COBURN TECHNOLOGIES

REFRACTION • LENSMETERS • RETINAL CAMERA • TOPOGRAPHER • TONOMETER • SLIT LAMPS • ACUITY CHARTS • EXAM LANES & FURNITURE

Exclusive authorized U.S. distributor of Huvitz CONNECTING SIGHT SUCCESS

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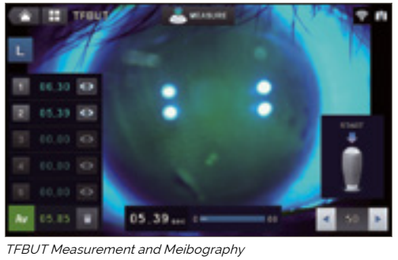


TFBUT Measurement and Meibography

TFBUT Measurement and Meibography
Conditions of tear film and dry eye can be collected by TFBUT (Tear Film Break-Up Time) and are readable for thorough understanding of visual acuity. Degeneration of meibomian gland can be also monitored with enough light source and image enhancement function.

IOL Mode
Extra measurement mode is available for IOL power or visual acuity after cataract surgery.

Peripheral Keratometry Measurement

Peripheral Keratometry Measurement
Continuous measurement on periphery of cornea at 90° both vertically and horizontally from center of cornea produces curvature and eccentricity values of all points and allows best fitting of contact lenses.

Micro Lens Array
Huvitz's own developed Micro Lens Array creates a number of separated focal spots, of which the pattern provides valuable information of patients' ocular systems.

Auto Tracking

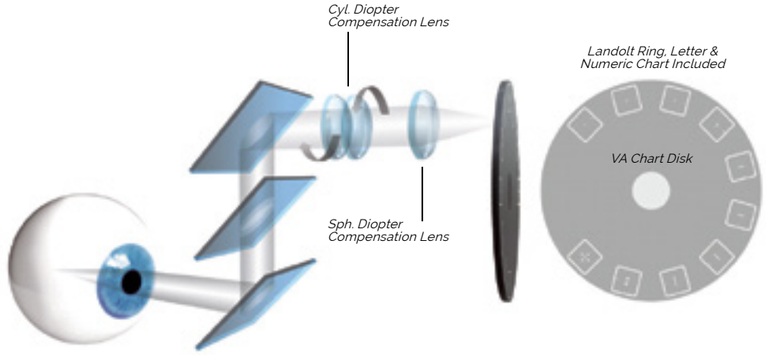
Auto Tracking
Cutting edge auto sensor and 3 dimensional movement mechanism allow you to track and measure the focus of an eye automatically and helps complete measurement perfectly, even with inexperienced users.

Iris and Pupil Diameter Measurement
Image capturing function supports highly accurate exam by measurement of iris and pupil diameter with diameter from 2mm to 14mm.

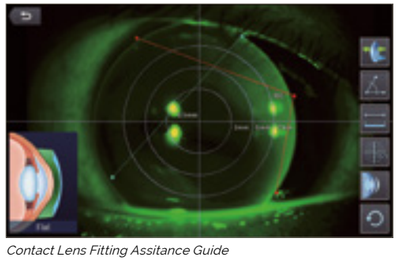
AUTOREFRACTOR/KERATOMETER
HRK-9000A

Subjective VA Test - Glare Mode

Subjective VA Test
Comparison between subjective and objective VA tests yields more reliable and accurate data. Subjective VA test is useful in deciding the necessity of progressive lenses because it checks visual acuity based on patients' responses.



Subjective VA Test

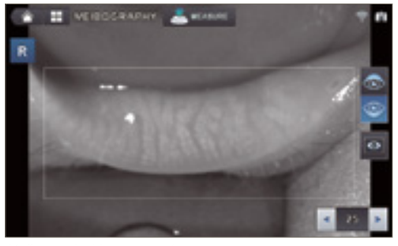


Contact Lens Fitting Assitance Guide

Efficient Contact Lens Prescription
Image capture and contrast regulation are possible. HRK-9000A gives you the best On-K fitting guide based on the base curve and KER value.

Contact Lens Fitting Assistance Guide
The world's first contact lens fitting function in an auto ref/keratometer enables you to see fluorescein liquid with blue illumination.

Contrast Sensitivity and Glare Test
Highly reliable night visual acuity is examinable with low contrast sensitivity test and glare test which perfectly reproduces halo effect. Progress after refractive or cataract surgery can be monitored effectively.



Meibography Measurement

Touch and Tilting 7" Color Display
Wide color TFT LCD supports high-resolution images and real-time image processing to realize after image-less image quality. Moreover, swiveling and tilting touch display is readable from any direction for smooth communication between examiners and examinees.

Wireless Communication
Wireless Communication via Wi-Fi allows perfect data transmission with HDR-9000 Digital Refractor and HLM-9000 Auto Lensmeter regardless of working environment. Classic communication via RS-232 cable is available for data transmission with previous models.

Auto Cutting Printer

More Accurate Data
Accuracy of KER data is improved by setting optimal zone diameter on measuring spot and also REF data by standardization of quantity of light of fogging chart and fogging lens position along with complete block of accommodation.

Color View Mode
Full color CCD camera and white LED light source in auto ref/keratometer enables you to see eyes and contact lens fitting status, which was previously only possible with slit lamps.

WAVEFRONT TECHNOLOGY

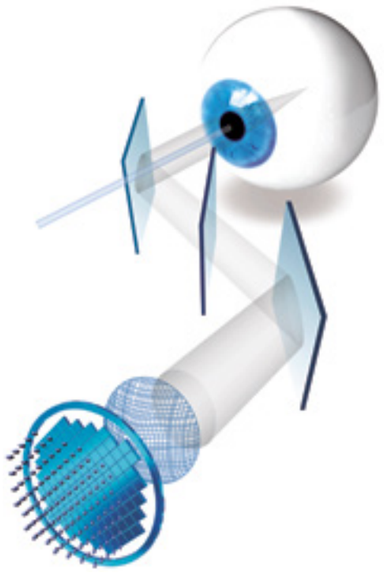
HRK-9000A and HRK-8100A Autorefractor/Keratometers are based on the Hartmann-Shack wavefront sensor, which analyzes many focal spots of a light wavefront.

Huvitz' wavefront analysis algorithm goes beyond general refraction to conclude highly accurate and reliable cornea refractive power and index.

Both autorefractors/keratometers surpass conventional and simple refraction, offering added values with high order aberration data output for customized lenses and observation of patients before and after refractive surgery.

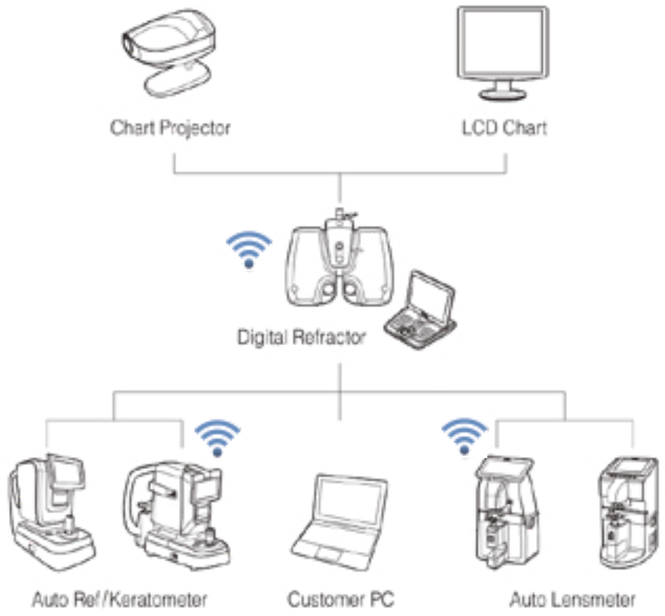
HRK-9000A
Autorefractor/Keratometer

HRK-8100A
Autorefractor/Keratometer



Wavefront Technology / Micro Lens Array

SYSTEM NETWORKING



Contact Lens Fitting Assistance Guide
The world's first contact lens fitting function in an auto ref-keratometer enables you to see fluorescein liquid with blue illumination. The HRK-8100A also analyzes and simulates the lens fitting status with automatic calculation and recommendation. HRK-8100A gives you the best On-K fitting guide based on the base curve and KER value measured.

