Hongdee

15 YEARS IN OPHTHALMOLOGY AND OPTOMETRY

BEIJING HONGDEE CORPORATION

www.hongdeecorp.com

Manufacturing facility equipped with advanced processing equipments

● 6000 square meters with two storey building, 1st floor to do the processing of the parts, and 2nd floor to do the assembling.

● Complete set of manufacturing processing machines.

| Laser cutting | Laser cutting machine | CNC processing center |

| Welding | Polishing | Spray paint |

| Ball blasting | Drilling machine | Bender |

● Worldwide distribution network established in 60countries

Experienced in doing OEM for the well-known manufacturers

Optelec Life is worth enjoying   TOPCON   Vision ENGINEERING

ISO13485 and ISO9001 certified and SGS verified

Aupha V LED CCD

Aupha V LED with the CCD camera module

Now the Aupha V LED has been upgraded to a higher lever integrating the CCD camera module which allows the doctor to take pictures and video a lot easier than ever before.

adopted with 12mp CCD camera,plus with the Coaxial background light, the image sharpness and clarity is totally guaranteed for a variety of clinical operation needs.

Synchronous flash compensation system offers consistent image quality, and reveal the details of lesion even with weak illumination light.
the yellow filter is integrated into the CCD module already, doctor no longer needs to purchase it and install it separately.

Meibomian photography also is available as an option by integrating the UV light into the background illumination.
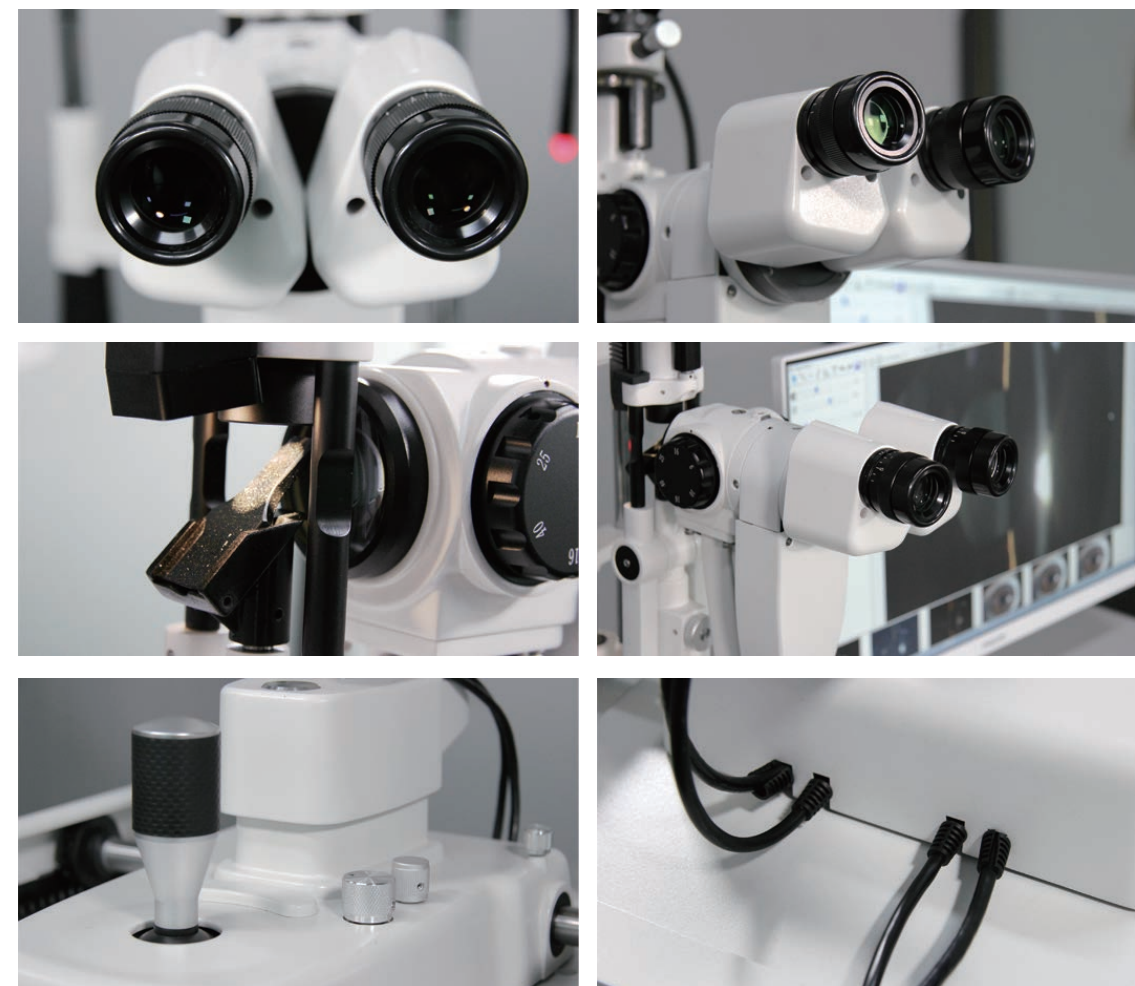
Features:
1. New eye cap design: Instead of using the rubber eye cap which is easy to get dirty and dusty. The plastic eye cap is adopted. Tidy and clean. Easy to use, pull it out and then push it back.

