MediWorks

AL550

Automatic Optical Biometer For Cataract Surgery

Fast, Precise & Automatic Biometric and Topographic Measurement

—— Your Eyesight Guardian.



Fast

Two eyes biometry can be captured within **20 seconds**.

Zero learning curve, master operation in **60 seconds**.

Precise

µm-level accuracy and repeatability.

Seven independently developed patents and mature market experience, boosting data detection rate.

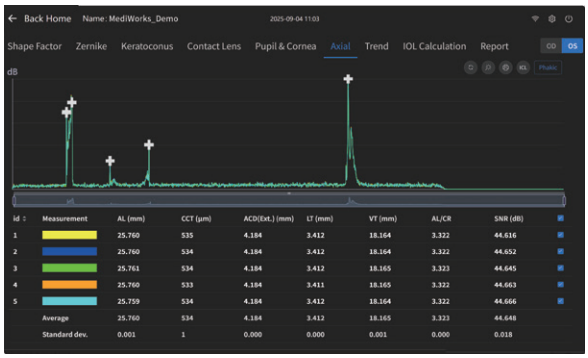
Automatic

Two times click, capture completed.

Voice prompts guide users through the capture.

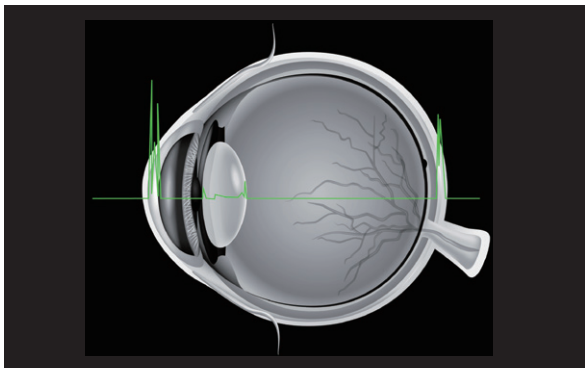


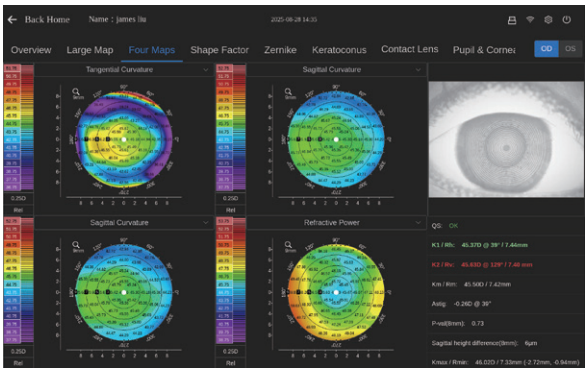
Accuracy Meets Innovation

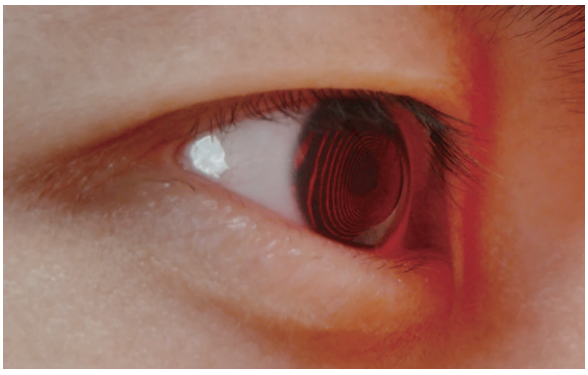


OLCR (Optical Low-Coherence Reflectometry) Measurement Technology

- The high signal-to-noise ratio makes the measurement more precise compared with traditional measurement.
- The 1060nm wavelength provides greater penetration of ocular tissue compared to other wavelengths, enhancing measurement success rate and accuracy even in dense cataracts.







Placido Disc

- The 50-ring design Placido disc can provide 125,600 accurate analysis data points.
- The large cone design covers more than 9.8mm diameter of central cornea to obtain more precise measurement data.

