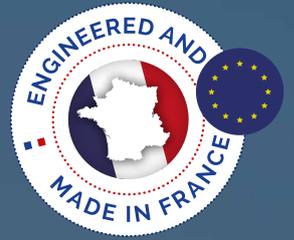




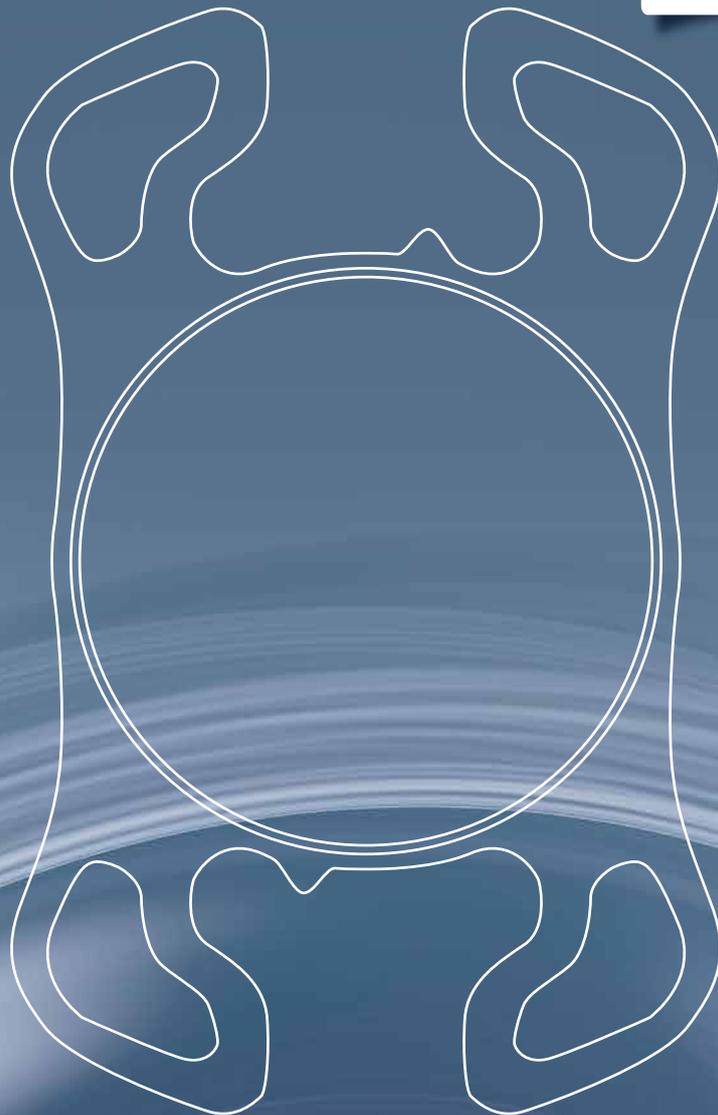
CUTTING EDGE  
*sense of innovation*



# Synthesis<sup>®</sup>

Acrylic Monofocal

NEW



# Synthesis<sup>®</sup>

Acrylic Monofocal

## CUTTING-EDGE TECHNOLOGY IOL

**Synthesis<sup>®</sup>** is a new acrylic monofocal intraocular lens, developed and manufactured by CUTTING EDGE, expert in IOLs design.

Cutting Edge builds experienced and dedicated teams to design, prototype and manufacture high-quality Intraocular Lenses. Our state-of-the-art facility honours the quality and process sophistication of the medical device industry.

The proximity of our Research & Development team to our manufacturing operations is truly significant for building close links and in using a results-orientated approach.

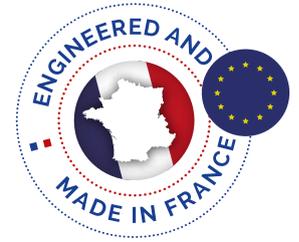
Cutting Edge masters all manufacturing stages in house, from machining to optical and mechanical tests, through to packaging and international logistics.

Synthesis was engineered by a team who fully believe that the human eye is both fragile and precious and requires the utmost in precision, “savoir-faire” and faultless industrial quality.