Customized Lens Manufacturing
High order aberration and Zernike map data output function allow premium custom spectacle or contact lens manufacturers to improve vision accuracy and power.

Ultra High Precision KER Data
Mire ring and LED sources enable highly reliable keratometry data of the corneal base curve to be obtained.

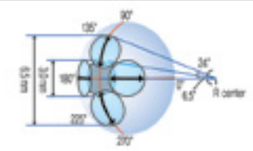
Optimized Optical System
Wavefront Technology measures the wavefront of light reflected from the retina and the refractive power with various sensors divided by sectors and analyzes them with extreme precision.

More Data on Aberration Measurement
High order aberration data such as Coma, Trefoil, Spherical Aberration, Secondary Astigmatism, and Tetrafoil, which was only available in wavefront aberrometers, is now available.

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 a 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 ref/keratometer enables you to see eyes and contact lens fitting status which was previously only possible with slit lamps.

Peripheral Keratometry Measurement



Micro Lens Array
Huvitz's own developed Micro Lens Array creates a number of separated focal spots, of which the pattern provides valuable information of the customer's ocular system.

Touch & Tilting Color Display Screen
High brightness and contrast VGA 7" wide color TFT LCD screen provides with high resolution video images. Smooth and free tilting function also offers you a comfortable and clear view at any angle.

Auto Tracking
Cutting edge auto sensor and 3-dimensional movement mechanism allow you to track and measure the focus of an eye automatically and helps complete measurement perfectly, even with inexperienced users.

Comfortable One Touch Lock
The upper moving stage can be locked easily with one touch of a button.

HRK-1

Smart Assembly Moving Control Technology
The invisible technology behind Huvitz's REF optical system can be seen in the accuracy and stability of the measurement results. Considering the refractive error of the patient, the measurement ring is projected on the retina, and is adjusted automatically by Smart Assembly Moving to secure a stable signal. HRK-1 uses this moving optic mechanism to scan more of the cornea's surface area resulting in a more accurate measurement of reflected light.

Touch-Enabled 7-inch Color Display
Adopting a wide color TFT LCD that provides high quality imaging with real-time processing chip design. It also has a buttonless touch screen that is as familiar and convenient as a smartphone. The magnified optical magnification allows you to observe and measure the eye of the subject in detail with a sharper and larger size.

Convenience for Prescribing Contact Lenses
Adjusting and capturing the contrast of the image being observed, HRK-1 automatically calculates and displays the base curve value of the lens by the On-K fitting used when prescribing the contact lens from measured KERATO Data (RGP lens only).

Easy One-Touch Lock
For convenience, the upper moving stage can be easily locked down.

High-Speed Printer and Convenient Paper Change
Ability to print 10 measurement results quickly & quietly in less than 3 seconds with an easy and simple printer paper changing function.

Clear Retro-Illumination Mode
You can observe the eye health & condition, such as lens opacity or corneal damage. SPH, CYL and AXIS measurement data required for eyeglass and contact lens prescriptions are made at the same time.

Contact Lens Fitting Assistance Guide
Image processing, using a fluorescent solution and yellow filter, automatically determines the fitting state.

Immediate Color View Mode
Full color camera and white LED light is used for color display, overall condition monitoring, contact lens fitting and prescription.

Intuitive Iris, Measurement of Pupil Size
With the image capture function, iris and pupil diameter can be measured up to 14mm, and REF measurement with a pupil diameter as small as 2mm.

Familiar User Friendly Interface
Featuring an icon-based intuitive operating system, the interface is simple for all users.

Simple Up & Down Auto Tracking
The auto tracking feature automatically tracks the eye of the patient making it easier to measure by manipulating the joystick back and forth without having to rotate the joystick.

Quick Virtual Aiming Dot Function
The aiming dot quickly guides you to easily find the patient's visual apex from any position for fast alignment. Reliable refractive power REF data is then automatically obtained.

Secure Delete Confirm Dialog
Delete Confirm Dialog function prevents the data from being deleted immediately after measurement, to aid in further analysis.

Friendly External Monitor Display
By connecting the measurement results to an external monitor, you can easily and accurately communicate the diagnostic results.

Lensmeter Printer Features
It can directly connect to our automatic lensmeter (HLM-1) using optional Y-cable for printing HLM-1's measurement result.

AUTOREFRACTOR/KERATOMETER

SPECIFICATIONS

	Model	HRK-9000A	HRK-8100A	HRK-1
MEASUREMENT MODE	K/R Mode	Continuous Keratometry & Refractometry		
	REF Mode	Refractometry		
	KER Mode	Keratometry		
	Color View Mode	Color View & Contact Lens Fitting Assistance (White & Blue LED Light)		
	Meibography Mode	Special Mode for Observing Meibomian Gland	N/A	N/A
	TFBUT Mode	Special Mode for Measuring TFBUT (Tear Film Break-Up Time)	N/A	N/A
	CLBC Mode	Contact Lens Base Curve Measurement: 0~180° (Increments : 1°)		N/A
	KER P Mode	Peripheral Keratometry		N/A
REFRACTOMETRY	Vertex Distance (VD)	0.0, 12.0, 13.5, 13.75, 15.0	0.0, 12.0, 13.5, 15.0	0.0, 12.0, 13.75, 15.0
	Sphere (SPH)	-30.00~+25.00D (VD=12mm) (Increments : 0.01, 0.12, 0.25D)		
	Cylinder (CYL)	0.00~±12.00D (Increments : 0.01, 0.12, 0.25D)		
	Cylinder Form	-, +, ± (Mixed)		
	Axis (AX)	0~180°(1°unit)		
	Astigmatism Indication	-, +,± (Mixed)		
	Pupil Distance (PD)	10~85mm		
	Minimum Pupil Diameter	ø2.0mm		
KERATOMETRY	Radius of Curvature	5.0~13.0mm (Increments : 0.01mm)		
	Cornea Power	25.96D~67.50D (Increments : 0.05, 0.12, 0.25D) (When cornea equivalent refractive index is 1.3375)		
	Cornea Astigmatism	0.00~-15.00D (Increments : 0.05, 0.12, 0.25D)		
	Axis	0~180° (Increments : 1°)		
	Pupil, Iris Diameter	2.0~14.0mm (Increments : 0.1mm)		
	Memory of Data	10 measurements for each eye		
MOVEMENT RANGE	Up-Down	±15mm (Auto Tracking)		
	Left-Right	±5mm, ±2mm (Auto Tracking)		±5mm, ±2mm (Manual)
	Forward-Backward	±5mm, ±2mm (Auto Tracking)		±5mm, ±2mm (Manual)
VA TEST - SUBJECTIVE REFRACTIVE TEST	VA Measurement	<0.1/0.1/0.25/0.32/0.4/0.5/0.63/0.8/1.0/1.25> <20/200 / 20/200 / 20/80 / 20/60 / 20/50 / 20/40 / 20/30 / 20/25 / 20/20 / 20/16>	N/A	N/A
	Sphere(SPH)	-22D to +22D (increment 0.25D)	N/A	N/A
	Cylinder(CYL)	0 to ±10D (Max, increment 0.25D)	N/A	N/A
	Cyl Axis	0 to 180° (increment 1°/5°)	N/A	N/A
OTHER	Display	7" Wide Color TFT LCD, Touch panel with Tilting function		7" Wide Color TFT LCD Resistive Touch Panel
	Interface	RS-232 x 1, USB(for Service) x 1, Wi-Fi (for data communication)	RS-232	RS-232
	Internal Printer	Thermal line printer with auto cutting function		Thermal Line Printer
	Power Supply	100-240VAC, 1.0-0.6A, 50/60Hz	AC100-240V, 50/60Hz (Free Voltage) 60W	100-240VAC, 1.0-0.6A, 50/60Hz
	Dimensions / Weight	262(W) x 518(D) x 441(H)mm, 19kg	262(W) x 518(D) x 441(H)mm / 20.9kg	261(W) x 513(D) x 433(H)mm / 16kg
	Wi-Fi	Band: 2.4GHz, IEE802.11b/g; Security: WPA2-PSK	N/A	N/A
	Power Saving	Automatic switch-off (3min/5min/10min)	Automatic switch-off (5min)	Automatic switch-off (3min/5min/10min)

Fully compatible with all EMR Systems and equipped with a full year warranty.