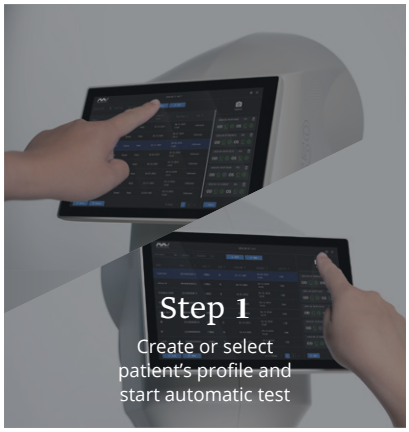
Sleekness Transcends Form



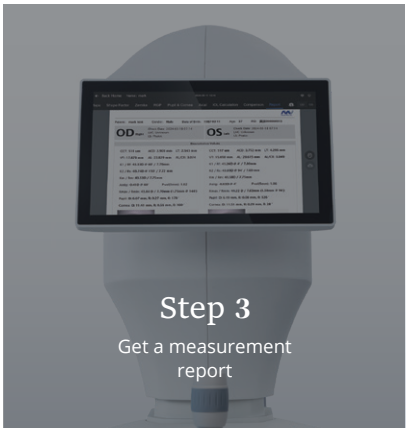
Space-Saving Design

- Integrated touchscreen, with clear data and intuitive operation at a glance.
- Combined OLCR & Placido technologies – no repeated measurements needed.

Ease of Operation







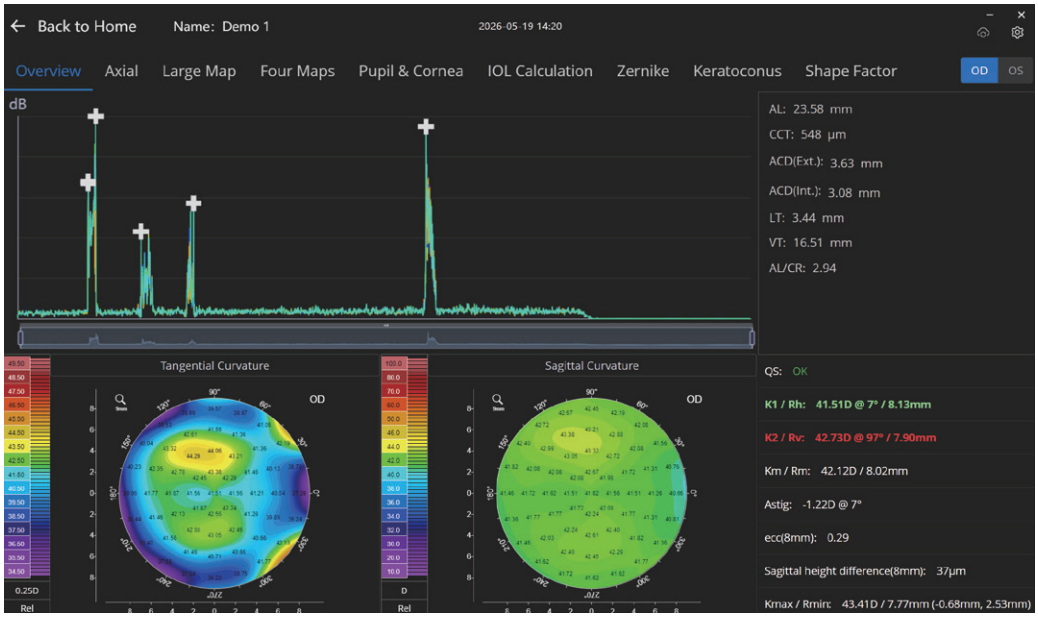
23 Parameters

Axial Length (AL)
Trend of AL
Axial Lenghth/Corneal Radius Ratio (AL/CR)
Trend of AL/CR
Flat Keratometry (K1)
Steep Keratometry (K2)
Mean Keratometry (Km)
Maximum Keratometry (Kmax)
Astig (AST)
Astig Axis
Pupil Diameter (PD)
Pupil Center Position (Kappa Angle)
White-to-White (WTW)
Cornea Center Position (Alpha Angle)
Keratoconus Indices
Eccentricity Value (Ecc)
Central Corneal Thickness (CCT)
Anterior Chamber Depth (ACD)
Lens Thickness (LT)
Vitreous Thickness (VT)
Higher Order Aberration (RMS)
Strehl Ratio (SR)
IOL Calculation