2. Coaxial background light design synchronizes the movement with the slit lamp together, no separate adjustment is requirement.

3. The optional add-on of the UV light into the background illumination makes the the meibomian exam very simple and easy.

4. DICOM 3.0 is available to help integrate the patient record into the system to share easily.
5. the straightforward lay-out of the software interface makes it very easy to understand and operate;

6. the touch bar in front of the joy stick offers much ease of taking pictures and videos, just one touch, it is done.

Technical Parameter

Items \ Model	Aupha V LED CCD
Optical Part	
Microscope Type	Galilean Type System
Magnification Changer	Revolving Drum
Magnification	6X,10X,16X,25X,40X
Eyepiece Magnification	12.5x
Visual Angle of Eyepiece	13°
PD Range	52mm-85mm
Diopter	±7D
Visual Field Diameter	6X(33mm), 10X(22mm),16X(14mm), 25X(8.5mm),
	40X(5.5mm)
Illumination Part	
Illumination Type	Tower Type
Light Source	Warm LED
Brightless control	Continuously adjustable
Illumination tilting	5°,10°,15°,20°
Slit Width	0mm-14mm continuously adjustable
Slit Height	1mm-14mm continuously adjustable
Slit Angle	0°~180° continuously adjustable
Slit Aperture Size	Φ0.2，Φ1，Φ3，Φ5，Φ10，Φ14（mm）
Filter	Heat Aborption, Grey, Redfree(Green), Cobalt Blue
Imaging system	
Image collector	Medical Grade CCD, 12 Mega Pixel
Eyepiece Splitting Ratio	50%
Camera Splitting Ratio	50%
Coaxial Background illumination	●
Synchronous flash compensation system	●
DICOM Connectable	●

* Voltage: 100~240V 48~62Hz Compatible

Extra information

› Outstanding Optic Quality Ensure the Comfortable View
› Precision Machining Makes the Smooth and Flexible Movement
› Professional & Multi-functional Software With Simple Humanized Human- computer Interface & Easy Operate
› Have both image capturing function and video capturing function, Image processing for better
› Symptoms Diagnose
› Backup patient database easily to guarantee data safety
› Coaxial background light configured for diverse clinical operation needs
› Synchronous flash compensation system, ensure uniform image quality, and reveal the details of lesion even with weak illumination light
› OD/OS auto recognition
› Auto recognition of magnification for captured images and reveal under each image
› Touch-sensitive shooting button, One-handed operation to focusing, brightness adjusting and taking pictures
› English version software:Patient management, Image Capturing, Image management, Report printing, DICOM 3.0 Available
› Meibomian photography is optional

Aupha II LED

Features:
The microscope's ray's path is converging stereoscope ways;
All optics lenses adopt high quality material to keep its high definition and brightness;
All the lens has been tested by multi-layer reflection, moist and mildew, it can keep high optics effect all the time;
Light resource adopts high quality Halogen bulb, which can keep brightness and equality of light spot.
The intensity can reach to 200000 1x.
2 or 3 steps magnification.
Specifications

Type	Converging Stereoscope	
Magnification change	Switch the pole	
Light source	Halogen lamp (LED option)	
Real fields of view	9mm-18mm	
Stereoscopical angle	13 degree	
Eyepiece	10x	10x 16x
Total magnification	10x 16x	10x 16x 25 x
Field of View	10X: 20mm, 16X: 13mm	10X: 20mm, 16X: 13mm, 25X: 8mm
Reflector	Long reflector	Long reflector, short reflector
Dispersion lens	No	Yes
Range of adjusting the distance pupil of	54mm-92mm(>92mm)	
Eyepiece diopter adjustment	≧±6D can reach D can reach ±8D(eyepiece10X) ; ±15D (eyepiece16X) ;	
Slit image width	0mm~14mm continuous	
Slit image length	1mm~14mm continuous	
Diameter of aperture	φ14mm、φ10mm、φ5mm、φ2mm、φ1mm、0.2mm	
Slit angle	0~180 Rota table	
Illumination angle	0、5、10、15、20	
Filter	Heat absorption, Grey, red free(Green), Cobalt blue	
Illumination	12v, 50w halogen bulb	
Moving Back and forth moving	90mm	

Features:
The excellent image for users.
Twosteps of magnification are provided.
The 14mm aperture fit for eye pre-checking of wearing contact lenses and the corneal foreign objectexamination.
6V/20W Osram halogen lamp is employed, which provides strong and stable lighting for observations.
LED light source is optional.
Heat absorbing filter, ND filter, Red-free filter and Cobalt Blue filter are provided.

