



**The new IOLMaster 700**  
Next generation biometry from ZEISS

With  
**SWEPT Source  
Biometry®**



We make it visible.



# The new ZEISS IOLMaster 700 with SWEPT Source Biometry

ZEISS was the inventor of the first optical biometer and pioneered the introduction of OCT for ophthalmology.

We have now integrated SWEPT Source OCT technology into biometry to create the first SWEPT Source Biometry® device from ZEISS.

Defining next generation biometry from ZEISS.

## Your key benefits

- **Get fewer refractive surprises**  
OCT image based biometry for visually verifying measurements and for the detection of unusual eye geometries
- **Improve your refractive outcomes**  
Repeatability, clinical foundation, telecentric keratometry, biometrical parameters
- **Optimize your workflow**  
On-board toric IOL power calculation, easy delegation, measurement speed, markerless implantation of toric IOLs
- **Make a future-proof investment**  
Platform ready for future enhancements, hassle-free service package

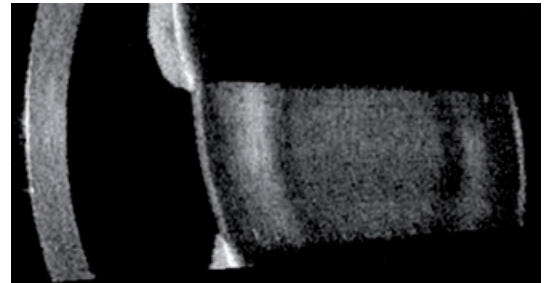




## Get fewer refractive surprises

### Detect unusual eye geometries

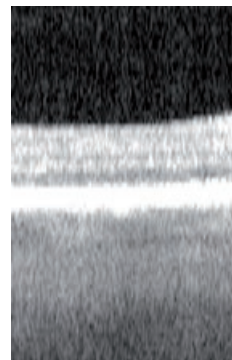
The SWEPT Source Biometry performed by the IOLMaster® 700 from ZEISS provides a full-length OCT image showing anatomical details of the eye on a longitudinal cut through the entire eye. Thus, for the first time in optical biometry, unusual eye geometries, such as a tilt or decentration of the crystalline lens, can be detected. If left undetected, such critical details can lead to an unsatisfactory post-operative visual experience.



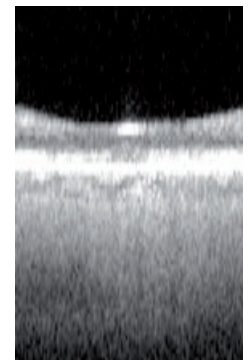
*Suspected tilted lens\**

### Detect poor fixation

The unique Fixation Check of the IOLMaster 700 provides you with more confidence in biometry. Can you see the foveal pit? If so, you can reduce the risk of refractive surprises due to incorrect measurements caused by undetected poor fixation. If not, you can educate your patients to always fixate on target.



*Poor fixation\*\**



*Correct fixation\*\**

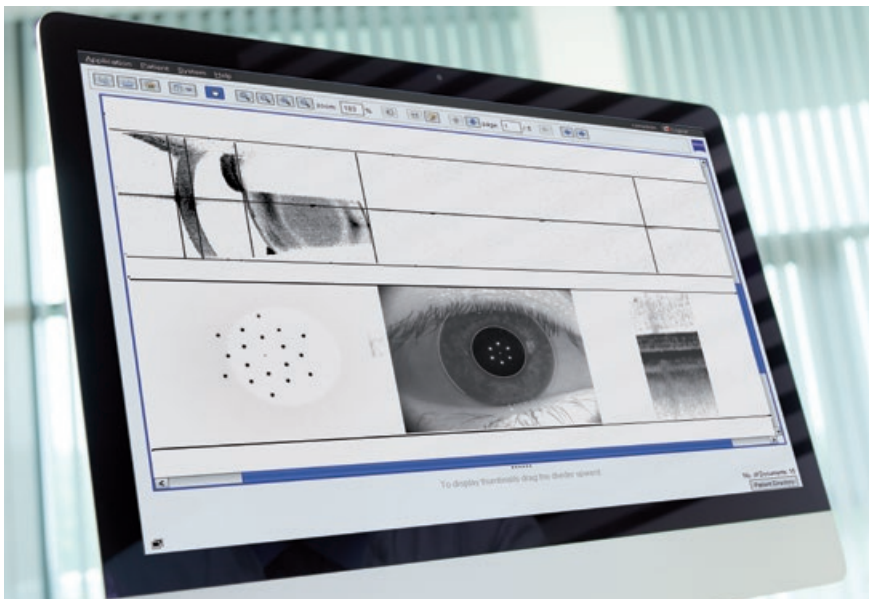
\* Image courtesy of Prof. W. Sekundo, Philipps University Hospital Marburg, Germany

