

# Smarter Measurements, Better Outcomes

Seamless IOL Calculations for Precision  
and Efficiency

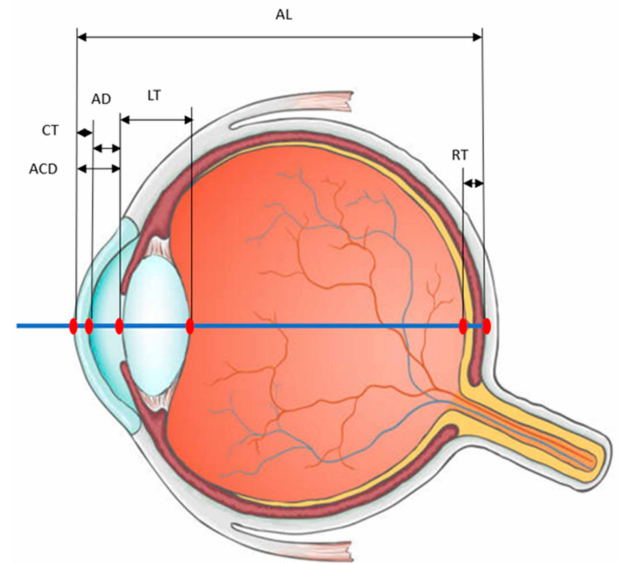
Empowering Eye Care  
Professionals through Optimized  
Workflow and Mobility

**3nethra**  
**bio**



## 3nethra bio

The 3nethra bio is an advanced optical biometer that utilizes low-coherence interferometry to deliver precise measurements of key ocular parameters. It ensures accurate alignment of the eye axis and measures **axial length, central corneal thickness, corneal curvature, anterior chamber depth, lens thickness, white-to-white distance, and pupil diameter**. Additionally, it calculates intraocular lens (IOL) power for precise implantation, optimizing refractive outcomes. Its intuitive design streamlines data acquisition, enhancing diagnostic accuracy, treatment planning, and overall clinical efficiency.



## Advantages

- ✓ **Rapid Measurement**  
Monocular measurements take a few seconds, with binocular measurements averaging less than 20 seconds.
- ✓ **High Accuracy & Repeatability**  
Achieved through 32 concentric light points for precise corneal measurement.
- ✓ **Comprehensive Diagnostic Capabilities**  
Predicts refractive attributes, tracks axial growth, and enhances myopia prevention, cataracts, corneal reshaping, and visual quality.
- ✓ **Kappa Angle Measurement Support**  
Evaluates the angular difference between the visual and optical axes, which is crucial for optimizing outcomes in cataract surgery.
- ✓ **User-Friendly Operation**  
Features animated voice guidance for easy and intuitive use.
- ✓ **Dual Mode Functionality**  
Offers Standard Mode for aphakic eyes and Pro Mode for phakic and pseudophakic eyes.

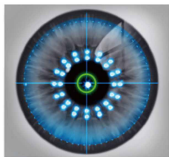


# Key Features

## ✓ High-Precision Axial Measurements with OLCR Technology

The integration of Optical Low Coherence Reflectometry (OLCR) technology enables high-precision axial measurements. By analyzing the time delay and intensity of reflected light, OLCR achieves sub-micron accuracy while minimizing refractive index-related errors.

## ✓ High-Precision Corneal Analysis Using 32 Light Points



The system projects 32 concentric light points onto the cornea, aligning reflections for high-precision, repeatable calculations.

## ✓ Advanced Eye Diagnostic System

- Predicts refractive attributes and axial growth
- It supports myopia control.
- It offers insights into:
  - Cataracts
  - Myopia Progression
  - Visual quality with Kappa angle measurement

Forus Health Pvt.Ltd	
Ophthalmic optical biometer report sheet	
Report No: 000000	Subject: Main
ID: 00000000000000000000	Date: 2023/05/24
Time: 10:05:54	
OD Right	OS Left
AL: 23.99mm	AL: 23.99mm
CT: 0.55mm	CT: 0.55mm
ACD: 3.71mm	ACD: 3.71mm
LT: 3.71mm	LT: 3.71mm
VT: 3.71mm	VT: 3.71mm
AL/CR: 3.03	AL/CR: 3.03