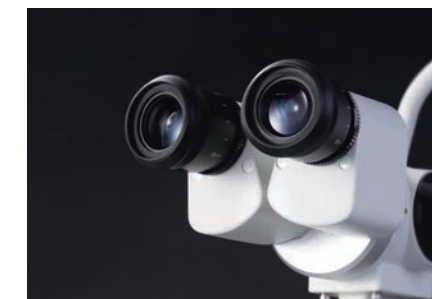# Aumega V

Microscope:

Type:	Galilean magnification, 13 degree binocular tube with converging optics
Magnification Style:	Revolving Drum
Magnification Ratio:	6X,10X, 16X, 25X, 40X
Stereo Angle:	13 Degree
Eyepiece:	12.5x
PD Adjustment:	55mm~78.5mm
Diopter Adjustment:	-6D~+6D
IIIumination	
Slit width:	Continuous from 0mm to 14mm (at 14mm,slit becomes a circle)
Slit Height:	Continuous from 1mm to 14mm (at 14mm,slit becomes a circle)
Slit Angle:	0 to 180 degree with horizontal scanning capability
Aperture Diameter:	14mm, 10mm, 5mm, 3mm, 2mm, 1mm, 0.2mm
Filter :	Heat-absorbing, UV, Cobalt Blue, Red-Free
Slit lnclination:	5 Degree, 10 Degree, 15 Degree, 20 Degree
Illumination Bulb:	6V, 20W halogen bulb
Power Supply:	110V/220V±;60/50Hz;58VA
Base:	
LongitudinalMovement:	90mm
Lateral Movement:	100mm
Fine Base Movement:	15mm
Vertical Movement:	30mm
Chinrest:	
Vertical Movement:	80mm
Fixation bulb:	Green Led
Power:	
Power Supply:	100-120V, 220-240V AC
Frequency:	50/60Hz
Power Consumption:	30VA

Quality Optics

Uniquely designed optical system makes slit lamp be able to project very sharp and homogeneous slits and apertures. Doctors can obtain closer observation through slit lamps and see all kinds of pathologies clearly. As a result, the diagnosis becomes easier for the doctors who can dedicate more time and energy to the treatment for the patients.

LED IIlumination

The light of LED lamp is very similar to halogen lamp, which conforms to the operating habit of doctors.
The LED lamp applied has a low color temperature and high illumination intensity, making view of retina without glare-colors much more vivid and view of cornea with nerves pop out better. The LED lamp has a longer life span and consumes less energy.
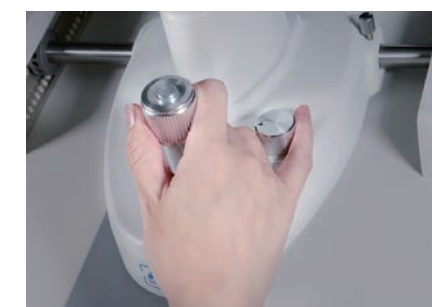
Rotational Drum

Slit Lamps provide rotational drums for doctors to switch between different magnifications. The scales are engraved by laser and durable for long time use. S260 offers 5 magnifications (6X,10X,16X,25X40X) and S280S/S260S offers 3 magnifications (10X,16X,25X).

Dedicated to Details

We pay full attentions to every detail in the design of slit lamps to deliver good user experience. Doctors can control the illumination knob simultaneously with the little finger without making hands leave the joystick.

Yellow Filter Module
Doctors can observe images at higher contrast with yellow filter. The eye tissues look sharper under yellow filter. Images can be switched between with filter and without filter by moving the module. The filter can be mounted in front of objective lens and took off easily from slit lamps.

Measuring Eyepiece
Equipped with a reticle inside, the eyepiece has a measuring function which can facilitate doctors to measure the pathologies conveniently and give more accurate diagnosis.

Observation Tube
Connected through beam splitter, the observation tube enable another medical staff to observe the patient's eye condition from the slit lamp. It is good for teaching education purpose.

Aumega II LED

Microscope	Aumega II LED
Microscope Type	Converging Stereoscope
Magnification Change	2 steps by Objective Lens Rotation
Total Magnification	10X、16X
Eyepieces	10X
Angle between Eyepieces	13°
Pupillary Adjustment	52mm~78mm
Diopter Adjustment	+5D～-8D
Field of View	16X (Ø14.5mm) 10X (Ø18mm)
Slit Illumination	
Slit Width	0~14mm continuous (slit becomes a circle at 14mm)
Slit Length	1~14mm continuous
Aperture Diameters	Ø14mm、Ø8mm、Ø3.5mm、Ø0.2mm
Slit Angle	0°~180°
Filters	Heat-absorbing filter, Red-free filter, Cobalt Blue filter
Lamp	6V/20W Halogen Lamp
Luminance	≥50KLX
Instrument Base	
Longitudinal Movement	115mm
Lateral Movement	110mm
Vertical Movement	30mm
Fine Base Movement	15mm
Chin-rest	
Vertical Movement	80mm
Power Supply	
Input Voltage	220V/110V~±10%
Input Frequency	50Hz/60Hz
Power Consumption	30VA (max)
Output Voltage	Lamp 6V, Fixation 3V
Packaging	
Dimension	740mm×450mm×550mm (L/W/H)
Gross weight	22kg
Net weight	16kg

Hand-held Slit Lamp
Model: PSL-150

The PSL-150 hand-held slit lamp adopts the most innovative design to make it very compact and versatile for the eye exam.
The doctor can adjust the brightness very easily by rotating the dial with the thumb. the magnetic tape design makes it possible to utilize the smart phone to its best effect regardless of the phone size.
It also eliminates the power switch , just simple rotate the optical head to the left or right to turn it on. and back to original position to power off.
With the built in blue tooth, it can synchronize with the smart phone and then take the picture by pressing the button behind within a second.