\*\* Image by Carl Zeiss Meditec AG



### **Visually verify your measurement**

All measurement calipers are shown on the full-length OCT image provided by the ZEISS IOLMaster 700. Now, for the first time in biometry, you can visually verify what structure of the eye has been measured. The complex interpretation of A-scans and guesswork as to which peak might be the right one to be measured are no longer necessary. Thus, potential sources of errors are eliminated.

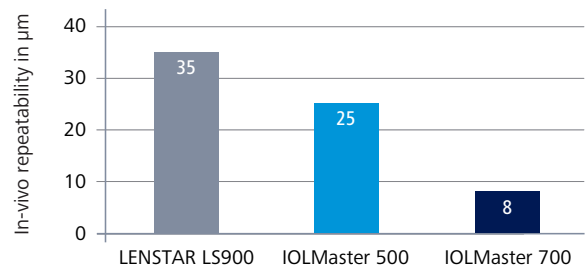




## Improve your refractive outcomes

### Outstanding repeatability

Repeatability is essential for good refractive outcomes. Thanks to its unique SWEPT Source Biometry with 2,000 scans per second, the repeatability of the ZEISS IOLMaster 700 is absolutely outstanding.



Comparison of the repeatability of axial length measurement<sup>1</sup>

### Get the broadest basis of clinical data

The biometry of ZEISS IOLMaster 700 is 100% compatible with former versions of the IOLMaster. Therefore, you can leverage the complete "User Group of Laser Interference Biometry" (ULIB) database. You will find optimized lens constants for more than 270 IOL models based on the data from over 50,000 cataract surgeries specifically collected for the IOLMaster. This will help you to improve your refractive outcomes.<sup>2</sup>



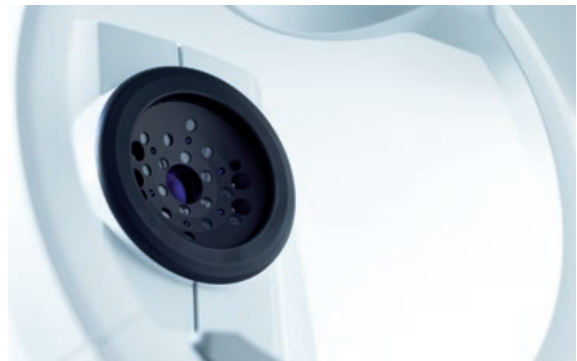
<sup>1</sup> Sources: LENSTAR LS900, HS-Art.No. 1511.7220032.02060, standard deviation (1, $\sigma$ ); IOLMaster 500, Vogel A, Dick B, Krummenauer F: Reproducibility of optical biometry using partial coherence interferometry. Intraobserver and Interobserver reliability. J Cataract Refract Surg 27: 1961-1968, 2001 standard deviation (1, $\sigma$ ); IOLMaster 700 see technical data

<sup>2</sup> Aristodemou P, Knox Cartwright NE, Sparrow JM, Johnston RL, Intraocular lens formula constant optimization and partial coherence interferometry biometry: Refractive outcomes in 8108 eyes after cataract surgery, J Cataract Refract Surg. 2011 Jan;37(1):50-62