AUTO LENSMETER

HLM-9000

Multi-focal Lens Measurement
Automatic recognition of multi-focal lenses supports easy measurement with measurement guidance on display and even measurement of sunglasses and prism multi-focal lenses is simple.

Improved Accuracy with Green Light Beam
Green light beam (545nm), which is nearly the same as Fraunhofer e-line (546.1nm) of ISO standards, allows higher accuracy in measurement than general infrared light.

Auto Lens Recognition
Single vision, progressive and other lenses are recognized automatically and turned into corresponding measurements.

Contact Lens Measuring Kit
Hard and soft contact lenses are measurable. (Soft Contact Lens Jig : Optional)

Hartmann Sensor Wavefront Analysis Tech
Implementation of Hartmann Sensor Wavefront Analysis Technology with more measuring spots maximizes accuracy in measurement even for multi-focal and high curved lenses.

Blue Light Hazard Measurement
As usage of smart phones, LCD monitors and many electronic devices increases, blue light hazard emitted from LED displays is recognized as one of the harmful rays. HLM-9000 measures the blue light transmittance of blue light blocking lenses.

UV Measurement
Ease of operation and display of UV transmittance allow for understanding of UV transmittance level from single vision lenses and sunglasses.

7" Color LCD Display
Wide display with unlimited viewing angle (178°) minimizes work fatigue and maximizes work efficiency.

Wide Tilting Angle
Clear and bright display is readable from any direction with the wide tilting angle.

Intuitive Prism Direction
Moving directions for both the actual lens and the lens on display are the same direction to avoid any confusion during measurement.

Wireless Communication
Wireless communication via Wi-Fi allows perfect data transmission with HRK-9000A and HDR-9000 regardless of working environment. Classic communication via RS-232 cable is available for data transmission with previous models.

Simple GUI
GUI readable at the first glance is user-friendly with easy operation and anyone can easily conduct measurement without expert knowledge.

Minimized Gap Between PD Bar and Nose
Bi- or multi-focal lenses of small sizes are measurable, and accurate measurement is possible over entire area of lens.

Auto Cutting Printer
Fast and quiet printer with automatic cutting function shows all data to customers quickly. Replacement of paper roll is a one touch action.

Extra Storage
Extra storage on upper section allows small accessories to be stored without any dust-free. Made of rubber material.

AUTO LENSMETER

HLM-7000

Progressive Measurement Now More Efficient
The advanced algorithm helps to automatically measure the far and near sight addition with improved accuracy and speed.

Additional Prism Display Mode
Now with an additional prism mode, you have a choice of Five or Ten Prism Display. For high prism, you may choose the Ten Prism Display to get the status of a wide area, and for normal and low prism, you may choose the Five Prism Display.

Dark Sunglasses Mode
You can measure dark sunglasses better by using Dark Sunglasses Mode.

PD Measurement
The built-in PD sensor enables your measure the PD of frames easily. The power of lens can be captured simultaneously.

Incomparable UV Measurement Level Assessments
Few lensmeters provide UV assessments with the exact numerical value. Provide patients with the exact UV protection figure.

Adjustable Tilting LCD Monitor
The LCD monitor has a tilting capability of -5° to 60° offering unparalleled visual and operational comfort whether sitting or standing.

User-Friendly Graphical Interface
The Graphical User Interface suggests immediate guidance for easy operation. The well recognizable icons assure rapid response to everyone.

Wide Measurement Range
The extensive diopter measurement range of +25D to –25D gives you the ability to measure wide range of lenses.

Contact Lens Measurement
HLM-7000 offers fast and accurate measurement data of hard/soft contact lenses.
Uniquely designed soft contact lens measurement jig improves stability and comfort when measuring soft contact lenses.
Contact lens measurement jig is an optional accessory.

TFT LCD: The Best in Image Quality
TFT LCD images provide higher clarity and increased brightness for an even more efficient operation.

Compact Lens Table
Smaller sized glasses or children's glasses can be measured without interfering with the temples of the glasses.

Newly Designed PD Bar and Measurement Nose
Measure small, progressive, or multi-focal glasses. The operator can still use the measurement nose when measuring the near sight addition.

Slim & Compact Design
The newly designed HLM-7000 with its compact size (190 x 377 x 237 mm) offers more space and freedom on limited table space.

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

Pen Type Marking
Pen type marking assembly guarantees clean and precise marking.

AUTO LENSMETER

HLM-1

Wavefront Analysis Technology with the Hartmann Sensor
Provide more accuracy in the measured values utilizing the Hartmann Sensor Wavefront Analysis Technology with more measurement points than previous generations.

Expanded Prism Measurement Range
Prism measurement range has been expanded up to 20Δ, measuring from all directions of: BU, BD, BI, BO.

Wide Range for Measuring Small or Large (Blank) Lenses
Easy to measure all lens diameters from ø15mm to ø120mm.

Easily Measures Sunglasses
While measuring the refractive power of darkly tinted or mirrored sunglasses, the HLM-1 will calculate the refractive power of the lens by automatically amplifying the amount of light without requiring any additional key strokes, the same way it measures normal lenses.

Class B. Medical Equipment Certificate
HLM-1 meets or exceeds this standard IEC60601-1 (4th Edition) Class B.

Slim and Compact Design
Measuring only 182 x 415 x 235mm, the HLM-1 works well in today's compact office designs.

Auto Lens Recognition
Single vision, progressive and other lenses are recognized, and the HLM-1 automatically enters the appropriate measurement mode.

Improved Progressive (Multifocal) Lens Measurement
Measurement is fast and easy by simply moving the target and following the guides on the screen.

User-Friendly Graphical Interface
New bright and easily visible Graphical User Interface(GUI) that gives feedback and guidance for easy-to-use operation.

5.7'' Color & High Resolution IPS Panel (LCD)
Performance has been improved with processing information, enabling high speed data flow and response time. The HLM-1 screen also features an anti-glare coating giving you a sharp image, and also has a hardened coating to protect the screen from scratches. Adjustable brightness function, for comfortable use in all room light conditions.

Enhanced Camera Performance
Providing faster response when measuring refractive power of lenses and improved lens detection, when compared to previous generation models.

50% Faster Processing Speed
High performance (processing speed per frame: 65ms) with more frames per second (15FPS) can be an incomparable measurement speed.

Newly Designed Nose Cone and Lens Support for Small-Sized Frames
With the newly designed nose cone and lens support of the HLM-1, you can easily measure today's small-sized frame styles with ease.

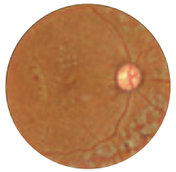
AUTO LENSMETER

SPECIFICATIONS

Model	HLM-9000	HLM-7000	HLM-1
Sphere	0D~±25D (0.01/0.06/0.12/0.25)	0 ~±25.00D	0D~±25D (0.25/0.12/0.06/0.01)
Cylinder	0D~±10D (0.01/0.06/0.12/0.25)	0 ~±10.00D	0D~±10.00D (0.25/0.12/0.06/0.01)
Axis	0°~180° (1° step)	0°~180°(1°)	0°~180°(1°step)
Add	0~10D (0.01/0.06/0.12/0.25)	0 ~10D	0~10D (0.01/0.06/0.12/0.25)
Cylinder Mode	0 to ±10.00D (Mix/-/+)	-, +, ±	±, + , -
Diopter	0.01 / 0.125 / 0.25D		
Prism	0~20Δ (0.01/0.06/0.12/0.25)	0.01 / 0.125 / 0.25Δ 0 ~10Δ (prism power) Rectangular / Polar / Displacement	0~20Δ (0.25/0.12/0.06/0.01) Rectangular / Pole / Displacement
Measurable Lens Diameter	20 - 120mm (Contact Lens : 5 mm over)	15~115mm	15-120mm
LED Wavelength	525nm (green)	630nm	525nm (green)
Wavelength	525nm (Green)	e-Line: 546.07nm d-Line: 587.56nm	525nm (Green)
Measurement Method	Hartmann Sensor		
Contact Lens Measurement	Hard / Soft		
UV Transmittance	0~100%		N/A
Blue Light Transmittance	0~100%	N/A	N/A
Display	Tiltable 7" Color LCD IPS panel (800 x 480) /Touch panel	TFT LCD Display (320 x 240 LED Backlight)	5.7"Color LCD Panel (640x480)
Printer	Auto Cutting		
Interface	RS-232C / USB 2.0 Port Wi-Fi (802.11b, 2.4GHz)	RS-232	RS-232
Dimensions	222(W) X 240(D) X 370(H)mm, 5.4kg	190(W) x 237(D) x 377(H)mm / 5.5kg	182(W) x 235(D) x 415(H)mm / 4.0Kg
Power Supply	100-240VAC~, 0.5-0.3A, 50/60Hz	AC 100-120V / AC 220-240V 50 / 60Hz	AC100~240V, 50/60Hz, 0.3~0.2A
ABBE Values	Normal: 50~60 Mid: 40~49 Low: 0~39	30~60 (1Step)	Manual Revision
Wave	e-Line, d-Line		
Baud Rate	9,600 / 19,200 / 38,400 / 57,600 / 115,200bps		9600, 57600, 115200bps
Data Output	RS-232 / USB / WiFi	RS-232	RS-232
Fully compatible with all EMR Systems and equipped with a full year warranty.			