Features:
Compact and lightweight only 290g(10.2Oz), easy to carry around for mobile exam;
3400mAh rechargeable lithium battery to provide working time up to 6 hours;
Magnetic plate design to fit different size smart phones to take image and videos of the eyes for better diagnosis;
Adoption of LED bulb 3W to increase the illumination efficiency and guarantee longer lifetime.
Three slit width with continuous brightness adjustment.

Specs:
Magnification: 6.5X;
Illumination: continuous brightness adjustment
Slit Width: 0.2mm; 0.7mm; 12mm;
Slit length: 12mm
Lumen: more than 10000lx
Filter: Cobalt blue;
Battery: Li-ion battery 3350mAh
LED illumination: LED bulb 3W
Working time: 4-6 hours
Charging time: 3.5 hours
Net weight: 290g(10.2Oz) including battery
Packing dimension: 25.5cmx41cmx56cm

Digital slit lamp imaging system
Model:Phoenix

This Prime digital slit lamp imaging system is a complete image capture and management system, which is developed to be compatible with the majority brand slit lamps to bring out the best imaging to the doctors and make the diagnostic examination much more accurate and ease of use.

Features:
Easy connection
Quick data transmission with USB 2.0 connector
Intuitive software
Image comparison of multiple sessions
Diagnose report documentation and printing cable free, touch pad control via infrared.
Wide range of compatibility with the different brand slit lamps;

Imaging module
Image sensor:1/2.5 inch high speed &HD image sensor
Image resolution:2592 X1944
Image format:jpeg
Video resolution:1920 X1080 (Full HD) 25fps
                              1280 X720 (HD) 30fps
Image capture mode: infrared touchpad joystick, shutter pedal, mouse click, keyboard shortcut button
Exposure mode:Auto exposure, auto gain & auto white balance.
Data transmission interface: USB 2.0, wireless (infrared)
Power supply:USB 2.0, 5V/DC

Below is a list of the slit lamp models that Phonto is compatible with	
Haag Streit	BQ-900
Marco	Ultra G5 (16x)/Ultra G5 Zoom (16x)
Keeler	SL-40H (12.5x)
Topcon	SL-D2/D4/D4Z/D5 (12.5x); SL-5D (12.5x)/6E (12.5x)
Zeiss	30 SL (12.5x/10x); SL-130 (12.5x/10x); SL-160 (12.5x/10x)
Reichert	Xcel-255 (12.5x); Xcel-200/250/400/700 (12.5x)
Nidek	SL-1600 (10x/16x); SL-1800 (12.5x)
Inami	Classicus L-0179 (15x); Classicus L-0179 Z (15x); Classicus L-0219 (12.5x);
	L-0187 (15x); L-0189 (12.5x); L-0229 (12.5x); L-0240 (15x); SL-0229-E (12.5x)
Huvitz	HS-5000 (12.5x)/HIS-5000 (12.5x)
Takagi	SM-70 (16x); SM-90 (12.5x)
CSO	SL-980 (12.5x); SL-990
Shin Nippon	SL-203
Tomey	TSL-3000 (15x)
Rondenstock	RO-3000 (12.5x); RO-4000 (12.5x); RO-5000 (16x); RO-2000(10x)
Woodlyn	HR3 (15x); HR5 (12.5x)
Burton	860(15x)
Nikon	FS-3 (12.5x); FS-2 (12.5x)
Righton	RS-1000 (12.5x)
Suzhou 66 vision	YZ5S (12.5x); YZ5F1 (12.5x); YZ5G (12.5x); YZ5X1 (12.5x)
Mediworks	S350S (12.5x); S350C (12.5x); S350 (12.5x); S360 (12.5x); S360S (12.5x)

Slit lamp Digital imaging system
Model: Phonto

Phonto is an innovative digital slit lamp imaging module that fully utilizes the phones as the camera to make the video processing and image editing a lot easier and convenient than ever before.
It works with Android phones and iPhones. Any phone can become a slit lamp imaging processing module.

Features:
1. Designed to work with different Operating system
Works for both Apple and Android smart phones
2. Compatible with the majority brand slit lamps
Unique mechanical design makes it perfectly adapted to the majority brand slit lamp available in the market
3. Easy installation
Just install it onto the binocular head of slit lamp, and then attach your iphone onto the Phonto, it is ready to use.
4. Bluetooth capture.
The most popular solution in application, no interference, real time fast reaction, and precise paring.
5. No PC needed. Due to the utilization of the phone, no need to install software onto computers anymore. Save you a lot of work.
7. Export.
Pictures, videos, and professional report. Anything you need is built in there.
8. app download is simple
Specially designed App and APK are available for download from the store for free.