# Synthesis<sup>®</sup>

Acrylic Monofocal



## THE LATEST ALL-IN-ONE INNOVATIONS PLATFORM



### SAFETY

- **Material**
  - Clear or blue-light-filtering option
- **Design**
  - 4 point fixation haptics
  - 360° C-Edge+ square edges
  - Orientation notch on optic edge
- **Truly MICS enhanced characteristics**

### REPRODUCIBILITY

- **Optic**
  - 6 mm diameter optic
  - Anatomically friendly with 3 overall diameter
  - Aberration neutral Aspheric lens
  - Posterior shift features
- **Injection**
  - Latest injection system options

### From -10.0 D to +40.0 D

- 1 D increment between -10.0 D to +10.0 D & +31.0 D to +40.0 D
- 0.5 D increment between +10.0 D to 30.0 D

### OPTICAL QUALITY

- MTF curves exceed ISO 13485 norm
- UV and blue-light-filtering option



CUTTING EDGE

# SAFETY

## MATERIAL

- Acrylic copolymer successfully **used for more than 17 years** in ophthalmology
- **Ultraviolet absorption**
- **Blue-light-filtering** option (yellow)

## DESIGN

- **4 point** fixation haptics
- **3 overall diameters** to fit the capsular bag:
  - 11 mm from -10.0 D to +15.0 D
  - 10.7 mm from +15.5 D to 22.0 D
  - 10.5 mm from +22.5 D to +40.0 D
- **Enhanced C-Edge+**  $\leq 5\mu\text{m}$  360° square edge

# Synthesis<sup>®</sup>

Acrylic Monofocal



### Overall diameter

- 11 mm
- 10,7 mm
- 10,5 mm

## C-EDGE+ SCANNING ELECTRON MICROSCOPY IMAGES

MAGNIFICATION 50X



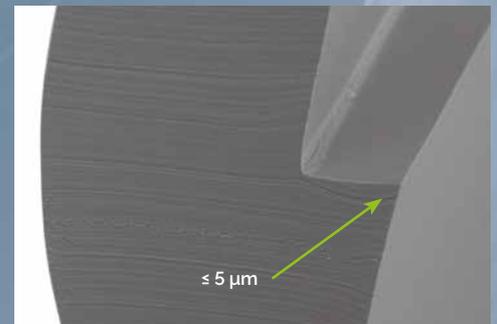
2 mm

MAGNIFICATION 200X



500  $\mu\text{m}$

MAGNIFICATION 500X



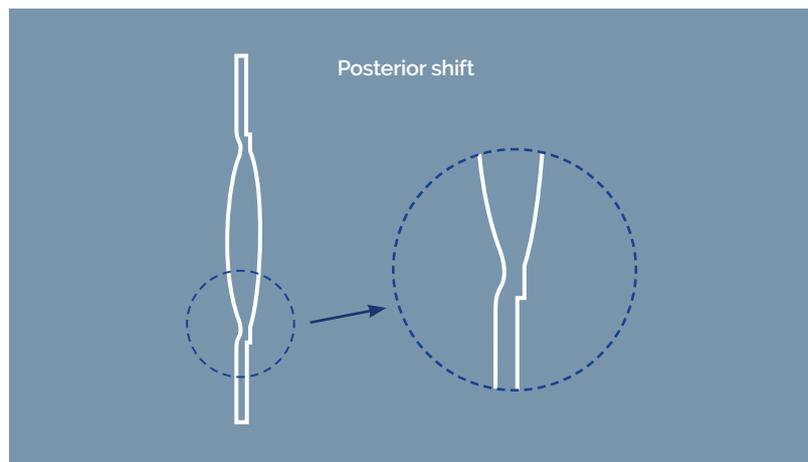
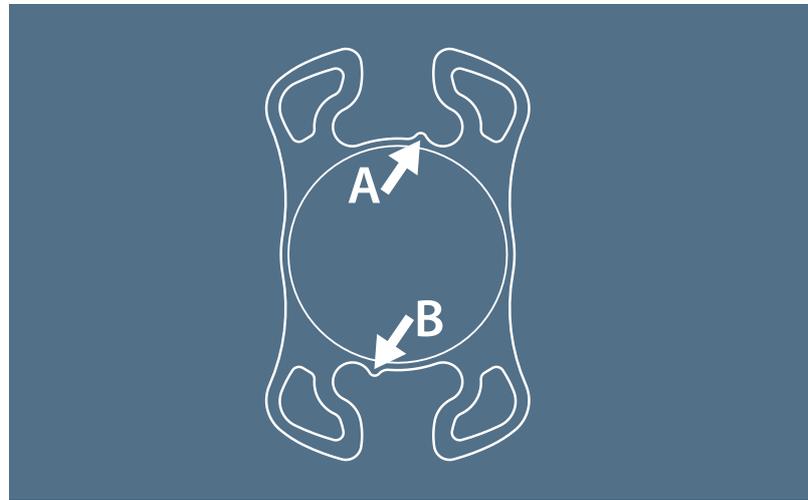
200  $\mu\text{m}$