NON-MYDRIATIC FUNDUS CAMERA

AMD



PDR, Laser Scar

CNV

Auto Tracking & Auto Shooting
Quick and stable auto tracking and auto shooting based on highly accurate auto detection technology. There is no need to change modes for measuring a small pupil, as HFC-1 can automatically adjust to measure this.

20 Megapixel High Definition Camera
Produces high quality images with reduced Motion Artifact, and can be enlarged to study details. Images can be visualized through a variety of modes for more accurate analysis.

Variety of Image Modes
- **Color**: Brilliant & Full Spectrum Images
- **Blue**: RNFL, Wrinkles, Edema, Cell Membrane
- **Red**: Pigmentary Abnormalities, Choroidal Rupture, Birthmark, Melanoma
- **Red-Free**: Glaucoma, Diabetic Retinopathy
- **Cobalt**: RNFL

Enhanced Visualization Technology (EVT)
EVT helps acquire the highest quality images in for any clinical case. EVT is specifically beneficial when capturing fine pathological variation.

Web Browsing System
Available within HFC-1 without any software installation. Analyze measurement data on web browsers like Chrome, Safari and Internet Explorer. DICOM compatible.

Fixation Target
By adjusting the Fixation Target position on the LCD touch screen display, users can acquire more accurate and precise measurement results.

Panorama Function
Creates a high resolution composite image showing a broader range of retinal surface area, all while minimizing any distortion.

Compact Design
Designed to conveniently cover only a small surface area of exam room space. This compact technology with built-in PC allows for measurement, analysis, diagnosis, and reporting on site rather than using an additional external eyecare provider.

12.1" LCD Touch Screen
View measurements and results in real time on a large, high resolution screen with convenient, user-friendly touch screen functionality.

Applied EVT
(Epiretinal Membrane)

Unapplied EVT
(Epiretinal Membrane)

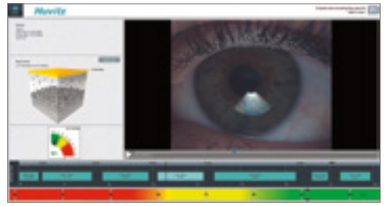
SPECIFICATIONS	
Type	Non-mydriatic fundus camera
Resolution	Center : 60 lines/mm or more Middle (r/2) : 40 lines/mm or more Periphery(r) : 25 lines/mm or more
Angle of View	45°
Camera	Color Image Sensor
Minimum Pupil Diameter	4.0mm (Normal mode), 3.3mm (Small pupil mode)
Flash Light	White light
Working Distance	33mm
Display	12.1 inch, 1280x800 pixel, Touch panel color LCD
Dioptric Compensation for Patient's Eye	-33D ~ +33D total -33D ~ -7D with minus compensation lens -13D ~ +13D with no compensation lens +7D ~ +33D with plus compensation lens
Fixation Target	LCD (internal), White LED (external)
Horizontal Movement	70mm (back and forth), 100mm (left and right)
Vertical Movement	30mm
Chinrest Movement	62mm (up and down), motorized
Auto Tracking	X,Y for positioning, Z for working distance
Power Supply	AC 100-240V, 50/60Hz, 1.6-0.7A
PC	Built-in computer
Dimensions	13(W) x 21.4(D) x 20.5(H)in/330(W) x 542(D) x 521(H)mm
Mass	28kg/61.8lbs
Fully compatible with all EMR Systems and equipped with a full year warranty.	

OCULAR SURFACE ANALYZER

HDA-100

PERFORMS MULTIPLE NON-INVASIVE TESTS IN JUST 4 MINUTES

SPECIFICATIONS		
TECHNICAL	Image Resolution	5 MP
	Acquisition Mode	Single and multi shot video
	Focus	Autofocus, manual focus
	ISO Management	Variable
	Cones	Main cone and Placid cone
	Camera	Color, sensitive to infrared (NIR), yellow-filtered
	Light Source	Infrared LED – White and Blue
MINIMUM HARDWARE REQUIREMENTS	Intel Core™ i7 | SSD Drive | 8 GB | Screen resolution: 1600x900 | 1 available USB 3.0 port 1 other available USB port | Microsoft® Windows® 8.10 Professional (Pro)	



Auto-Interferometry

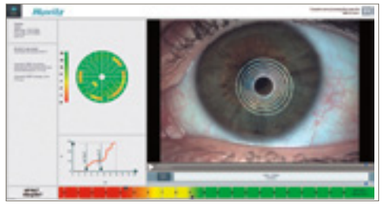
Auto detection of maximum thickness of the lipid layer, average thickness, and blinking rate. Generates data, such as lipid layer thickness, in seconds.

Tear Meniscus Height Measurement

Quick and non-invasive testing only lasting 3 seconds. Acquires up to 5 measuring points. Measures upper and lower tear meniscus.

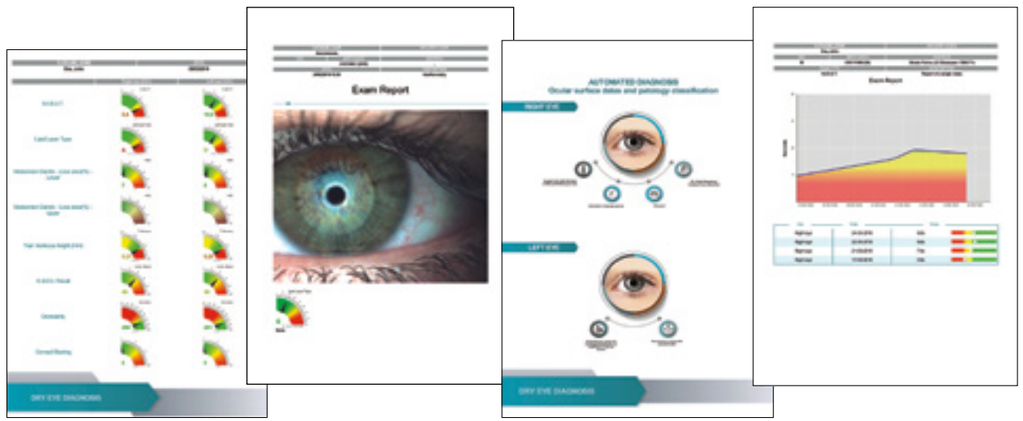
Meibography/3D Meibomian Gland Imaging

Detects length and width of meibomian glands shown through infrared meibography without requiring any input from the user.



Auto-NIBUT (Non-Invasive Break Up Time)

Evaluates tear film stability and regularity. Automatically provides first and average break up time, stability graph and tear topography.



Reporting

Produces various medical reports that offer clinical solutions for patients. Review how pathology has changed over time using easy-to-understand visuals. Includes complete report, treatment report, follow up report, blinking quality, monocular report, and binocular report.

