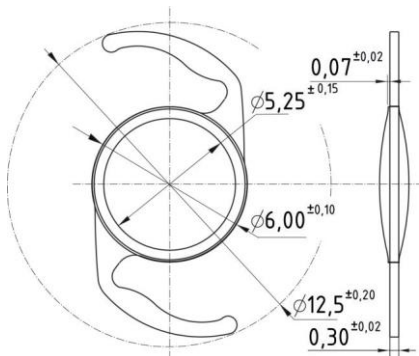


CATALOGUE OF INTRAOCULAR LENSES AND IOL DELIVERY SYSTEMS
To see!

LIGHT GROUP Affordable and high quality IOLs with UV filters

AQUAMARINE HYDROPHILIC ^{IOL} NanoCrystalTM

The ACS12.05 IOL/KIT model made of transparent Action hydrophilic acrylic



MATERIAL

Material	Hydrophilic acrylic with UV filter Action (05)
Color	Clear (C)
Water content	26%
Refractive index	1.457
Abbe number	45

DESIGN

IOL type	Monofocal
Optics	Spherical
Optics diameter	6 mm
Optics thickness (+20D)	0.7 mm
Haptic design	S-shaped
Haptic thickness	0.35 mm
Haptic deflection angle	0°
Overall diameter	12.5 mm
Incision size	2.2-2.4 mm
PCO protection	Square edge 360° along the whole edge of IOL
Shelf life	3 years after sterilization

DELIVERY OPTIONS

Scope of supply	IOL
	The kit with an injector
Spherical power	from -6.0 to +10.0 division 1.0D from +10.0 to +29.5 division 0.5D from +30.0 to +45.0 division 1,0D

RECOMMENDED CONSTANTS FOR AQUAMARINE ACS12.05

A-SCAN ULTRASOUND BIOMETRY

SRK/T	Barrett
A-const	LF
118.0	1.36

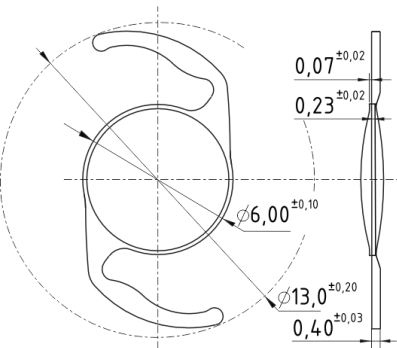
OPTICAL BIOMETRY

SRK/T	Barrett	Haigis			Holladay 1	Holladay 2	HofferQ
		A-const	LF	a0	a1	a2	SF
118.3	1.52	0.85	0.4	0.1	1.29	5.14	5.07

LIGHT GROUP Affordable and high quality IOLs with UV filters

CITRINE HYDROPHOBIC ^{IOL} NanoCrystal TM

The CCS12.05 IOL/KIT model made of CHA Action hydrophobic acrylic



MATERIAL

Material	Hydrophilic acrylic with CHA Action (05) UV filter
Color	Clear (C)
Water content	< 0.40%
Refractive index	1.555
Abbe number	38

DESIGN

IOL type	Monofocal
Optics	Aberration-free aspheric
Optics diameter	6 mm
Optics thickness (+20D)	0.59 mm
Haptic design	Modified - L shaped
Haptic thickness	0.39 mm
Haptic deflection angle	0°
Overall diameter	13 mm
Incision size	2.2-2.4 mm
PCO protection	Square edge 360° along the whole edge of IOL
Shelf life	3 years after sterilization

DELIVERY OPTIONS

Scope of supply	IOL
	The kit with an injector
Spherical power	+6.0D → +10.0D (1.0D division) +10.0D → +29.5D (0.5D division) +30.0D → +35.0D (1.0D division)

RECOMMENDED A-SCAN ULTRASOUND BIOMETRY

CONSTANTS
FOR CITRINE
CCS12.05

SRK/T	Barrett
A-const	LF
119.0	1.88




OPTICAL BIOMETRY

SRK/T	Barrett	Haigis			Holladay 1	Holladay 2	HofferQ
A-const	LF	a0	a1	a2	SF	ACD	p-ACD
119.3	2.04	1.63	0.4	0.1	1.96	5.61	5.68

CLASSIC GROUP Bestsellers by NanOptika LLC

Intraocular lenses made of premium materials with increased transparency, time-tested, aberration-free aspheric optics and advanced designs