C-EDGE+

# REPRODUCIBILITY

## OPTIC

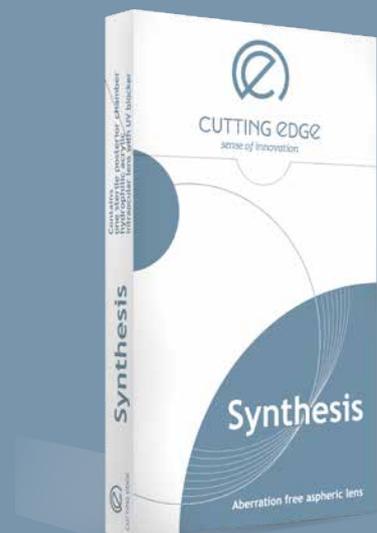
- **6 mm optic** across the power range
- **Orientation notch** at the optic edge
- **Posterior shift:** vaulted design for excellent capsular bag adhesion
- **Aberration neutral**  
Aspheric profile
- **Homogeneous surface** across the power range for consistent injection forces regardless of IOL diopter.



**Synthesis**<sup>®</sup>  
Acrylic Monofocal



CE  
0197

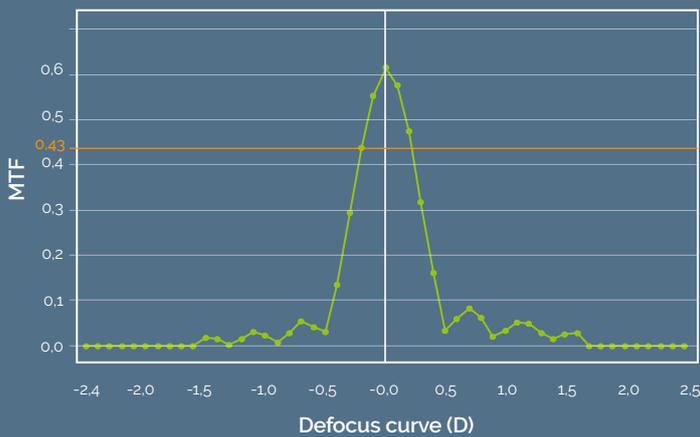


# OPTICAL QUALITY

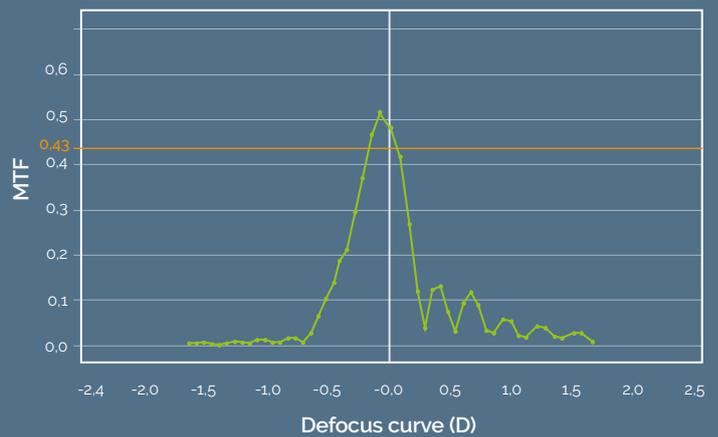
## MTF (MODULATION TRANSFER FUNCTION)

**Synthesis exceeds ISO 11979-2 standard requirement for optical properties and test methods (0.43 at 100 cycle/mm) at all light conditions and pupil diameter.**