Below is a list of the slit lamp models that Phonto is compatible with:
Haag Streit: BQ-900
Marco: Ultra G5 (16x)/Ultra G5 Zoom (16x)
Keeler: SL-40H (12.5x)
Topcon: SL-D2/D4/D4Z/D5 (12.5x); SL-5D (12.5x)/6E (12.5x)
Zeiss: 30 SL (12.5x/10x); SL-130 (12.5x/10x); SL-160 (12.5x/10x)
Reichert: Xcel-255 (12.5x); Xcel-200/250/400/700 (12.5x)
Nidek: SL-1600 (10x/16x); SL-1800 (12.5x)
Inami: Classicus L-0179 (15x); Classicus L-0179 Z (15x); Classicus L-0219 (12.5x); L-0187 (15x); L-0189 (12.5x); L-0229 (12.5x); L-0240 (15x); SL-0229-E (12.5x)
Huvitz: HS-5000 (12.5x)/HIS-5000 (12.5x)
Takagi: SM-70 (16x); SM-90 (12.5x)
CSO: SL-980 (12.5x); SL-990
Shin Nippon: SL-203
Tomey: TSL-3000 (15x)
Rondenstock: RO-3000 (12.5x); RO-4000 (12.5x); RO-5000 (16x); RO-2000(10x)
Woodlyn: HR3 (15x); HR5 (12.5x)
Burton: 860(15x)
Nikon: FS-3 (12.5x); FS-2 (12.5x)
Righton: RS-1000 (12.5x)
Suzhou 66 vision: YZ5S (12.5x); YZ5F1 (12.5x); YZ5G (12.5x); YZ5X1 (12.5x)
Mediworks: S350S (12.5x); S350C (12.5x); S350 (12.5x); S360 (12.5x); S360S (12.5x)

Auto perimeter AP-100

The AP-100 visual field analyzer/ auto perimeter is a perfect ophthalmic diagnostic equipment for any one who wants to conduct the visual field test for the sake of evaluation on the overall vision loss situation correlated with different eye diseases particularly glaucoma.

Features:
1. The easy to set-up overall design combined with automated/manual eye alignment reduces the test time by leaps and bounds.
2. Modulized design of mechanical and structure for easy maintenance and parts replacement.
3. Intuitive and straightforward touch screen interface facilitates the operation by simply inputting patient's name, gender and age, it will be ready for testing.
4.built-in Voice prompts and voice tutorial function tremendously increase the operator's working efficiency and reduce the workload, meanwhile, effectively guide the patients to follow the procedure during the test.
5. A wide array of testing options up to 22 programs cover the majority of different eye disease related with vision field.

DB Value Range displayed	0~40db
Stimulus Intensity Range	1asb~10000asb
Stimulus Size	Goldmann III
Stimulus Color	White
Stimulus Duration Time	200ms/ Adaptive
Max Measurement range	90°
Test Distance	30cm
Test Mode	Static
Stimulus quantity	456 points
Stimulus Plane	Aspherical surface
Background Illumination	White 31.5 asb（10cd/m2）
Customize test program	●
Auto eye recognition	●
Blind zone range test	●
Stimulus Source	LED
Chinrest Control	Touch Screen,Keyboard and mouse control,Button control
Head Movement	Chinrest and forehead-rest move simultaneously
PC Configuration	CPU:1.6 GHz; RAM: 4 GB; Hard disk: 120 GB; Operation system: Windows 10; LCD:14 " Capacitive Touch screen; Networking: Ethernet & WIFI;
Dimension	480mm(L)*430mm(W)*528mm(H), 14kgs
Packaging	550mm(L)*480mm(W)*640mm(H), 19kgs
Others	Input Voltage: AC 100－240V,50～60Hz

Portable fundus camera
Model: FC-200

The FC-200 fundus camera is specifically designed for the retinal imaging like pictures and videos. With built in 10 mega pixels camera, it allows you to take highly crystal clear pictures and videos to provide high quality image which makes the diagnosis a lot faster and easier than ever before.
The light weight and compact design weighing less than 500g(19.68oz) makes it easy to carry with you anywhere to perform the exam fundus screening very conveniently.

Model	FC-200
FOV	50 degree
Sensor resolution	10 Mega pixels
Optical resolution	>60lp/mm
Min. pupil	2.5mm
Focus	Manual/Auto focus
Flash mode	White LED and IR LED
Screen	4.7 inch TFT colored screen
Format	JPEG, MPEG-4/1, Dicom3.0,
Internal targets	5 targets fixation
Image transfer	USB3.0, WIFI, SD card, HDMI
Storage	4G+64G
Power	Li-on rechargeable battery 3.7V/3500mAh
Charging power	100-240VAC,50/60Hz
Working time	>8 hours
Charging time	<2 hours
Net weight	<500g
Size	205×125×205mm

Features:
1.10 MP built in camera to guarantee incredible image clarity and sharpness
2.Field of view up to 50 degrees to ensure faster and easier diagnosis.
3.Auto focus and image capture to take a picture with a single button for easy operation.
4. 4.7 " touch screen offers ease of use in exam;
5.Wifi and blue tooth allows for quick transfer for the images and videos.
6.3500Mah rechargeable lithium battery provides more than 8 hours continuous operation without interruption.

Portable fundus camera
Model:FC-100

Application: this fundus camera is used in nonmydriatic conditions, to observe, capture, access to patients'retinal image, for medical practitioners to do the diagnosis of fundus diseases.

