

OZMA

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AUTO REF/KERATOMETER CRK 9000



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To measure a human eye with high precision,
OZMA Wavefront Technology can be the right answer.

Wavefront Technology measures the wavefront of light reflected from the retina and the refractive power with various sensors divided by sectors and analyzes them with extreme precision.



3D Auto Tracking

The cutting edged auto sensor and 3 dimensional movement mechanism enables you to track down a measuring focus of an eye automatically and complete the measurement perfectly even with an inexperienced user.



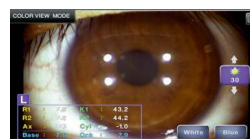
High Order Aberration Map

Besides the conventional data such as Spherical, Cylinder and Axis, the high order aberration data is displayed in a graphical Zernike refraction map for better understanding of patient's eyes and superior clinical decision making.



Color View Mode

The Full Color CCD camera and white LED light source in the auto Refractometer enable you to see eyes and contact lens fitting status which was only possible with slit lamps.



Motorized Chin rest & Auto Cutting Printer

Motorized chin rest allows to set the height of the measuring point comfortably and quickly. Automatic paper cutting and one touch paper change functions are new advantages of CRK-9000.



Measurement Mode

K/R Mode	Continuous Keratometry & Refractometry
REF Mode	Refractometry
KER Mode	Keratometry
CLBC Mode	Contact Lens Base Curve Measurement
KER P Mode	Peripheral Keratometry
Color View Mode	Color View & Contact lens Fitting Assistance (White & Blue LED)

Refractometry

Vertex Distance(VD)	0.0, 12.0, 13.5, 15.0mm
Sphere(SPH)	-30.00D ~ +25.00D (VD=12mm) (Increments : 0.01/0.12/0.25D)
Cylinder(CYL)	-12.00D ~ 0.00D(or 0.00D ~ +12.00D)
Axis(Ax)	0 ~ 180° (Increments : 1°)
Cylinder Form	-, +, ±
Pupil Distance	10 ~ 85mm
Minimum Pupil Diameter	2.0mm

Keratometry

Radius of Curvature	5.0 ~ 13.0mm (Increments : 0.01mm)
Corneal Power	+25.96D ~ +67.50D (n=1.3375) (Increments : 0.01/0.12/0.25D)
Corneal Astigmatism	-15.00D ~ 0.00D (Increments : 0.01/0.12/0.25D)
Axis	0 ~ 180° (Increments : 1°)
Pupil/Iris Diameter	2.0 ~ 14.0mm (Increments : 0.01mm)

Others

Display	Tilttable 7inch TFT Touch LCD
Internal Printer	Thermal Line Printer with Auto Cutting Function
Power Supply	AC100-240V, 50/60Hz, 60W
Dimension/Weight	252(W) x 500(D) x 423(H) mm/20kg

Designs and details can be changed without prior notice for improvements

DIGITAL LENSMETER CLM 9000



OZMA

To measure various lenses with high precision,
OZMA Wavefront Technology can be the right answer.

CLM-9000 realized supreme precision with Hartmann sensor. Graphical User Interface leads the most satisfying operation providing intuitive guide.
Enjoy the confidence with this beautiful design.

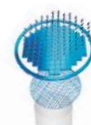


More efficient Progressive Measurement



New designed algorithm using Zernike's polynomial allows quick detection and accurate measurement of progressive lens. The intuitive user graphic helps to easily measure lens.

Multiple Measurement Points



Hartmann sensor with multiple measurement points guarantees the reliable measurement value and the stable measurement repeatability. The auto adjustment of LED brightness depending on the detected intensity on the sensor provides more accurate measurement of high diopter lens.

Green LED

New optical system with green LED(546nm, e-line) provides more accurate measurement result without Abbe value compensation.

Newly Designed PD Bar and Measurement Nose



The newly designed PD Bar and Measurement nose can measure small, progressive or multi-focal glasses. In addition, the operator can still use the measurement nose when measuring the near sight addition.

Incomparable UV measurement Level Assessments



Few lensmeters provide UV assessments with the exact numerical value. Feel the difference and provide patients with exact UV protection figure

Built-in Thermal Printer



Print paper can easily be changed with one-touch lever. Illustration of Axis & PD helps customers to understand the data better.

MEASUREMENT MODES

Cylinder	—, +, ±
Prism	Rectangular / Polar / Displacement
Sampling Speed	0.016 sec
LED Wavelength	546 nm
Measurable Lens Diameter	15~115mm

MEASUREMENT RANGE

Sphere Power	10 ~ ± 25.00D
Cylinder Power	10 ~ ± 10.00D
Cylinder Axis	0° ~ 180°
Add Power	0 ~ + 10.00D
Prism Power	0 ~ 10 Δ

INCREMENTS

Diopter	0.01/0.125/0.25D
Prism	0.01/0.125/0.25 Δ

OTHERS

Dimension	196(W) X 253(D) X 398(H)mm/5.5kg
Power Supply	AC 100-240V 50/60Hz
Display	TFT LCD Display
Printer	Thermal Printer
Data Output	RS-232C

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DIGITAL REFRACTOR CDR 9000



OZMA

To make fast and accurate refraction test with convenience,
OZMA Phoropter with slim design can be the right answer.