Clinical Application in Cataract Surgery

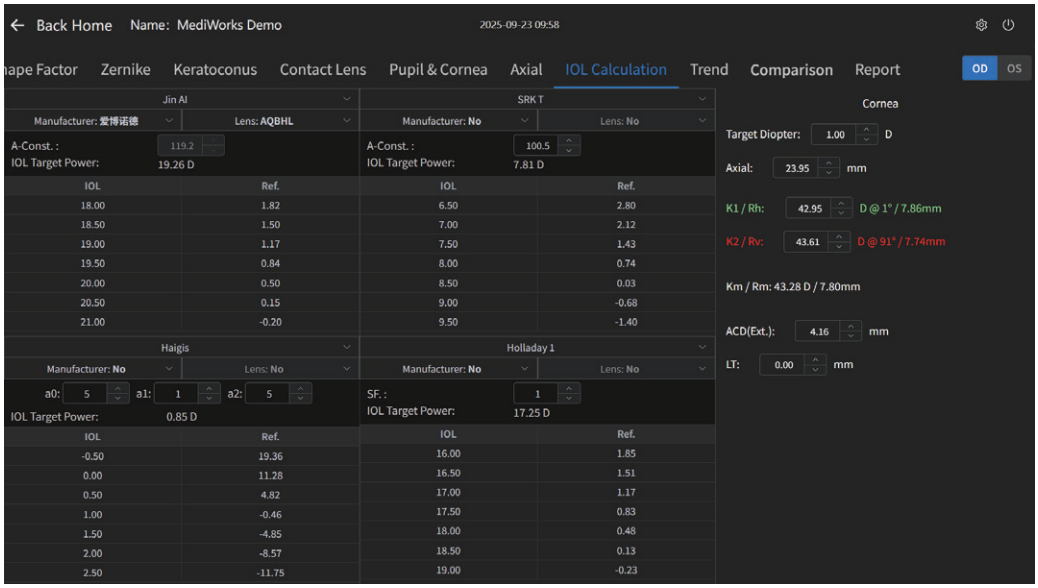
IOL Power Prediction Parameter Measurement

AL550 provides accurate measurements such as axis length, corneal curvature and anterior chamber depth, which are crucial for the precise prediction of IOL power.



IOL Calculation

AL550 integrates multiple IOL calculation formulas, including Jin AI, SRK-T, Holladay 1, Hoffer Q and Haigis, enabling rapid calculation of IOL power for cataract patients. Moreover, a study has confirmed that the Jin AI formula achieves prediction accuracy comparable to that of the Barrett Universal II.