FOV	42°	PICTURE FORMAT	JPEG/AV
MINIMUM PUPIL	2.5MM	LIGHT SOURCE	WHITE LED/IR
REFRACTIVE COMPENSATION	-20D-+20D	STORAGE	32GB MICRO SD CARD
FOCUS MODE	MANUAL	BATTERY	3.6V LITHIUM BATTERY
IMAGE RESOLUTION	1920X1080	INTERFACE	Micro USB
SCREEN	3.5″	Unit SIZE	19X10X21CM
POWER	≤6VA	N.W	400G

Features:
1.Real time wifi transfer;
2.Compact and portable, very easy to carry around for the mobile examination;
3.Non-mydriatic, the retinal image of the eye can be taken right away once it is in focus;
4.3.5″ screen provides a clearer display of the retinal image to make it easy and simple for doctor to do the analysis.
5.3 hours working time makes it possible to do more examination to serve more patients.
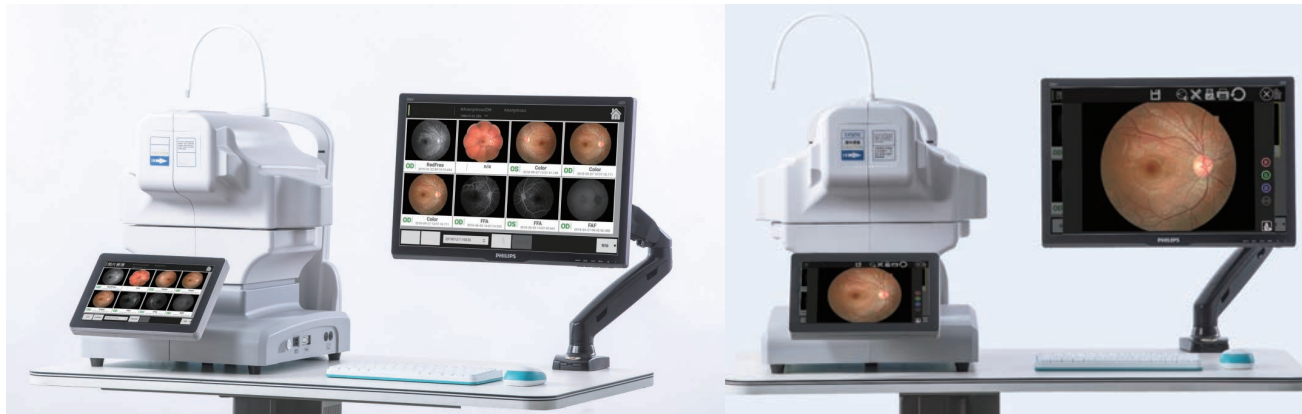
Desktop fundus camera
Model:FC-3100M

The FC-3100M desktop Fundus camera is a fully automated retinal camera which comes with a new 5-megapixel sensor to produces crystal clear,detail-rich images which effectively help to diagnose and monitor posterior andanterior eye segment diseases from glaucoma to diabetic retinopathy to AMD.

The 135 degree rotating touch panel monitor at 10.1", allows the operator to acquire the image very quickly just by a simple finger touch.

Features:
5MP camera to exhibite fully chrystal clear and True color fundus image
Automatic focus and capture of high-resolution true color fundus photos
Small pupil photography − Acquires images with pupils as small as 3.3mm;
fully motorized chin rest to adjust the height of the patient head automatically.

Small Pupil Mode and Soft lighting
• Small Pupil Mode enables the operator to acquire retinal images with pupil as small as 2.8mm.
• Soft lighting technology also reduces the constriction of pupil caused by illumination.
Internal Fixation Target Operation
As many as 9216 internal fixation targets (Disc, Center and Macula) as well as the 1 external fixation target for peripheral photography are incorporated. doctors can take the pictures of the retina from any angle , any direction.
Additional output display
it can be connected to a monitor for additional display which allows the operator to have a better access to the test results.
SIMPLE AND EFFECTIVE RESULT' S MANAGEMENT
More than a pretty picture
135° wide field, mosaic with countless fixation points
The mosaic function can generate the fundus image up to 135° field of view from various images of 50° field width each. The operator can choose fixation points by his/her own choice. Just by touching the monitor screen in chosen point...

Multifunctional software system
Gamma, contrast, brightness, color of image can be adjusted, according to the doctors requirement.