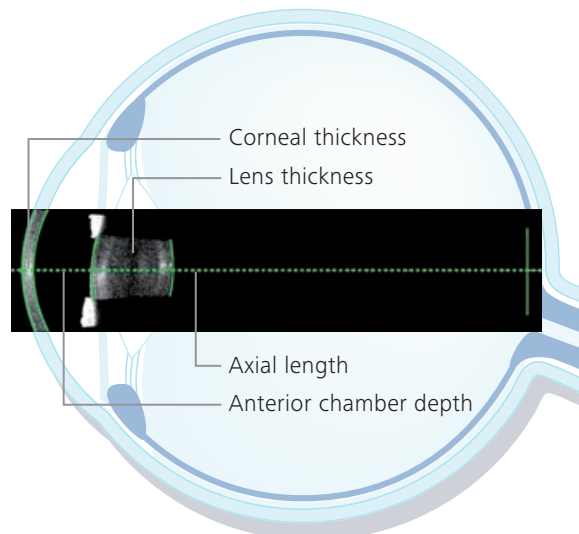
### **Unique telecentric keratometry**

ZEISS is the only company that offers a biometer with telecentric, and thus distance-independent, keratometry. Its smart optical configuration allows robust and repeatable measurements – especially with restless patients – for superior keratometry measurements.



### **Complete set of biometric parameters for latest IOL power calculation formulas**

The ZEISS IOLMaster 700 measures all biometric parameters for the latest IOL power calculation formulas.





## Optimize your workflow

### Toric IOL power calculation made easy

In the new Haigis Suite, the ZEISS IOLMaster 700 provides the first on-board all-in-one solution for toric IOL power calculation. It combines the well established Haigis formula, the Haigis-L formula for post-LVC cases, and the new Haigis-T for toric IOL in one powerful tool. There is no need to key-in data into the vendors' online toric IOL power calculation tools.

### Easy to use and delegate

Taking biometry measurements made easy! The multi-touch screen and the new graphical user interface allow for gesture control of the device like you are used to from your smartphone or tablet computer.

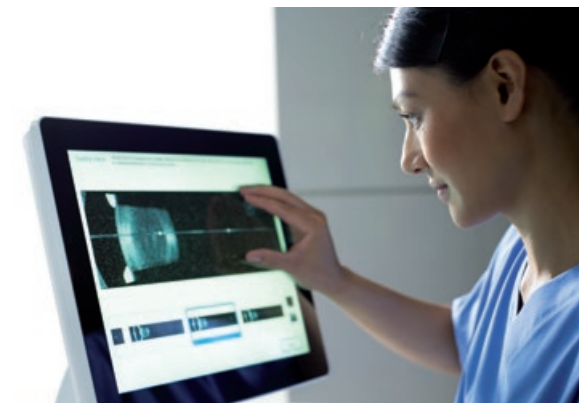
Alignment assistance functions make the results largely independent from the user and therefore easy to delegate.

### Fast

Thanks to its SWEPT Source Biometry, the measurements take only seconds. This is a huge advantage – especially with restless patients.