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### Axial Ratio

Results

Horizontal Vertical IOL Name: Tom Birthday: 2019-08-13 Date: 2019-08-13 18:38:53

Parameter	Abbreviation	(OD)	(OS)
Axial length	AL	23.99mm	23.99mm
Central Corneal thickness	CCT	0.55mm	0.55mm
Anterior chamber depth	ACD/AD	3.71mm/3.71mm	3.71mm/3.71mm
Lens thickness	LT	3.71mm	3.71mm
Vitreous cavity	VT	3.71mm	3.71mm
Axial ratio	AL/CR	3.03	3.03

Measurement time 30s

Click on data to view details

A4 Print Ticket Print K-R Remeasure Back

Measuring the Axial Ratio for Precise Eye Diagnosis

### Lens Thickness

Results

Horizontal Vertical IOL Name: Tom Birthday: 2019-08-13 Date: 2019-08-13 18:38:53

Parameter	Abbreviation	(OD)	(OS)
Axial length	AL	23.99mm	23.99mm
Central Corneal thickness	CCT	0.55mm	0.55mm
Anterior chamber depth	ACD/AD	3.71mm/3.71mm	3.71mm/3.71mm
Lens thickness	LT	3.71mm	3.71mm
Vitreous cavity	VT	3.71mm	3.71mm
Axial ratio	AL/CR	3.03	3.03

Measurement time 30s

Click on data to view details

A4 Print Ticket Print K-R Remeasure Back

Lens Thickness Measurement for Enhanced Eye Health Analysis

### IOL Calculation

Biometric values

Horizontal Vertical IOL Name: Tom Birthday: 2019-08-13

Target Ref[D]: 0.0

Upload Calculate Print OS

Company	Material	Formula	IOL(D)	Bi(D)
ZEISS	Stabilab	Haege	23.5	0.40
ZEISS	Stabilab	Haege	24	0.04
ZEISS	Stabilab	Haege	24.5	-0.32
ZEISS	Stabilab	Haege	24.5	-0.32
ZEISS	Stabilab	Haege	24.5	-0.32

Note: The calculation results are for reference only

Editing lenses Adding lenses Back

IOL Calculation for Precise Cataract Surgery Planning

### Kappa

Results

Horizontal Vertical IOL Name: Tom Birthday: 2019-08-13 Date: 2019-08-13 18:38:53

Parameter	Abbreviation	(OD)	(OS)
Keratometry	K1	40.69D/172°	40.69D/172°
Keratometry	K2	40.69D/172°	40.69D/172°
Astigmatism	AST	-1.19D/172°	-1.19D/172°
White-to-white	WTW	12.02mm	12.02mm
Pupil diameter	PD	3.86mm	3.86mm
Pupil center	PC	0.02/-0.06mm	0.02/-0.06mm
Kappa	K	2.1	2.1

Measurement time 30s

Click on data to view details

A4 Print Ticket Print K-R Remeasure Back

Kappa Angle Measurement for Accurate Ocular Alignment and Cataract Surgery Planning

# Technical Specifications

Content	Measuring Range	Standard Deviation	Display Resolution
Axial Length (AL)	12~38mm	±25µm	0.01mm
Corneal Curvature (K1 & K2)	4.7mm~11.5mm	±10µm	0.01mm
Axial Angle (AST)	0°~180°	±9°	1°
Central Corneal Thickness (CCT)	300~800 µm	±2µm	1µm
Anterior Chamber Depth (ACD)	1.5~6.5 mm	±20µm	0.01mm
Lens Thickness (LT)	0.5~7.0 mm	±50µm	0.01mm
White to White Distance (WTW)	6mm~17mm	±0.2mm	0.01mm
Pupil Diameter (PD)	1.8mm~13.6mm	±0.3mm	0.01mm

Parameters	Values
Technology	OLCR (Optical Low Coherence Reflectometry)
IOL Power Calculation Formula	SRK/T, SRK II, Hoffer-Q, Hoffer-Colenbrander, Holladay 1, Haigis, Haigis-L, Binkhorst, Shammas.
Printer	External Thermal Printer and Wireless Connection for A4 printer
Dimension and Weight	410(L) x 240(B) x 410(H) mm   15Kg
Display	10 inch Touch Screen Display
Power Supply	100-240V AC, 50/60 Hz   Output - 24V DC 2.7 A
Interfaces	USB, HDMI, WiFi, Bluetooth