**SYNTHESIS® MTF  
IN DAY LIGHT CONDITIONS**  
(3 mm pupil diameter)

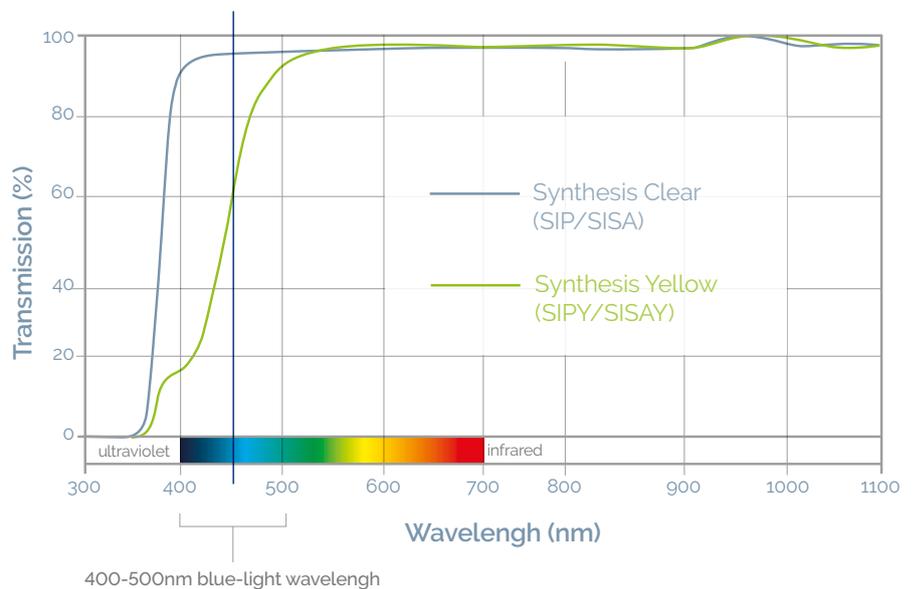


**SYNTHESIS® MTF  
IN DIM LIGHT CONDITIONS**  
(4.5 mm pupil diameter)



## SPECTRAL TRANSMISSION

**Synthesis Yellow filters 40% of blue light at 450nm wavelength**



# TECHNICAL SHEET

DESIGNATION	SPECIFICATIONS
Optic diameter	6 mm across the power range (0.0 D to 30.0 D)
Diopter Range	1 D increment between -10.0 D to +10.0 D & +31.0 D to +40.0 D 0.5 D increment between +10.0 D to +30.0 D
Ordering information	Stock items between 0.0 D to 35.0 D On-order (4 weeks lead-time) between -10.0 D to -1.0 D & 36.0 D to 40.0 D
Total diameter	From -10.0 D to 15.0 D: 11.0 mm From 15.5 D to 22.0 D: 10.7 mm From 22.5 D to 30.0 D: 10.5 mm
Design	4 point-fixation, C-Edge+ $\leq$ 5 microns
Angulation	0°, posterior-shift feature
Optic	Aspheric aberration-neutral
Biometry	SRK/T: A = 118.851 Haigis: a0 = 1.2228 (with a1 = 0.4 & a2 = 0.1) Hoffer-Q: pACD = 5.4595 Holladay 1: SF = 1.7064
References	Synthesis <i>CLEAR</i> Preloaded: <b>SIP</b> Synthesis <i>YELLOW</i> Preloaded: <b>SIPY</b> Synthesis <i>CLEAR</i> IOL: <b>SISA</b> Synthesis <i>YELLOW</i> IOL: <b>SISAY</b>

# INJECTION SYSTEMS

		Brands	References	Wound-assisted recommended incision	In-the wound recommended incision	In-the-bag recommended incision
	Preloaded	Medicel Accujet™ PRO 1.6	<b>LP604550P</b> (box of 10)	1.6 mm	1.8 mm	2.0 mm
	Cartridge loading	Medicel Viscojet™ BIO 1.8	<b>LP604350C</b> (box of 10)	1.8 mm	2.0 mm	2.2 mm



**CUTTING EDGE**  
*sense of innovation*

SENSE OF EXCELLENCE

SENSE OF INNOVATION

SENSE OF PARTNERSHIP

SENSE OF ETHICS

**CUTTING EDGE HEADQUARTERS**

770 rue Alfred Nobel - Immeuble le Nobel  
34000 Montpellier - France

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**CUTTING EDGE MANUFACTURING**

580 rue Max Planck - 31670 Labège - France

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Tel. +44 (0) 1202 696963

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**CUTTING EDGE SURGICAL**

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Tel. +34 658 208 691

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