Vision screener
Model:VS-100

VS-100 vision screener is a portable diagnostic device to quickly detect vision abnormalities on patients aged from 6 months to adults.
• Myopia (nearsightedness)
• Anisometropia
  (unequal refractive power)
• Hyperopia (farsightedness)
• Strabismus (eye misalignment)
• Astigmatism (blurred vision)
• Anisocoria (unequal pupil size)

Performance parameter

Measuring Mode	Binocular/Monocular
Refraction detection	Full Auto
Measuring Time	less than 1 Sec.(after focusing)
Working Distance	100cm±5cm
SPH	
Range	-10D~+7.5D
Resolution	0.25D/0.01D
Accuracy	±0.5D (-3.5D~+3.5D)
	±20%(<-3.5D,>+3.5D)
CYL	
Accuracy	±0.5D
Range	-3D~+3D
Resolution	0.25D
Axis	
Range	1~180°
Resolution	1°
Accuracy	±5° (0.5D~3.00D)
Pupil Size	
Range	4.0~9.0mm
Accuracy	±0.1mm
Pupil Distance	
Range	30~80mm
Accuracy	±1mm
Fixation Target	Red light
Working Time	5 hours
Data Transfer	WIFI
LCD display screen	5 "full LCD touch screen
Charging Port	USB
Weight	1000g
External power adapters Power supply	~100-240V,50/60HZ, 35VA Output: 5V,2A
Size	205×185×115(mm)

Optical coherence tomography
Model:OCT-100

All-in-one design OCT, no additional monitor required. easy to set up, just plug the cable and it is ready to go.
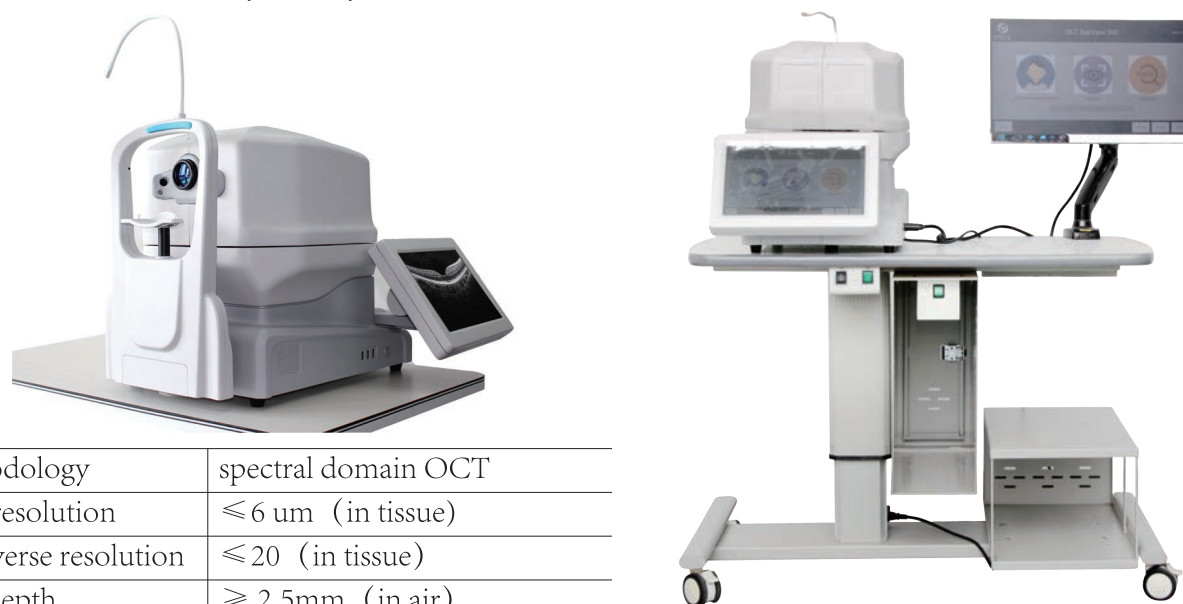configured with 13.3" touch and rotating screen, all of the operation can be easily done with the touch of your finger, easy and simple.
Fully automated operation to scan the eye, just one touch, then leave the rest to the machine, and it will complete the whole exam for you.
More than 4 scan mode on macular and optic part, the software creates a summary analysis of macula retina, RNFL,ONH. Progress analysis for follow-up examination is available.
Smart pupil alignment, advanced signal optimization assure quality OCT images independent of operators.
The small footprint and all-in-one system fits in the smallest examination room. The flexible monitor locations allows various operator positions.

Methodology	spectral domain OCT
Axial resolution	≤6 um（in tissue)
Transverse resolution	≤20（in tissue）
Scan depth	≥2.5mm（in air）
Scan range	6-12mm
Scan speed	≥24,000 A-scan/sec, up to 36,000 A-scan /sec
Scan mode	3D (Macular & Optic Disk), HD,Raster,Circle , Cross
Analysis mode	Up to 7 retinal layers segmentation, Macular analysis mode, RNFL & Optic Disk analysis mode,Glaucoma analysis mode and Progress analysis for follow-up examination.
Fundus image	OCT en face
Focus adjustment	-15D to +15D
Pupil diameter	≥3mm
OCT light source	840nm SLD
Optical power	750um(at cornea)
Operation	13.3inch touch screen ,optional external mouse or keyboard
Power supply	100-240V,50/60 HZ
Dimensions	497 x395x490mm
Weight	34kg

Rebound Tonometer : RT-100

The RT-100 rebound tonometer is a very reliable ophthalmic diagnostic device for all eye care practitioners, ophthalmologists, optometrists etc. it is used to measure the intraocular pressure of patient either in a sitting position or a standing position very easily without anesthesia or drops.
RT-100 rebound tonometer comes with 100 pcs disposable probes which can effectively prevent cross infection during the test to guarantee highly hygienic eye exam.
Intuitive design allows for simple and easy measurement, just load the probes, align with the eye, press the button, results will be available in seconds.