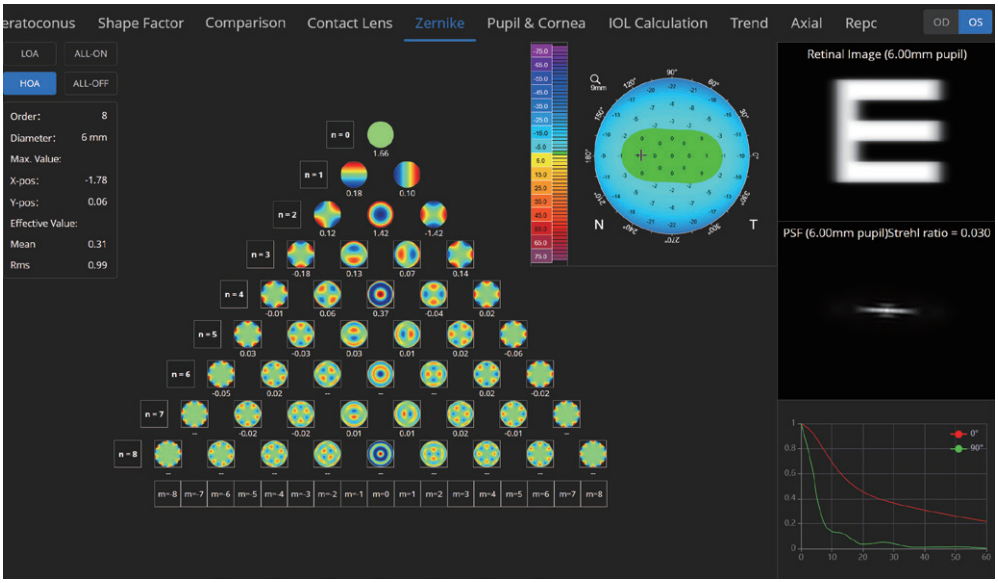
Keratoconus Screening

AL550 provides the maps of anterior corneal sagittal curvature and elevation, and a variety of keratoconus indices, which can effectively aid in clinical keratoconus screening.



Wavefront Aberration Analysis & Visual Quality Analysis

AL550 provides Zernike wavefront aberration data of the corneal anterior surface with up to 8th order and a maximum diameter of 12mm. Meanwhile, it offers Retinal Imaging, Point Spread Function (PSF, including Strehl ratio), and Modulation Transfer Function (MTF) for more intuitive visual quality analysis and doctor-to-patient communication.





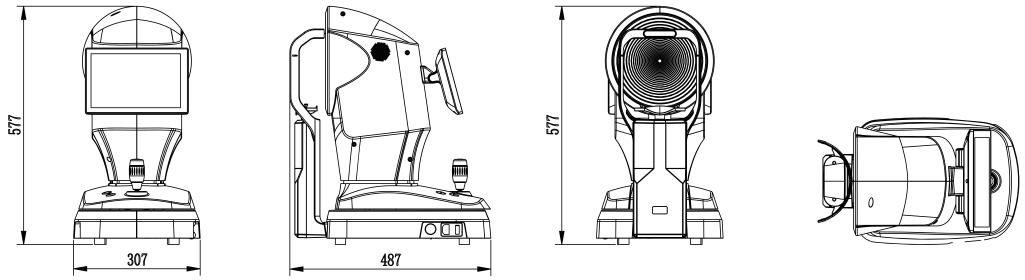
AL550 Automatic Optical Biometer
A trusted ally for your practice in cataract surgery!

Specifications

FEATURE	SPECIFICATION
Keratoscopic cone	50-ring Placido
Analyzed points	125,600
Measured points	18,000
Diopter power range	32.14 ～ 61.36D (±0.1D)
Axial Biometry	Optical Low-coherence Reflectometry (1,060nm)
Focus mode	One-touch, XYZ axes autofocus tracking measurement
OS/OD Recognition	Automatic
Monitor	10.1" touchscreen
Illumination	Red, Infrared
Database	Internal
Working environment	+5°C~+40°C, Relative humidity ≤80% (no condensing),
	Atmospheric pressure 700 – 1,060 hPa
Power supply	~100 - 240 VAC, 50/60 HZ
Power consumption	100 VA
Dimensions	307 mm (W) × 487 mm (L) × 577 mm (H)
Weight	21kg
Printing options	USB printer, Network printer, PDF on network shared folder,
	PDF on USB PDF or Image on network folder or on USB
Operating System	Linux
Hard Disk	1TB

INFORMATION ON MEASUREMENTS

MEASUREMENT	Measuring Range	Tolerance Value	Display Resolution
Axlal Length	0 - 40 mm	±10 μm	1 μm
Corneal Thickness	0.2 - 1.2 mm	±10 μm	1 μm
Anterior Chamber Depth	0.7 - 8 mm	±10 μm	1 μm
Lens Thickness	1.5 - 6.5 mm	±10 μm	1 μm
White-to-White	8 - 16 mm	±0.1 mm	
Pupil Diameter	1 - 13 mm	±0.1 mm	
Projection ring diameter	> 9.8 mm		
Corneal Radius of Curvature	5.5 - 10.5 mm (Accuracy ± 0.02 mm)		
Axis	0 ~ 180°		



CE NMPA MDSAP ISO

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Details Make the **Difference**