One vision, Two sharp eyes with Our Innovation

OA-2000

Optical Biometer

New approach to examination unit
before cataract surgery

- Fourier domain axial length measurement + Topography
- Enhanced usability
- Connection with ultrasonic measurement unit
- One-shot IOL power calculation
- Internal Database

TOMEY®

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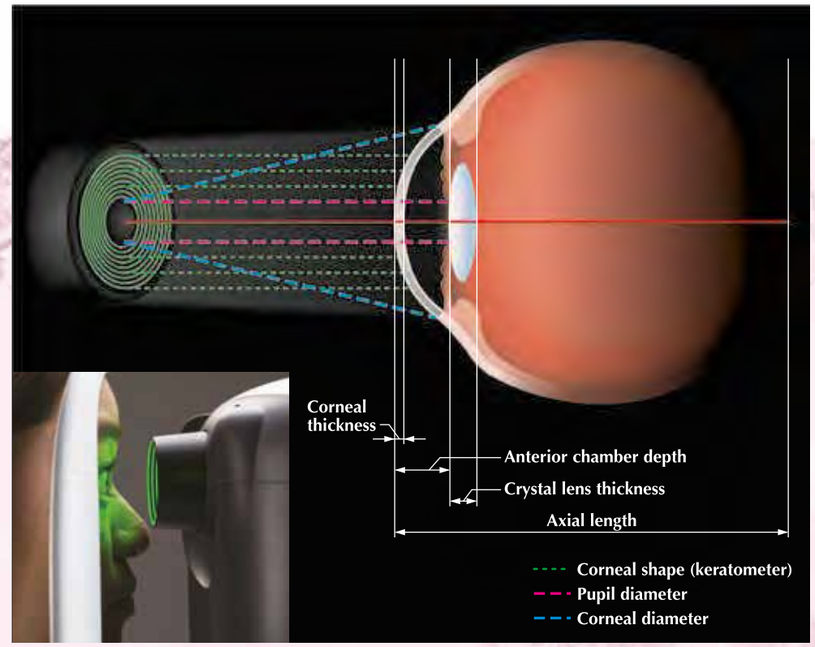

IOL power can be calculated in the main unit based on the data obtained.

Measurement → IOL power calculation → Output (print / LAN) Data storage / statistical processing

Fourier domain axial length measurement + Topography

The Fourier domain method is used as a measuring method that features high-speed superior tissue penetration. Equipped with a search function that automatically detects a measurable point even when the crystal lens is unclear.

Measurement result screen with search waveform

The ring cone method is used to measure the radius of corneal curvature.
In addition to the ø3.0 mm position measured by a general Keratometer, ø2.5 mm and ø2.0 mm positions are also simultaneously measured.

Keratometer screen

Topography screen

Also, up to ø5.5 mm of the cornea is captured and the topography (corneal shape map) is drawn using the ring cone method. The topography is useful for checking eyes after LASIK surgery or corneal irregular astigmatism, or observing the variation in the corneal shape before and after the surgery. It is also equipped with a function that supports the axis where the toric intraocular lens is to be inserted in the cataract surgery.

Toric intraocular lens auxiliary function screen

IOL power calculation function

The OA-2000 is standard equipped with nine IOL power formulas, including two formulas for eyes after LASIK surgery. Up to 15 types of lens can be registered.

Nine formulas

SRK-II formula, SRK/T formula, HOLLADAY formula, Hoffer Q formula, HAIGIS optimized formula, HAIGIS standard formula, SRK SHOWA formula,
<Formulas exclusively for eyes after LASIK surgery>
Double K SRK/T, Shammas-PL formula (Will be supported on "OKULIX" "EASY IOL")

IOL calculation screen

Enhanced usability

In spite of a size that allows the unit to be installed on a compact optical bench, it is equipped with a 10.4-inch large monitor with a tilting function that adjusts the position to the level of physician's eyes.

Simply touching the center of the pupil displayed on the monitor screen begins alignment. Measurement starts immediately via the Auto Alignment and Auto Short functions. Even when the physician operates the unit for the first time, intuitive operation is possible.
In the event that automatic measurement is difficult, manual measurement is possible using an electric joystick.

Connection with ultrasonic measurement unit

In cases where optical measurement is difficult due to blood in the eyes or other issues, the OA-2000 can be connected wirelessly to the ultrasonic axial length measurement unit AL-4000. IOL power calculation, data storage and other operations can be performed on the main unit of the OA-2000.

AL-4000

One-shot IOL power calculation

Up to seven sets of measurement data, such as the corneal thickness and anterior chamber depth in addition to the axial length and corneal curvature, can be obtained in one shot in short time.
A series of operations from the examination before cataract surgery to the management after surgery can be performed with one OA-2000, including IOL power calculation, post-surgery data storage, A-constant optimization, and statistical processing.

Measurement screen

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OA-2000 SPECIFICATIONS

Measurement range

Axial length	14 - 40mm
Anterior chamber depth	1.5 - 7.0mm
Crystalline lens thickness	0.5 - 6.0mm
Corneal thickness	0.2 - 1.2mm
Corneal curvature radius	5.0 - 11mm
Pupil diameter	1.5 - 13mm
Corneal diameter	7 - 16mm

Measurement accuracy

Axial length	±0.03mm
Anterior chamber depth	±0.05mm
Crystalline lens thickness	±0.05mm
Corneal thickness	±5μm
Corneal curvature radius	±0.02mm(ϕ3 mm / ϕ2.5 mm)
Pupil diameter	±0.1mm
Corneal diameter	±0.3mm

Display resolution

Axial length	0.01mm
Anterior chamber depth	0.01mm
Crystalline lens thickness	0.01mm
Corneal thickness	1μm
Corneal curvature radius	0.01mm

IOL power calculation formula

SRK-II formula, SRK/T formula, HOLLADAY formula, Hoffer Q formula, HAIGIS optimized formula, HAIGIS standard formula, SRK SHOWA formula, Double K SRK/T, Shammas-PL formula

Built in Printer	Thermal printer
Data output type	USB-H×2, USB-D×2, LAN SD Card (for Internal Database)
Display	10.4 inches and color TFT monitor
Dimensions	300(W) × 490(D) × 450(H)mm
Weight	Approx. 24kg
Power Supply	100 - 240VAC, 50/60Hz 110VA

TOMEY®

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