TOPOGRAPHER

HTG-1

SPECIFICATIONS		
Parameter	Measuring range	SD of Repeatability
Corneal curvature radius	3 – 38mm	±0.03 mm
Cornea refractive power	9D~110D (Cornea equivalence's refractive index: 1.3375)	
Direction of principal meridians	Measuring range: 1° – 180° Accuracy: according to the ISO 10343:2014	
White-to-white distance	7 – 14mm	±0.05 mm
Pupil diameter	0.5 – 10mm	
Working distance	80 mm	
Placido disc	24 rings	
Points Analyzed	Over 100,000 (Measured points:Over 6,220)	
Measuring accuracy	Type A according to the ISO 19980:2012	
Measuring range	Up to Ø 9,8 mm (on a 8 mm sphere) 42,20D with n=1.3375	
Common		
Display	Tiltable 10.1 inch, Touch panel, color LCD	
Horizontal movement	45 mm (back and forth), 100 mm (left and right)	
Vertical Movement	30 mm	
Chinrest Movement	62mm (up and down), motorized	
Auto tracking	X, Y for positioning, Z for working distance	
Power supply	AC 100–240 V, 50/60 Hz, 1.6–0.7 A	
PC	Built-in computer	
Dimensions	(W) x (D) x (H) in/302(W) x 506(D) x 510(H) mm	
Mass	22 kg	
Software Features		
Keratoconus	KPI	
Contact lens fitting	Fluorescein simulation	
Zernike Analysis		

Accurate Corneal Data Measurement

Placido disc analysis precisely measures various corneal data, including Keratometry, Topography, Keratoconus, Zernike Coefficients, Pupillometry, and white-to-white measurements. Data is presented in the form of Axial, Tangential, Refractive Power, and Elevation Maps. Helps assess the shape and health status of the cornea, determining vision correction lens prescriptions, and planning for cataract surgery.

SimK

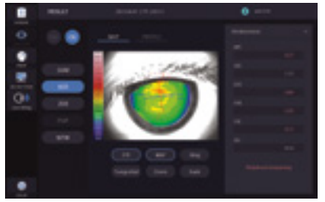
Meridian

TOPOGRAPHER

HTG-1

Early Detection of Keratoconus Prediction

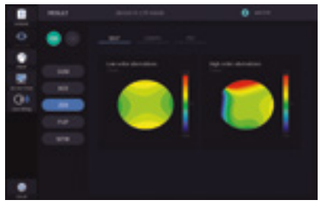
Examines the cornea's front curvature, regional shape, convexity, and eccentricity, HTG-1 calculates the KPI (Keratoconus Prediction Index) value to predict likelihood of keratoconus, providing insights into keratoconus risks and predicts potential outcomes.



Keratoconus

Zernike Analysis for a Range of Parameters

Through the analysis of Zernike Coefficients/Map, it measures and provides analysis data for various parameters including refractive power variations, irregular astigmatism, and aberrations in the eye.



Zernike Analysis

Pupillometry for Gathering Pupil Data

Evaluates pupil size and responsiveness under various lighting conditions, during the day and night. Results are graphically displayed, including pupil diameter, maximum average pupil diameter, and average pupil diameter.

White to White Measurement

Performs automatic measurements of corneal size, essential for diagnosing and monitoring a range of eye conditions such as congenital glaucoma, cataract and refractive surgery planning, and selection and fitting of contact lenses. Measurement data can be easily adjusted and applied using the Edit function.

Contact Lens Fitting Simulator

Simulator accurately replicates the fitting results for both Hard Contact Lenses and Soft Contact Lenses using the Fluorescein Image filter, all without the need for direct injection of fluorescent liquids.

Seamless Connectivity to Diverse Network

Integrates with various networks, supporting standard DICOM formats.

Comprehensive and Reliable Diagnostic Reports

Provides systematic reports for Topography, SimK, Meridian, Keratoconus, and White to White measurements, all derived from meticulously collected data.

APPLANATION TONOMETER

HT-5000

Fast IOP Calculation

HT-5000 processes IOP calculation virtually in real time. No delay or lag in calculation results.

Digital Display

Displays results digitally rather than outdated analog results.

Quick Wake-up Time

Zero-delay wake-up time upon startup of the tonometer, saving time for operator and patient.

Easy Calibration

Simple calibration with readings displayed sensitively to the user's control.

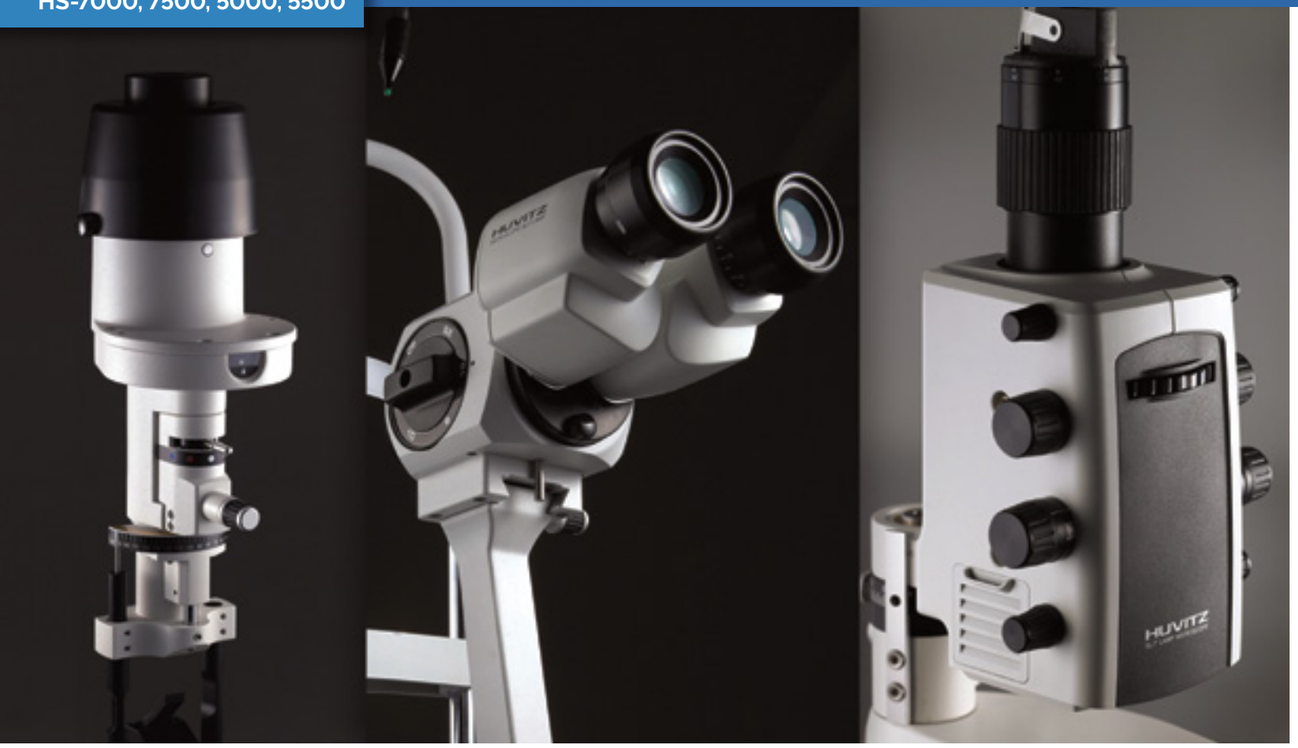
Comfortable Design

Designed for patient and user's comfort by including a slanted display, matching the angle of the user's view for comfortable observation. Wide grip knob for easier adjustment of measuring prism.

SPECIFICATIONS	
Measuring Force	Generated by leverage weight
Installation	Mountable on peg on microscope
Measuring Range	3~75mm Hg
Measurement Divergence	Of the force impingement on the measuring prism over a measuring range from 0-58.84 mN
Standard Divergence	0.49 mN =/< 3 s =/< 1.5% of rated value
Reverse Span	=/< 0.49 mN
Power Consumption	DC3V
Net Weight	0.50kg (without accessories, with batteries)

HS SLIT LAMP SERIES

HS-7000, 7500, 5000, 5500



Microscope
With the global standard Galilean converging binocular type optic system, the Huvitz high end slit lamp series offers a wider angle, live image and increased accuracy.

12.5x Eye pieces - 6x:38.5mm, 10x:24mm, 16x:15mm, 25x:9mm, 40x:6mm

10x Eye pieces - 5x:38.5mm, 8x:24mm, 12x:15mm, 20x:9mm, 32x:6mm
(Optional with HS-7500/7000)

Magnification Control System
The 5-position drum-style magnification changer provides a wide range of magnification from 6x to 40x easily accessible by rotating the drum.