AQUAMARINE HYDROPHILIC^{IO}L NanoCrystalTM



Article Number	ACO11.03IOL/ACO11.03KIT	ACQ11.03IOL/ACQ11.03KIT	ACZ1203IOL/ACZ12.03KIT
	AYO11.03IOL/AYO11.03KIT ●	AYQ11.03IOL/AYQ11.03.KIT ●	AYZ12.03IOL/AYZ12.03KIT ●
Image			
Material	Hydrophilic acrylic with UV and CONTAMAC CI 26 (03) blue light filter (optional)		
Color	Clear (C) / Yellow (Y)	Clear (C) / Yellow (Y)	Clear (C) / Yellow (Y)
Water content	26%	26%	26%
Refractive index	1.457	1.457	1.457
Abbe number	50	50	50
IOL type	Monofocal		
Optics	Aspheric aberration-free		
Optics diameter	6 mm	6 mm	6 mm
Optics thickness (+20D)	0.94 mm	0.94 mm	0.94 mm
Haptic design	O-shaped closed haptic	Four-post with six holes for suture fixation	S-shaped with double closed haptic
Haptic thickness	0.29 mm	0.29 mm	0.29 mm
Haptic deflection angle	0°	0°	0°
Overall diameter	11 mm	11 mm	12.5 mm
Incision size	2.2-2.4 mm	2.2-2.4 mm	2.2-2.4 mm
PCO* protection	Continuous 360° square barrier edge and reverse acute angle (45°) around the perimeter of the optics		
Scope of supply	IOL	IOL	IOL
	The kit with an injector	The kit with an injector	The kit with an injector
Spherical power	+6.0 D → +10.0 D (1.0D division)	+10.0 D → +29.5 D (0.5D division)	+30.0 D → +40.0 D (1.0D division)

*PCO - posterior capsule opacities

CLASSIC GROUP Bestsellers by NanOptika LLC

Intraocular lenses made of premium materials with increased transparency, time-tested, aberration-free aspheric optics and advanced designs

CITRINE HYDROPHOBIC IOL NanoCrystal™

Article Number	CCL13.03IOL/CCL13.03KIT	CCS13.02IOL/CCS13.02KIT
Image		
Material	Hydrophilic acrylic with CONTAMAC Hi56 (03) UV filter	Hydrophilic acrylic with AHFO SOLEKO (02) UV filter without glistening
Color	Clear (C)	Clear (C)
Water content	0.50%	2.90%
Refractive index	1.552	1.497
Abbe number	38	52
IOL type	Monofocal	Monofocal
Optics	Aberration-free aspheric	Aberration-free aspheric
Optics diameter	6 mm	6 mm
Optics thickness (+20D)	0.62 mm	0.65 mm
Haptic design	S- shaped with holes for suture fixation	S- shaped
Haptic thickness	0.43 mm	0.3 mm
Haptic deflection angle	0°	5°
Overall diameter	13 mm	13 mm
Incision size	2.2-2.4 mm	2.2-2.4 mm
PCO* protection	360° square edge	360° square edge and additional lip around the perimeter of the rear edge of the optics
Scope of supply	IOL The kit with an injector	IOL The kit with an injector
Spherical power	+10.0 D → +30.0 D (0.5D division)	+6.0 D → +10.0 D (1.0D division) +10.0 D → +29.5 D (0.5D division) +30.0 D → +35.0 D (1.0D division)

