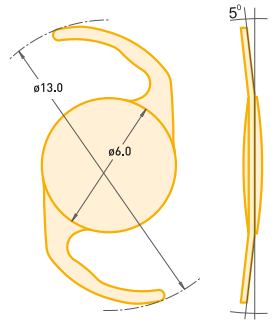
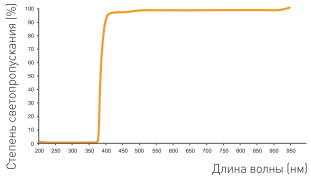
TECHNICAL CHARACTERISTIC CITRINE IOL

Parameter	Technical characteristic	Advantages for surgeons and patients
IOL design	Single-piece	Optic and haptic (fastening) parts of a single-piece Citrine IOL are cut out of the same material. Advantages of a single piece IOLs as compared to multiple piece IOLs: 1. Mechanical stability 2. Low risk of eye response to different materials 3. Smaller incision for implantation
Optic type	Aspheric	Aspheric IOL Citrine has equal optical power in all its zones due to alteration of surface curve radius of the optic from the center to the periphery. Advantages as compared to spherical IOLs of the previous generation: 1. Higher vision acuity due to light refraction focus on one and not on many spots 2. Aberration-free (no halos or flares) 3. Higher quality of vision by narrow and dilated pupil which is relevant for drivers in low light conditions
Focus	Monofocal	Monofocal IOLs provide clear vision at one range – distance vision or near vision. This is the most popular and most frequently implanted type of IOLs. Advantages of monofocal aspheric IOLs as compared to multifocal IOLs: 1. Better contrast vision and color reproduction 2. Aberration-free (no halos or flares) 3. Absence of neuroadaptation.
Haptic	S-loop	Advantages of S- loop haptic of Citrine IOL: 1. Easy implantation 2. Good centration in the capsular bag
Haptic thickness	0,281 мм	Provides IOL's flexibility and lowers the risk of haptic torn off during implantation
Light filtration	UV	All present-day IOLs have UV filter, which does not allow light wavelength from 200 to 400 nm come through. UV filter is necessary for prevention of age-related macular degeneration (ARMD).
Color	Transparent	Advantages of transparent IOLs as compared to IOLs of the yellow color: 1. Provide good vision in low lighting condition 2. Do not change contrast and color sensitivity 3. Do not affect melatonin production and quality of sleep
Refractive index	1,497	High optical power by low weight and thickness of IOL
A-constant	118,5 (Ultra-sound biometry)	Calculation parameter for defining IOL's required optic power

Parameter	Technical characteristic	Advantages for surgeons and patients
Optic diameter	6,0 мм	Matches the shape and size of human eye's natural lens
Haptic angle	5°	Minimum haptic angulation helps lower the risk of secondary cataract
Overall length	13,0 мм	Average size of S-loop hydrophobic IOLs, which provides good centration and tight adhesion to the posterior capsule for secondary cataract prevention
Incision width	2,2 мм	Minimum incision size for IOL's implantation
Spherical range	от +6,0 D до +35,0 D	Corresponds to 99,9% of clinical cases
Step	0,5	Lowers errors by individual choice of optical power for the patient

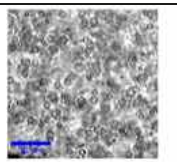


Light transmission curve of Citrine IOL



CITRINE IOLS FEATURES

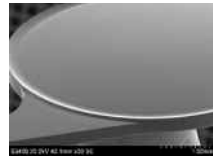
Parameter	Technical characteristic	Advantages for surgeons and patients
Material	Innovative acrylic by SOLEKO (Italy)	Citrine IOL is made of innovative acrylic in which acrylmethacrylate with hydroxyalkyl methacrylate are changed. Due to the modified contents of hydrophobic acryl, glistening effect is minimized (less transparency caused by water vacuoles in IOL optic thickness)
Water contents	⩾2,9%	Greater water contents in hydrophobic material provides glistening-free effect
IOL's edge processing	Double square edge and additional diamond cutting along back edge of IOL	Unique design of hydrophobic Citrine IOL with additionally milled cutting of the optic field back edge blocks migration of Lens Epithelial Cells (LEC) and prevents secondary cataract.
Individual package	Ergonomic transparent container with a special lens holder	Special design of individual package provides firm fixation and easy unloading of Citrine IOL



Stimulated «glistening» in usual hydrophobic IOLs

Stimulated «glistening» in IOLs of new material by Soleko – glistening-free

* Vol. 10, No. 4 | 1 Apr 2019 | BIOMEDICAL OPTICS EXPRESS 1870
Experimental study of the mechanisms leading to the formation of glistenings in intraocular lenses by Raman spectroscopy
GIULIA RUSCIANO,1,2,* ANGELA CAPACCIO,1 GIUSEPPE PESCE,1 AND ANTONIO SASSO



WORKING ORDER

1 Before use examine the marking carefully: examine the label on the unopened package for model, spherical power and expiration date.
Check the package to make sure it is undamaged and has proper configuration

2 After opening the outer polyethylene film and cardboard storage container verify lens information (e.g., model, power, serial number) on the pouch and on the container is consistent with information on outer package labeling.

3 Carefully rotate in the direction of the arrow to open the container

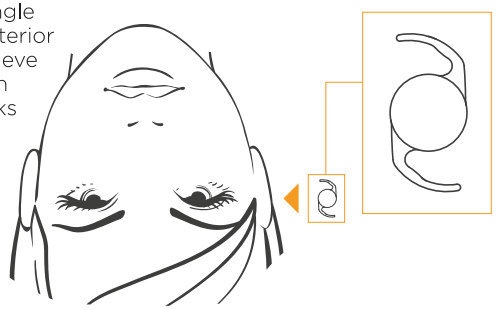
4 Carefully take the lens with the forceps by the haptics and remove it from the container. When removing the lens from the container, DO NOT grasp the optical area with forceps until the lens is folded.

5 Rinse the lens thoroughly using sterile balanced irrigating solution5 before implantation. All instrumentation should be scrupulously clean to minimize the occurrence of marks on the lens while folding

6 Prior to insertion, the lens should be carefully examined under magnification. In case of any defect or deformation occurrence, the lens should be returned to the manufacturer together with the package..

During handling do not allow contact of the lens with other materials and surfaces (cloths, gauze, gloves, swaddles, instrument table, etc.).

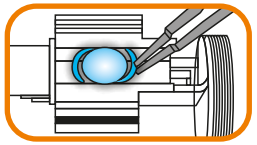
7 In the capsular bag, the posterior aspheric optical surface of the lens with sharp angle should adhere tightly to the posterior capsule of the eye's lens. To achieve this, during insertion the surgeon should pay attention to the marks on the haptic elements:
Mark on the haptic, directed during insertion to the nose of the patient, should be opened to the left, the mark on the haptic, directed to the forehead of the patient, to the right.



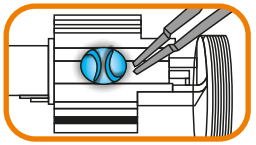
The lens should not be exposed to open air for a long time. After folding, the lens should be inserted within 3 minutes.

The implantation technique may differ, so it should be determined by the surgeon's experience and preference.

POSITION INTO THE CARTRIDGE



CORRECT



WRONG

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