OA-2000
Optical Biometer

One vision, Two sharp eyes with Our Innovation

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

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New approach to examination unit before cataract surgery

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.

The ring cone method is used to measure the radius of corneal curvature.
In addition to the ±3.0 mm position measured by a general Keratometer, ±2.5 mm and ±2.0 mm positions are also simultaneously measured.

Also, up to ±5.5 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 intracocular lens is to be inserted in the cataract surgery.

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, Hollaar Q formula, HAUSIS optimized formula, HAGHI standard formula, SRK SHAWA formula,<Formulas exclusively for eyes after LASIK surgery>
Disable K SRK T, Shinnar-PT formula. (Will be supported on “OKULUX” “EASY IOL”)

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.

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.

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.

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

IOL calculation screen

AL-4000
## 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 (φ 3 mm / φ 2.5 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-Hx2, USB-Dx2, 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

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