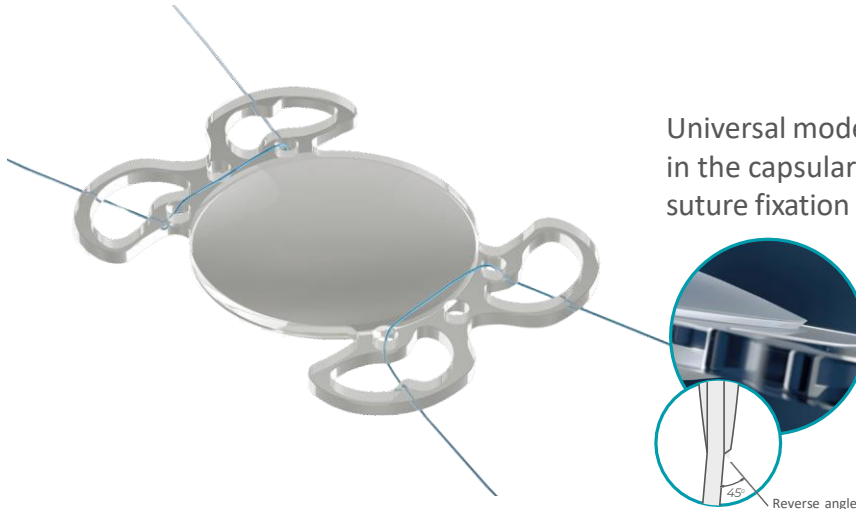
*PCO - posterior capsule opacities

CLASSIC GROUP Bestsellers by NanOptika LLC

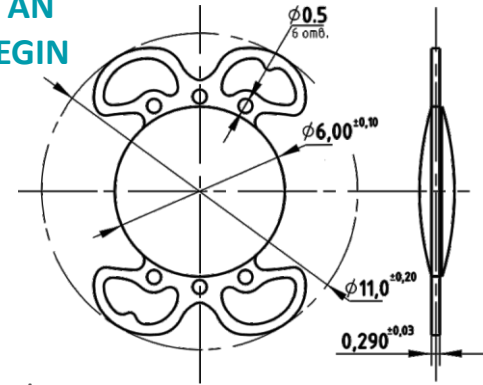
NANOCRYSTAL™ AQUAMARINE “TT MODEL” (art. ACQ/AYQ 11.03.IOL)



CONTAMAC CI 26/CY 26 material Clarity without chromatic aberrations and reliable retina protection⁶



DESIGN DEVELOPED BY AN EYE SURGEON, K.P. TELEGIN FOR EASE OF SUTURE FIXATION IN COMPLICATED CASES³



Universal model for implantation in the capsular bag or iris-ciliary sulcus Facilitates the suture fixation of an IOL.

Minimal risk of cataract development compared to other IOLs due to the special design of the optics edge¹

Recommended constants for aspheric NANOCRYSTAL™ AQUAMARINE IOLs

A-SCAN ULTRASOUND BIOMETRY

SRK/T	Barrett
A-const	LF
118.0	1.36

OPTICAL BIOMETRY

SRK/T	Barrett	Haigis			Holladay 1	Holladay 2	HofferQ
A-const	LF	a0	a1	a2	SF	ACD	p-ACD
118.3	1.52	0.85	0.4	0.1	1.29	5.14	5.07

CLASSIC GROUP Bestsellers by NanOptika LLC

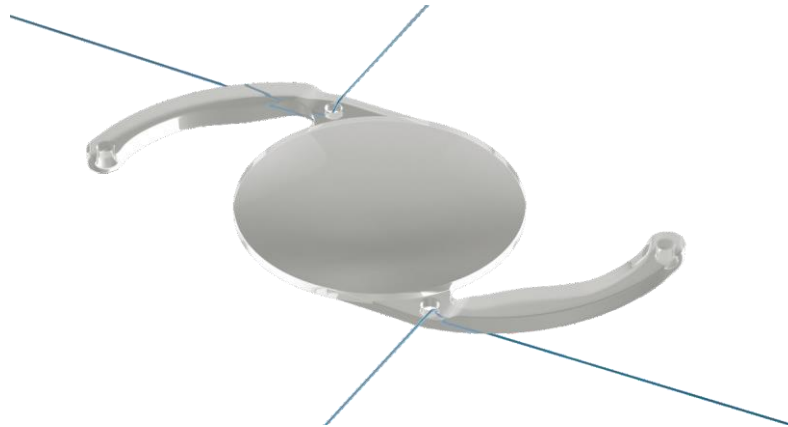
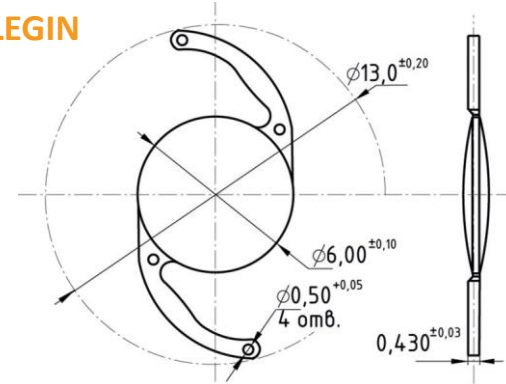
DESIGN AND MATERIAL FEATURES OF ASPHERICAL HYDROPHOBIC CITRINE IOLs

NANOCRYSTAL™ CITRINE
“TT MODEL”(art.
CCL13.03.IOL/KIT)

CONTAMAC HI 56 MATERIAL
 (WATER CONTENT LESS THAN 0.5%)
 with the zero level of glistening⁴



DESIGN DEVELOPED BY AN
EYE SURGEON, K.P. TELEGIN
FOR EASE OF SUTURE
FIXATION IN
COMPLICATED CASES³



Layout of four holes
 in the haptic at equal distance from the
 center of the optics ensures excellent
 centration of the CITRINE TT IOL during
 suture fixation⁶