Integrated Control
The integrated omni style joystick is simple to control. Trigger button is conveniently mounted on the joystick for easy image and video capture. Images and videos can be stored simultaneously if the slit lamp is connected to image devices.

Illumination
The 12-volt, 30-watt high luminance halogen lamp provides incredible clarity for both image and video. Optional: 10V, 4.4W LED lamp.

Yellow Filter
A yellow filter is conveniently located near the ocular for effortless insertion of the fluorescein pattern. With a control lever, any filters are easily inserted. Options include cobalt blue, red free, heat absorption, grey, and yellow.

Design
The slit lamps are offered in the Tower Illumination type (HS-7000) and the Integrated Illumination type (HS-7500) slit lamp models. Both types are designed in the industry standard type models used for their proven accuracy and reliability.

Patient Information Management
MS Access Database system allows you to search symptoms, diagnosed information, and related contents. You can also easily manage data and history of patients.

Digital Camera (USB 3.0)
USB 3.0 interface ensures maximum compatibility for any computer environment and used wide 1-inch image sensor to get brighter images.
Beam Splitter - 100:0 / 30:70 (Variable type)

FOV (Field of View)
Wide-angle lens allows for an extended view of entire eye.

Powerful Image Processing
Quick image capture of images and videos in real time with a simple click. With Live Tool graphic library, all the images such as JPG, TIFF, RAW and other formats can be adjusted for brightness, contrast, color channel, saturation, inversion, sharpness, red-free, etc.

Image Manipulation for the Best Diagnosis
- **Compare** - Selected images can be magnified, reduced, and rotated with various graphic effects for accurate comparison.
- **Overlay** - Correlative animation of images captured in different time frames allows identification of metastasis of symptoms.
- **Slide Show** - All selected images can be shown in a slide show.
- **Reference** - Images of same symptoms can be registered or searched for further reference.
- **Time Machine** - Shows 30 frames (images) of 2 seconds from moment of joystick click.

Plus report generation, printing, and DICOM connection.

HS SLIT LAMP SERIES

SPECIFICATIONS

HS-5000 with Tower Illumination

HS-7500 with Integrated Illumination

SPECIFICATIONS					
	Model	HS-7000	HS-7500	HS-5000	HS-5500
SLIT ILLUMINATION	Slit length (mm)	0.3~14		0.3~12	0.3~14
	Slit width(mm)	0~14 continuous		0~12 continuous	0~14 continuous
	Slit projection	1.167x		1x	1.167x
	Aperture diaphragms	12.5x			
	Filters	Cobalt blue, Red-free, Grey, Heat absorption and Yellow			
	Slit rotation	0°~180°continuous			
PATIENT'S EYE/ PRISM	Angle of incidence	0°, 5°, 10°, 15°, 20°	0°~20° continuous	0°, 5°, 10°, 15°, 20°	0°~20° continuous
	Surface working distance	80mm			
MICROSCOPE	Microscope	5x			
	Type	Galilean converging binocular			
	Magnification	5 position rotating drum			
	Eyepieces	12.5x			
	Total magnifications	6x, 10x, 16x, 25x, 40x			
	Real fields of view (mm)	38.5, 22.2, 15.2, 10.5, 6.7			38.5, 22.2, 15.2, 10.5, 6.1
	Interpupilary adjustment	55mm~80mm			
BASE	Vertical movement	28mm			
	Longitudinal movement	78mm			
	Lateral movement	98mm			
	Fine base	10mm			
	Power supply	Free voltage 100-240V AC			
	Voltage frequency	50 / 60Hz			
	Power consumption	70VA			
	Instrument voltage	12V DC			
	Halogen bulb	12V 30W			
	Fixation point bulb	3.4V 20mA			
Fully compatible with all EMR Systems and equipped with a full year warranty.					

HDR-9000

Tiltable Body
HDR-9000 Highly advanced near vision exam is achieved with tiltable body from 0˚ to 45˚, just like reading a book.

LCD Chart Compatibility
Compatibility with polarized LCD chart provides economic efficiency, both linear and circular polarization.

Fast & Silent Lens Loading
Fast lens loading helps to minimize accommodational interference and fatigue of examinees' eyes. Silent operation offers more comfort during exam.

Built-in Printer
User friendly built-in printer on operation panel replaces paper on its own.

Real Time Guide
Graphical representation displayed on screen guides test process easier and faster in real time.

Various Charts & Contents
Diversification of near vision exam is observed through highly reliable near vision test charts, visual function tests and various refraction charts along with vision therapy-related contents.

21 Point Exam
21 Point Exam removes complexity so now everyone can perform refraction easily. All results appear on display for easy reading for both examiners and patients. Guidance with prism, addition power prescription and visual function test in accordance with exam results are available for simplified use.

Monocular PD Adjustment
HDR-9000 provides independent PD for right and left eyes.

Wireless Communication
Wireless Communication with HRK-9000A Auto Ref/Keratometer and HLM-9000 Auto Lensmeter via Wi-Fi allows perfect data transmission regardless of working environment. Classic communication via RS-232 cable is available for data transmission with previous models.

Cross Cylinder Lens
Dual and Jackson cross cylinder lens provides highly accurate astigmatism axis and visual acuity exams. Improved speed of lens movement prevents accommodation from interfering with exam and guarantees accurate examination.

Tablet PC Control (Optional)
Exam can be carried out with not only basic OP panel, but also Tablet and PC. (Tablet PC OS: Win 7 or 8/Resolution 1366 x 768)

Tilting and Swiveling Display
Regardless of examinees' positions, information on display is viewed easily with the tilting and swivel feature.

Monocular Height Adjustment
Customized exam is available for those who have different monocular heights within adjustment of +/-3mm.

Slimmer Design
Slimmer design reduces mechanical interference and facilitates easier patient monitoring.

Explanatory Images
Various near vision charts include: incomplete color blindness test, amsler grid anatomy images, refractive power readings, and progressive lens guidance that help patients understand results.

HDR-7100P

Dual Cross Cylinder Lens
Supports fast and convenient astigmatic test.

Automatic Occlusion
Assists precise and comfortable astigmatic test by preventing accommodation while lens is rotating over 45˚ or test mode is changing.

Automatic Convergence
During presbyopic test or near vision acuity test, this function makes an examinee look at near vision charts toward the center of refractor lenses assuring precise test.
- Working distance : 35~70cm
- Available Near PD : 50~74mm

LED Near Sight Illumination and Detachable Near Chart Rod
Built-in LED illumination for near sight chart automatically recognizes near or far sight test and turns lighting on/off creating best lighting for test environment. Easy installation and removal of near chart rod with magnetic joint.

Various Muscle Balance Test Methods
HDR-7100P provides various muscle balance test methods such as Von Graefe Test, Schober Test, Maddox Rod Test, Polar Cross Test, etc.

Test Process Programming
Maximum of 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.

Built-In Printer
Convenient location on operation panel. Replacing paper is a one-step process.

Various Charts and Tests
18 visual acuity charts, 26 vision test charts and up to 35 user defined unit test charts support the most advanced eye test process.

Easy Cleanup
Frequently contaminated parts (Forehead Rests, Face Shields, Lens Windows) are detachable for easy and fast cleanup.

Monocular PD Adjustment
HDR-7100P provides independent PD for right and left eyes.

Forehead Rest Indicator
An LED (on/off) sensor inside the forehead rest indicates whether an examinee's forehead is currently on the forehead rest to ensure the most precise vertex distance measurement.

Fast and Silent Lens Loading
Faster lens loading helps to minimize accommodational interference and fatigue of examinees' eyes. Silent operation offers more comfort during the exam process.

Illuminated Vertex Distance Check Window
More accurate test is guaranteed by positioning examinees' eyes in the correct vertex distance through the illuminated vertex distance check window.

Tilt & Swivel LCD Panel
Tilt & swivel LCD panel makes it possible to share the displayed information in any direction or angle. Touch screen interface offers intuitive guide with great convenience of operation.

Accurate Rotary Prism
Precise prism data can be obtained by fine increment (up to 20, minimum 0.1 increment) and automatic occlusion function works while the prism is changing directions to assist correct test.