Fulfill more precise exam with various vision tests covering basic to more sophisticated ones. Luxurious design and intuitive graphic interface meet the highest requirement of aesthetic and functional comfort



Powerful cross cyliner lens

- The dual cross cyliner lens makes fast & convenient examinations.
- Automatic occluding function prevents examinee's eye from accomodation, while the lens is rotating over 45 degrees or test mode is changing.



Test process programming

Maximum 10 customized test processes can be programmed and saved with the detailed setting of unit test charts conversion, auxiliary lens inserting fogging, chart masking, etc



Real time guide

Graphical representation displayed on screen guides you to make easier and faster refraction in real time



Displaying the result in tables and graphics

Test results are shown in tables and graphics helps to understand easier and faster



Various image clips

Color blindness test, Amsler's Grid and many other kinds of near vision charts are provided for more perfect test. Various image clips including progressive lens guide, diagram of an eye & refraction support better understanding for customers.



Touch screen & Multi fuction jog dial

Touch screen interface offers intuitive guide with great convenience for operation. Multi-function Jog dial assists fast convenient lens loading and execution of programs



SPECIFICATION

MEASUREMENT RANGE

	-29.00~+26.75D (Regular)
Spherical Lens	-19.00~+16.75D (Cross Cylinder or Prism test) (0.12D / 0.25D / 0.5D / 1.0D / 2.0D / 3.0D / 4.0D increments)
Cylinder Lens	0.00~±8.75D (0.25D / 0.5D / 1D / 2D / 3D increments)
Cylinder Axis	0°~180° (1° / 5° / 15° increments)
PD	48~80mm (0.5 / 1mm increments) Near working distance : 35~70cm
Rotary Prism	0 ~ 20 Δ (0.1 Δ / 0.2 Δ / 0.5 Δ / 1 Δ / 2 Δ increments)
Cross Cylinder	±0.25D, ±0.50D, ±0.25D Dual Cross Cylinder (Split prism lens)
Retinoscope	+1.5D, +2.0D (Measurement Distance 67cm, 50cm)

AUXILIARY LENS

Pin Hole Lens	ø 1mm
Madox Rode	Right Eye(Red, Horizontal), Left Eye(Red, Vertical)
Red / Green Filter	Right Eye(Red), Left Eye(Green)
Polarizing Filter	Right Eye : (135°, 45°) Left Eye : (45°, 135°)
Split Prism	Right Eye (6Δ BU) Left Eye (10Δ BI : up to 5Δ complement)
Fixed Cross Cylinder	(±0.50D, Fixed with the axis set at 90°)

DIMENSION

Refractor	361(W) x 108(D) x 280(H) mm / 4.7 kg
Controller	216(W) x 246(D) x 225(H) mm / 1.89kg (Printer included)
Junction Box	251(W) x 240(D) x 71(H) mm / 1.88kg
Power supply	AC 100-120V / AC 220-240V 50 / 60Hz
Power consumption	145VA

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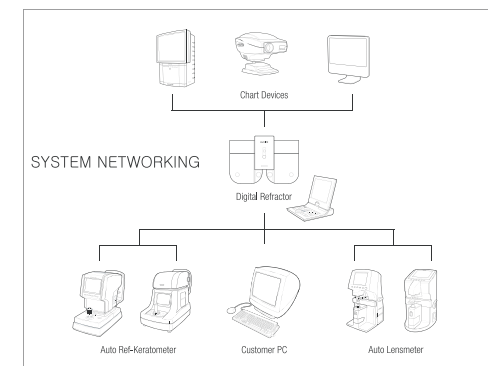


CHART PROJECTOR CCP 9000



OZMA

To perform precise acuity test with high quality charts,
OZMA chart projector can be the right answer

CCP-9000 delivers its promises by utilizing the total refraction system to perform any test you want accurately and efficiently. The various kind of chart can be changed more precisely within very short time.



Clear and Fast

High Quality Charts

CCP-9000 has high resolution power of line, so provides neat and clean graphics and a fast chart changing speed making it easy for operators to use and comfortable for customers.

Bright and Efficient

LED light

Semi-permanent lifetime LED light source can provide brighter and clearer charts than conventional bulb light.

Easy and Convenient

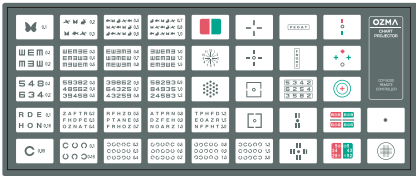
Best Networking

Any refraction system including OZMA digital refractor can incorporate CCP-9000 to provide fast and efficient vision tests.

Various and Perfect

Wide range of features

CCP-9000 with 41 charts including Red/Green and polarizing filters are the new solution for Binocular balance test, Stereo test, Aniseikonia test and Fusion test.



SPECIFICATION

Chart	41 chart 34 mask, Red/Green & Polarization Filters
Projection Distance	2.5~8m
Chart Rotation Speed	Average 0.15 sec
Projection Magnification	30 x at 5m
Power Saving	Automatic Switch off (10 min)
Program	2 programs with a maximum of 30 charts each

Tilt Angle	15°
Power Supply	110-120V / 200-240V, 50 / 60Hz
Power Consumption	Max 0.6A
Lamp	LED 4W
Dimension	270(W) x 182(D) x 230(H)mm
Weight	3.5kg

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