Recommended constants for CITRINE CCL13.03 IOL NANOCRYSTAL™

A-SCAN ULTRASOUND BIOMETRY

SRK/T	Barrett
A-const	LF
119.0	1.88

OPTICAL BIOMETRY

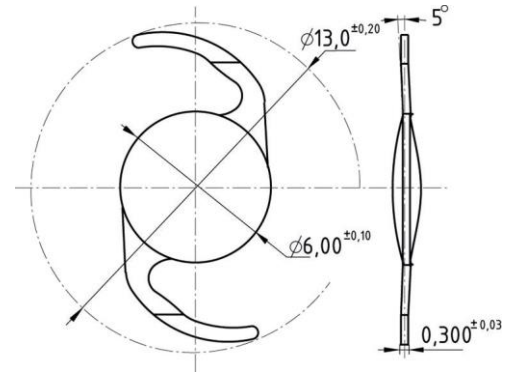
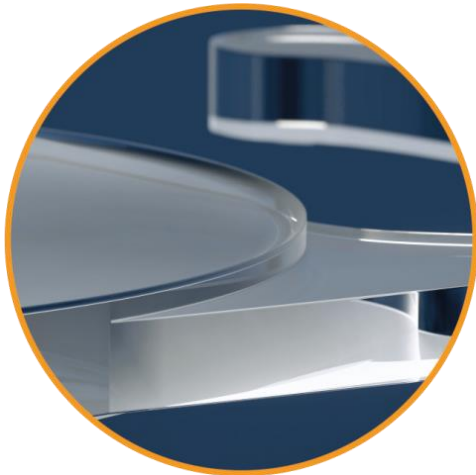
SRK/T	Barrett	Haigis			Holladay 1	Holladay 2	HofferQ
A-const	LF	a0	a1	a2	SF	ACD	p-ACD
119.3	2.04	1.63	0.4	0.1	1.96	5.61	5.68

CLASSIC GROUP Bestsellers by NanOptika LLC

DESIGN AND MATERIAL FEATURES OF ASPHERICAL HYDROPHOBIC CITRINE IOLs

CITRINE GLISTENING FREE NANOCRYSTAL™ (art. CCS13.02.IOL/KIT)

AHFO SOLEKO MATERIAL
(WATER CONTENT 2.9 %)
with the zero level of glistening⁴



Continuous barrier edge
+ additional lip
along the perimeter of the optic significantly reduces
the risk of secondary cataract development⁵

Recommended constants for NANOCRYSTAL™ CITRINE CCS13.02 IOL

A-SCAN ULTRASOUND BIOMETRY

SRK/T	Barrett
A-const	LF
119.5	2.15

OPTICAL BIOMETRY

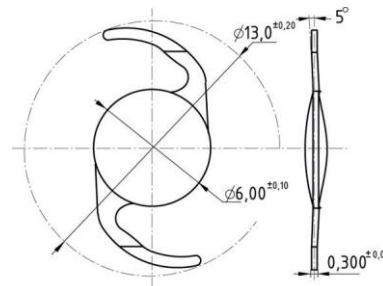
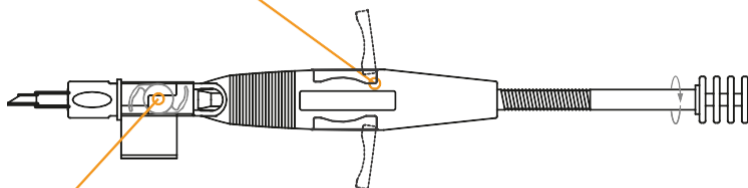
SRK/T	Barrett	Haigis			Holladay 1	Holladay 2	HofferQ
A-const	LF	a0	a1	a2	SF	ACD	p-ACD
119.7	2.25	1.77	0.4	0.1	2.19	5.95	5.97

PREMIUM GROUP For increased comfort of doctor and patient

NANOCRYSTAL™ CITRINEPRELOADED IOL OPHTHALMIC KIT FOR INTRAOCULAR LENS IMPLANTATION

The Accujet DUAL Two-In-One Injector

Freedom of choice and switching to the preferred operating mode of the surgeon - "screw" or "piston"



Optics without spherical and chromatic aberrations
(Abbe number >50)

Stability in the capsular bag
(55° angle of contact)

Additional protection against secondary cataract
(fine cut lip on the back edge of the optics)

Small incision implantation

Parameters	CCS 13.02.PLD model
Optics	Aspheric aberration-free
Material	Glistening free hydrophobic
Water content	2.90%
Haptic design	S-shaped
Overall diameter	13 mm
Optics diameter	6 mm
Haptic thickness	0.30 mm
Predicted A-constant (US)	119.7
Spherical power	from 10.0D to 30.0D (division 0.5D) from 6.0 to 10 and from 30 to 35 (division 1.0)