	Model	HDR-9000	HDR-7100P
MEASUREMENT RANGE	Spherical Lens	-29.00~+26.75D (Regular) -19.00~+16.75D (During XC or Prism Tests) (0.12D/0.25D /0.5D /1.0D/2.0D/3.0D/4.0D increments)	
	Cylinder Lens	0.00~±8.75D (0.25D/0.5 D/1.0D/2.0D/3.0D increments)	
	Cylinder Axis	0˚~180˚ (1˚/5˚/15˚ increments)	
	PD	48~80mm (0.5/1mm increments) Near PD : 50~74mm Near Working Distance : 35~70cm	
	Rotary Prism Lens	0~20Δ (0.1Δ/0.2Δ/0.5Δ/1Δ/2Δ increments)	
	Cross Cylinder	±0.25D ±0.50D ±0.25D Prism Split Lens (Dual Cross Cylinder)	
	Retinoscopic Lens	+1.5D, +2.0D (Measurement Distance 67cm, 50cm)	
AUXILIARY LENSES	Pinhole Lens	ø2mm	
	Maddox Rod	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 (Dissociation) Prism	Right Eye (6 ΔBU) Left Eye (10 ΔBI : up to 5 Δcomplement)	
	Fixed XC Lens	(±0.50D, with the axis fixed at 90˚)	
	Visual Field	40˚ (VD=12mm)	
HARDWARE	Digital Refractor	329(W) X 103(D) X 296(H)mm, 4.20kg	361(W)x 108(D)x 280(H) mm / 4.74kg
	Operation Panel	249(W) X 245(D) X 248(H)mm, 2.75kg (including internal printer)	216(W)x 246(D)x 225(H) mm / 1.89kg (including internal printer)
	Junction Box	240(W) X 141(D) X 71(H)mm, 1.24kg	251(W)x 240(D)x 71(H) mm / 1.88kg
	Power Supply	100-240VAC~, 1.0~0.5A, 50/60Hz	AC 100-120V / AC 200-240V 50 / 60Hz
Fully compatible with all EMR Systems and equipped with a full year warranty.			

IMAGING SYSTEMS

CAMERAS & ADAPTERS

Digital Camera
- Upgraded 10M Pixel Camera, improved high-resolution images
- USB Port for easy connecting
- Easy fine-tune of focus adjustment control (Focusing)
- New software upgrade - more precise measurements (length, width, etc.)

LED Lamp
- Comfortable for operator and patient
- Semi-Permanent LED lamp illumination, lifetime warranty
- Brighter and more homogenous LED powered slit than halogen

DSLR Adapter
- 18M-22M pixel images (Only Canon available)
- Binocular field of view can be switched
- Easy fine-tune of focus adjustment control (Focusing)
- Duplex image transmissions between DSLR & PC
- Supporting Canon EF & EOS (Flange back: 44mm)
- EOS 600D, 650D, 5D & ect. (Supporting the latest Canon camera models)
- Technical specifications are determined by the Canon camera model

SPECIFICATIONS		
Model	**HIS-5000U (10.0M)**	**HIS-5000U USB 3.0**
Image sensor	1/2" CMOS	1" CMOS
Image size (pixels)	Up to 3,840 x 2,748	Up to 2,592 x 2,048
Cell size	1.67 µm x 1.67 µm	4.65µm x 4.65 µm
Transmit method	USB 2.0	USB 3.0
Transmit speed	480Mbps	5.0Gbps
Frame rate	Maximum 30fps	
Lens mount	C-Mount	
Power consumption	2.5W	3.5W
Shutter	Rolling shutter	Global shutter
Photographing	External trigger or Software trigger	
CPU	Intel® Core™i3(2.4GHz over)	Intel® Core™i5(3.4GHz over)
Memory	Over 2GB recommended	Over 4GB recommended
System	Microsoft® Windows®7 SP1, Windows®8, Windows®10, Windows®11	
Monitor	Resolution 1920 x 1080 Recommended	
Fully compatible with all EMR Systems and equipped with a full year warranty.		

LED CHART PROJECTOR

HCP-7000

Featuring a semi-permanent lifetime LED light source making it brighter and clearer than conventional light bulbs. The HCP-7000 has an attractive streamlined shape and blue indicator as well as a RC-R Type (Russian Chart) included.

SPECIFICATIONS	
Chart	41 charts 34 masks, Red/Green & Polarization Filters
Projection Distance	2.5 ~ 8m
Chart Rotation Speed	Average 0. 15 sec
Projection Magnification	30x at 5m
Power Saving	Automatic Switch off (10 min)
Program	2 programs with a maximum of 30 charts each
Tilt Angle	15°
Power Supply	100 - 120V 50Hz: 0.64A, 200-240V 60Hz: 0.3A
Lamp	LED 4W
Dimension	270(W) x 182(D) x 230(H)mm
Weight	3.44kg

DIGITAL CHARTS

HDC-9100N, 9100PF & HDC-7000 SOFTWARE

Polarized Charts & Stereoscopic Vision Test
Several types of visual acuity and function tests are provided including the binocular balance test, stereoscopic vision test and heterophoria/heterotropia tests by the use of this state of the art technology with the polarized LCD panel.

System Integration
HDC-9100N/PF can be synchronized and integrated with the Huvitz Digital Refractor HDR-7000, HDR-7100P, and HDR-9000 for a more convenient, faster visual acuity test. All functions of the HDC-9100N/PF chart can also be operated from the control panel of HDR-7000, HDR-7100P, and HDR-9000. A wireless interface IR connection option is offered to make the installation easy.

Versatility with Red/Green Color Adjustment
Each LCD monitor has its own color display setting. HDC-7000 offers you the red/green color adjustment function in order to make the color vivid and extremely clear for a better prescription.

Comprehensive Test Range
High resolution LCD allows you to see the smallest size charts and optotypes without distortion and provides a comprehensive test range with the visual acuity charts.

Chart Options
Smart Chart with random display functions makes it impossible for the patient to memorize the chart. Contrast adjustment allows for more accurate prescriptions. Easily copy and paste images when creating your own image gallery.

Selectable Working Distance
Working distance can be adjusted according to the testing convenience. Working Distance: 1.5m-6m (can be set at a scale of 10cm).

Easy to Upgrade
HDC-9100N/PF can be upgraded automatically simply by uploading the new software to the USB memory and plugging it into the USB slot.

Convenient User Menu
The HDC-9100N/PF features a user-friendly menu structure and special visual functions testing.

Resolution for HDC-7000 Software

Resolution	Monitor
1280 x 1024	17"
1280 x 1024	19"
1400 x 1050	20.1"
1680 x 1050	20.1"
1680 x 1050	21"
1680 x 1050	22"
1600 x 1200	20.1"
1920 x 1080	21.5/22"
1920 x 1080	23"
1920 x 1200	23"
1920 x 1200	24"
1920 x 1080	25"
1920 x 1200	30"
1920 x 1080	31"
1920 x 1080	32"