*Integrated Reference Image for ZEISS Cataract Suite markerless (optional)*



*Multi-touch screen*

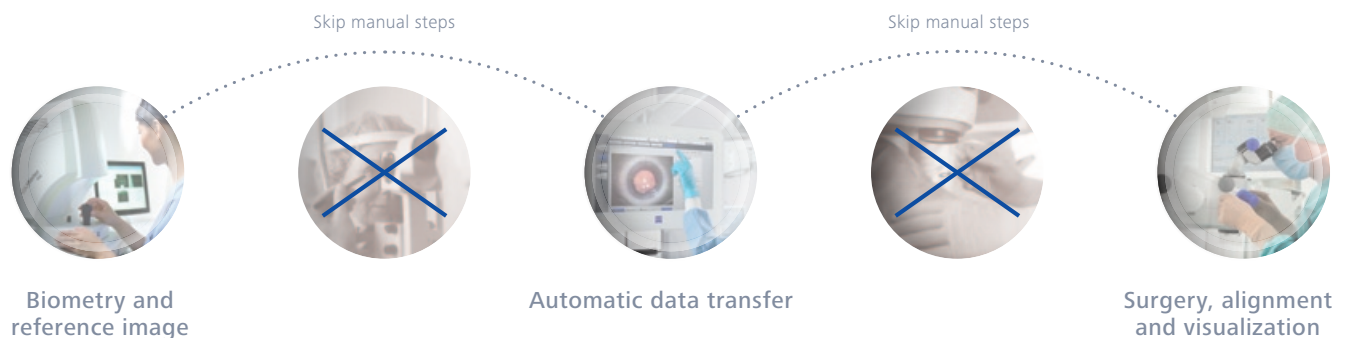




**Implant toric IOLs markerless – ZEISS Cataract Suite** markerless

The ZEISS IOLMaster 700 is part of the **ZEISS Cataract Suite** markerless. It acquires a reference image in case of astigmatism during routine biometry. The image of the eye is taken along with the keratometry measurement, all with one device. Both, reference image and keratometry data are transferred to CALLISTO eye®, the computer-assisted cataract surgery system from ZEISS.

During surgery, the image is used for intra-operative matching with the live eye image. All data needed is injected into the eyepiece of the surgical microscopes of the OPMI LUMERA® family<sup>3</sup> from ZEISS. Pre-operative corneal marking and additional measurements for toric IOL alignment become obsolete.



- Manual pre-op marking – just skip it
- Manual data transfer – just skip it
- Manual intra-op marking – just skip it

<sup>3</sup> **ZEISS Cataract Suite** markerless is available with: S7/OPMI Lumera, S88/OPMI Lumera T, OPMI Lumera i and OPMI Lumera 700



## Future-proof investment

In the ZEISS IOLMaster 700, you get a unique biometry platform based on the latest SWEPT Source Biometry technology. Its unique technology is open for future enhancements and developments of biometry applications.

### Stay at the cutting edge with ZEISS OPTIME complete

The ZEISS OPTIME complete package for the ZEISS IOLMaster 700 enables you to stay at the cutting edge and participate in future product enhancements. ZEISS OPTIME complete is a hassle-free service offering that includes future software upgrades which become available for your new device. It facilitates enhancements and improved performance for applications you have purchased on the ZEISS IOLMaster 700. Furthermore, ZEISS OPTIME complete features preventive and corrective maintenance as well as spare parts for maximum system availability and convenience.

- Preventive maintenance
- Service hotline
- Safety and performance updates

- Corrective maintenance
- Remote Service
- Phone/chat support

- Spare parts
- Software upgrades

**ZEISS OPTIME complete**

# Technical data

## IOLMaster 700 from ZEISS

<b>Measurement range</b>	Axial length 14 – 38 mm
	Corneal radii 5 – 11 mm
	Anterior chamber depth 0.7 – 8 mm
	Lens thickness 1 – 10 mm (phakic eye) 0.13 – 2.5 mm (pseudophakic eye)
	Central corneal thickness 0.2 – 1.2 mm
	White-to-white 8 – 16 mm
<b>Display scaling</b>	Axial length 0.01 mm
	Corneal radii 0.01 mm
	Anterior chamber depth 0.01 mm
	Lens thickness 0.01 mm
	Central corneal thickness 1 $\mu$ m
	White-to-white 0.1 mm
<b>SD of repeatability<sup>4</sup></b>	Axial length 8 $\mu$ m
	Corneal radii 0.09 D
	Cylinder > 2.0 D axis 1.7°
	Anterior chamber depth 11 $\mu$ m
	Lens thickness 12 $\mu$ m
	Central corneal thickness 2 $\mu$ m
White-to-white 90 $\mu$ m	
<b>IOL calculation formulas</b>	SRK® / T, Holladay 2, Hoffer Q, Haigis Suite (includes Haigis, Haigis-L calculation for eyes following myopic / hyperopic LASIK / PRK / LASEK surgery and Haigis-T for toric IOL power calculation)
<b>Interfaces</b>	ZEISS FORUM® eye care data management system
	ZEISS computer-assisted cataract surgery system CALLISTO eye (via USB & FORUM)
	Data interface for electronic medical record (EMR) / patient management systems (PMS)
	Data export to USB storage media
	Ethernet port for network connection and network printer
<b>Line voltage</b>	100 – 240 V $\pm$ 10 % (self sensing)
<b>Line frequency</b>	50 – 60 Hz
<b>Power consumption</b>	max. 150 VA
<b>Laser class</b>	1



<sup>4</sup> Carl Zeiss Meditec AG, clinical trial, EUDAMED No. CIV-12-08-008641

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