Recommended constants for NANOCRYSTAL™ CITRINE CCS13.02 IOL

A-SCAN ULTRASOUND BIOMETRY

SRK/T	Barrett
A-const	LF
119.5	2.15

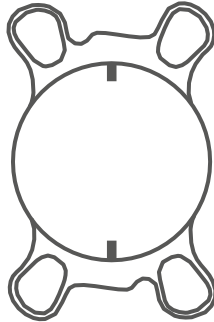
OPTICAL BIOMETRY

SRK/T	Barrett	Haigis			Holladay 1	Holladay 2	HofferQ
A-const	LF	a0	a1	a2	SF	ACD	p-ACD
119.7	2.25	1.77	0.4	0.1	2.19	5.95	5.97

PREMIUM GROUP For increased comfort of doctor and patient

NANOCRYSTAL™ AQUAMARINE TORIC IOL, MODEL ACT 11.05.IOL/KIT

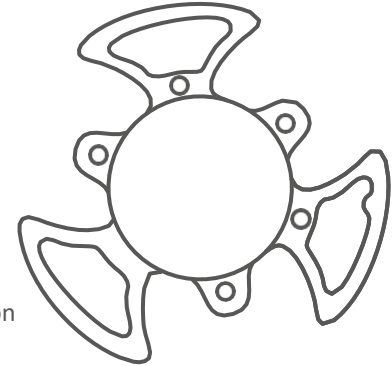
in the process of registration



Parameters	CCT 11.05.IOL/KIT model
Optics	Aspheric, toric
Material	Hydrophilic
Water content	25%
Haptic design	Four-point
Overall diameter	11 mm
Optics diameter	5 mm
Haptic thickness	0.30 mm
Predicted A-constant (US)	118.2
Spherical power (sphere)	from 15.0 D to 25.0 D (division 0.5D)
Spherical power (cylinder)	from 1.5 D to 6.0 D (division 0.75D)

THREE-POINT NANOCRYSTAL CITRINE IOL MODEL CCG 12.02.IOL/KIT

in the process of registration



Parameters	CCG 12.02. model IOL/KIT
Optics	Aspheric aberration-free
Material	Glistening free hydrophobic
Water content	2.90%
Haptic design	Three-point
Overall diameter	12 mm
Optics diameter	6 mm
Haptic thickness	0.30 mm
Predicted A-constant (US)	119.7
Spherical power	from 10.0 D to 30.0 D (division 0.5D) from 6.0 to 10 and from 30 to 35 (division 1.0)

OPTIONS OF SCOPE OF SUPPLY

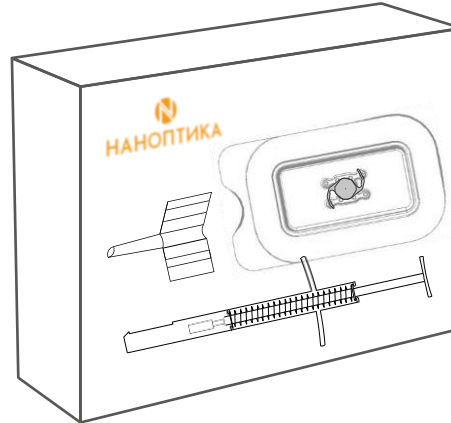
IOL

- a box containing an intraocular lens container only.



KIT

- a box containing a container with an intraocular lens, a disposable injector and a cartridge.



PLD

- a box containing a disposable injector with a preloaded cartridge and a preloaded intraocular lens inside it.



REFERENCES

- 1.A.D. Chuprov, M.I. Startseva Orenburg Branch of the Federal State Independent Institution “National Medical Research Center “Interbranch Scientific and Technical Complex “Eye Microsurgery” named after S.N. Fedorov” Journal “Medicine” No. 2, 2022
2. Useful model patent/No.211219 dated 08.09.2021
3. K.G. Khliyan, I.R. Omarieva, S.Yu. Kopaev. New domestic intraocular lenses. Resistance to biodegradation processes in comparison with foreign analogues
4. K.G. Khliyan, S.V. Sazhin, Yu.V. Grigorieva, S.Yu. Kopaev. Technological methods of intraocular lens manufacturing and their influence on the quality of vision. DOI: <https://doi.org/10.25276/2686-6986-2022-1-94-96>
6. Useful model patent/No. 210593 dated 08.09.2022



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