SPECIFICATIONS		
Model	**HDC-9100N / HDC-9100PF**	**HDC-7000 (Software)**
LCD Type	24" color TFT-LCD (Only HDC-9000/PF supports the polarized panel)	Compatible to 17", 19", 20", 23", 24", 25", 30", 31", and 32" LCDs
Resolution	1920 x 1080 pixels	N/A
Operating System	N/A	Windows 11, 10, 8.1, 8, Vista, 2000, XP
White Luminance	300 cd/m²	N/A
Chart Type	3 types in decimal or fractional meter, or in feet	
Total File Size on Disk	N/A	100MB
Chart Window Size	531.4mm(H) x 298.9mm(V)	N/A
Power Supply	Input : AC100-240V, 50/60Hz Output: +DC12V, 7.08A	5V, 100mA, 0.5W
Power Consumption	80VA	N/A
Dimensions	568mm(W) x 346mm(H) x 80mm(D) / 6.1kg	Receiver: 51(W) x 80(L) x 21(H)mm / 46g
Remote Controller Size	65(W) x 195(H) x 20mm(D) / 160g	
Working Distance	1.5m~6m (0.1m step)	2.1 to 7m (scale of 0.1m)/7-23ft (scale of 0.5ft)
Connections	Audio, USB, HDM, CAN, RGB	N/A
Communications	Wire (CAN) – HDR-7000 can be integrated / CDR-3100 can be integrated. Wireless (IR) – Remote controller and HDR-7000 can be integrated.	Connected to PC (USB), Connected to HDR/ CDR (CAN)
Wall Mount	240(W) x 25.5(D) x 230mm(H) / 2.9kg	
Optional Accessories	Desk stand, Floor stand, RG glasses, Polarized glasses	N/A
Charts	Landolt C, Letter, Number, Snellen E, Children, Russian, Hiragana, Functional charts (adjustable Red/ Green, Cross Cylinder, Binocular Balance, Fusion and Suppression, Heterophoria, Aniseikonia, Stereoscopic Vision Test, etc.)	
Mask Filter	Letter, Horizontal Line, Vertical Line, Red/Green Filter	Line (horizontal/ Column (vertical) / Single Optotype - controlled by remote controller with infrared communications
User Menu	Video and Image mode, Slide show, Contrast Sensitivity, Background Luminance, Red/green Balance, Compensation for Red/Green Filter, Random Function, Optotype, Chart Background, Reverse	
Special Tests	Color Vision Test, Hue Test, Contrast Sensitivity Test	
Fully compatible with all EMR Systems and equipped with a full year warranty.		

VISION SCREENER

HVS-1

Quick and Comfortable Non-Contact Measurement
Measures refractive abnormalities like myopia, astigmatism, hyperopia, and strabismus within a second from 1 meter, similar to taking a photo.

Child-Friendly Measurement Method
Attracts the child's gaze and interest with light and sound to focus on the center of the vision screener.

Minimized Shaking During Measurement
A global camera sensor helps to minimize shaking during the quick measurement process.

Accurate Measurement with Focus LED Technology
Measures the eyes precisely and in detail, minimizing the influence of external light using patented Focus LED technology with increased LED intensity.

Easy Connectivity
Not only easily compatible with standard DICOM format but also allows checking measured data on a PC through self-developed software, HIIS-1.

SPECIFICATIONS			
Spherical	Range	-8.0D to +8.0D	
	Increment step	0.01D, 0.25D	
	Accuracy	-3.50D to +3.50D	± 0.5D
		-8.0D to < -3.50D	± 1.0D
		> +3.50D to +8.0D	± 1.0D
Cylindrical	Range	-3.0D to +3.0D	
	Increment step	0.01D, 0.25D	
	Accuracy	-1.50D to +1.50D	± 0.5D
		-3.00D to < -1.50D	± 1.0D
		> +1.50D to +3.00D	± 1.0D
Axis	Range	0 - 180°	
	Increment step	1°	
	Accuracy	± 10°	For CYL's values > 0.50D
Pupil Distance	Range	35 - 80mm	
	Increment step	1mm	
	Accuracy	± 1.5mm	
Measurement Time	Average	≤ 1s	
Measuring Distance	Range	100cm ± 5cm	
LCD	IPS 800X480		
Printer	BIXOLON Bluetooth Thermal Printer (Optional)		
Fixation Target	Visual Pattern / Audible Sound		
Wireless Network	802.11 b/g/n		
Interface	USB 2.0		
Fully compatible with all EMR Systems and equipped with a full year warranty.			

EXAM LANE CHAIRS

ENVI S2-AR

ENVI S2-AR AUTOMATIC RECLINE CHAIR

Innovative engineering. Quality-driven performance. Cost-effective pricing.
Envi chairs give eye care professionals the competitive edge with advanced features designed for peak clinical efficiency and exceptional patient care.

Envi S2-AR
Automatic Recline
Exam Lane Chair

envi essential eyecare instruments

Coburn Technologies is a proud distributor of Envi Essential Eyecare Instruments

Complete Automatic Power
Effortlessly adjust chair up/down, recline back/forward, including a fully flat position at the touch of a button, and activate auto return mode.

Customizable Comfort
High-quality, durable upholstery is available in a variety of colors to complement your space.

Practical Design
Enjoy the convenience of a folding footrest with spring assist, adjustable headrest, and armrests that move synchronously with the chair.

Comfort For Patient
Folding footrest with spring assist.

Enhanced Mobility
Rotate chair 180° with the foot lock for easy positioning.

User-Friendly Controls
Easily operate chair with soft-touch buttons conveniently located on both sides.

SPECIFICATIONS	
Chair Base Dimensions	21"(W) X 23.75"(D)
Height In Lowest Position	23.6"(H)
Height In Highest Position	31.5"(H)
Length When Fully Reclined	65"(L)
Lifting Capacity	500 lbs
Voltage	120v

EXAM LANE CHAIRS

ENVI S2-MC

ENVI S2-MC MANUAL RECLINE CHAIR

Designed to meet the industry's highest standards, each chair incorporates essential features that enhance patient comfort and clinical efficiency.
Crafted with the eye care professional in mind, Envi chairs embody a perfect blend of quality, affordability, and functionality.

Envi S2-MC
Manual Recline
Exam Lane Chair

Manual Recline
Control chairs recline position with a handle conveniently located on back of the chair.

Power Up/Down
Easily adjust chair height with convenient foot pedal control.

Customizable Comfort
High-quality, durable upholstery is available in a variety of colors to complement your space.

Practical Design
Enjoy the convenience of a folding footrest with spring assist and an adjustable headrest.

Enhanced Mobility
Rotate chair 180° with the foot lock for easy positioning.

SPECIFICATIONS	
Chair Base Dimensions	21"(W) X 23.75"(D)
Height In Lowest Position	23.6"(H)
Height In Highest Position	28"(H)
Length When Fully Reclined	60"(L)
Lifting Capacity	500 lbs
Voltage	120v

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INSTRUMENT STAND & TABLE

ENVI SWITCH

ENVI SWITCH INSTRUMENT STAND

Envi Switch is a versatile and adaptable stand.
With a multitude of configurations, practical storage options, and unique add-ons, the Envi Switch is truly customizable to meet your specific needs.

Customized Fit
Choose from left or right-handed setups and widths of 36 or 40 inches (including chair) to perfectly match your workspace.

Efficient Workflow
Control chair height directly from the slit lamp arm for seamless adjustments.

Organized Storage
Utilize the functional storage space to keep your instruments and supplies within reach.

Versatile Options
Select the slit lamp arm that best suits your needs: fixed, counter-balanced, or electric.

Optimal Lighting
Benefit from a multidirectional, 360° dimmable LED overhead lamp with customizable color options for precise personalized illumination.

SPECIFICATIONS	
Base Dimensions	12"(W) X 24"(D)
Base Dimensions with Baseplate	21.5"(W) X 24"(D)
Total Height of Unit	76"(H)
Slit Lamp Arm Weight Capacity	80" lbs
Phoropter Arm Vertical Range	10"

COMPACT INSTRUMENT TABLE

CIT-4000

Easily Install Huvitz Instruments
Supports instruments such as Huvitz slit lamps and autorefractor. Tabletop can be replaced to install Huvitz slit lamps HS-5000, HS-5500, HS-7000, and HS-7500. Easy up and down movement by simple pedal operation.

SPECIFICATIONS	
Dimensions	500(W) X 465(D) X 850(H)mm
Weight	26kg (including Table Top for Auto Ref)
	29kg (including Table Top for Slit Lamp)
Power Supply	AC 220-230V, 50/60Hz
Travel Length	250mm
Speed	22mm/sec (under 40kg), 11mm/sec (under 60kg)
Load	Max 60kg
Other	Up, down movement operations pedal included

COBURN TECHNOLOGIES

Exclusive authorized U.S. distributor of Huvitz CONNECTING SIGHT SUCCESS

YOUR COMPLETE SOLUTION

Coburn Technologies, Inc. is a leading provider of ophthalmic lens processing systems. We design, manufacture, distribute and service equipment and supplies used in all aspects of surfacing prescriptions for lens blanks, coating lenses, and finishing lenses to fit into patient frames. For 70 years, we've supplied optical practices and labs with the equipment, application support, field service, and turn-key solutions they need to take their business to new heights.

Coburn Technologies provides a complete line of diagnostic systems throughout the United States, manufactured by Huvitz Co., Ltd., a leading innovator, developer and manufacturer specializing in optometric medical equipment.

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