A wireless infrared printer is offered along with the rebound tonometer, once the results are available, just align the infrared port between tonometer and printer, it is ready for printing, fast and easy!

1. Measurement Range :3mmHg~70mmHg
2. Measurement Errors:
±1.5mmHg(3mmHg≤intraocular pressure≤25mmHg);
±2.5mmHg(25mmHg<intraocular pressure≤70mmHg;
3. Qty of disposable probes: 100 pcs
4. Rating voltage: DC3V (2 AA Batteries)
5. Net Weight: 0.2kgs
6. Gross weight: 2.9kgs
7. Package dimensions: 43.5×9.8×34.5cm
8. Wireless infrared printer: 1 pcs

Features:
1.Compact and lightweight, only 200 grams (7.8oz)
2.No drops, air or calibration required;
3.Fast and quick to measure in a second;
4.Disposable probes adopted to measure, hygienic and clean, no cross infection;
5.Ease to use, no additional training needed.
6.Rebound technology adopted, no corneal disruptions incurred.
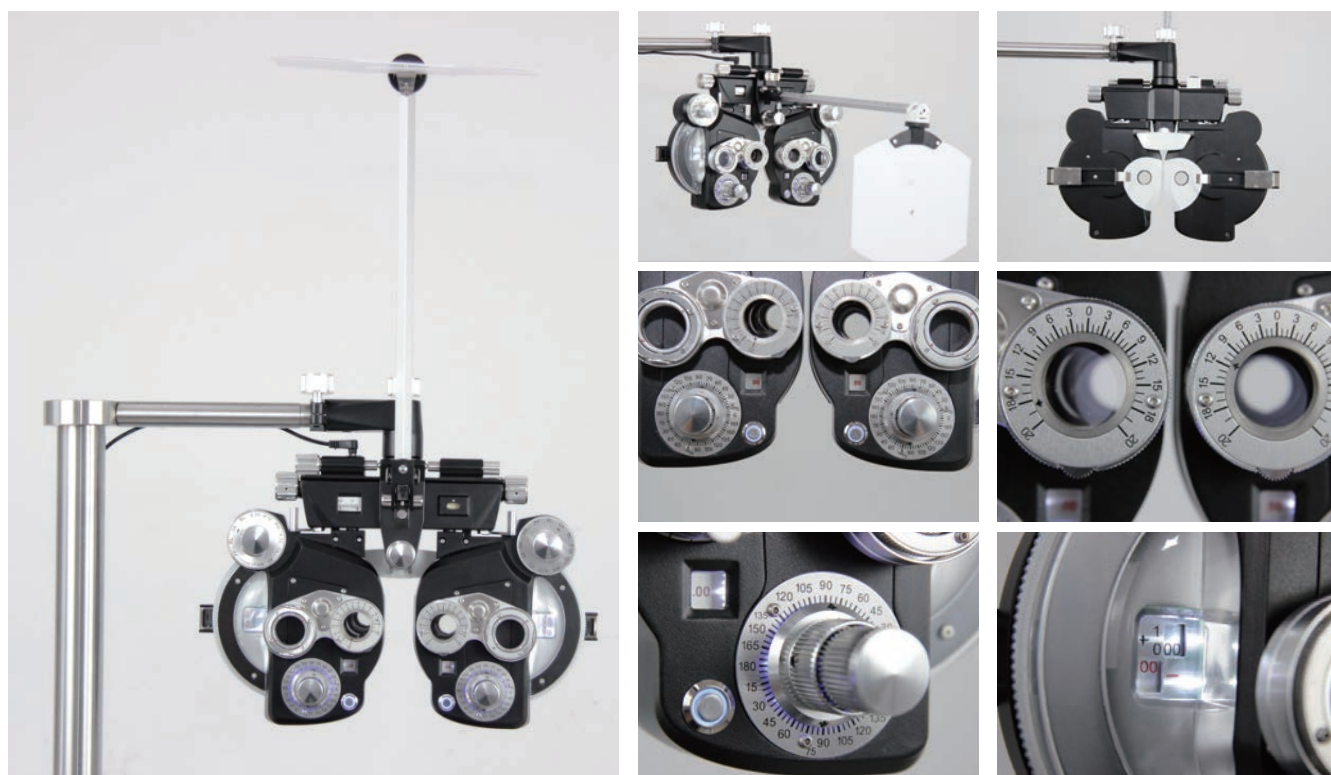
Illuminated phoropter
Model: MR-600

Hongdee is happy to introduce the new model manual refractor/phoropter that is added with the illumination to meet the need of doing exam during the dark environment.
with the main parts made out of metal and copper, the new illuminated phoropter is very durable for long time usage.

Features:
1. Illuminated sphere, cylinder power and cylinder axis scale, easier to read the scale value even in the dark environment;
2. two separate main power buttons design allows you to turn on/off the light on each side at your own choice;
3. the energy efficient LED illumination eliminates the need to change the bulb;
4. precisely machined gears to provide the easy to adjust control on each dials; smoother rotation;
5. with the majority parts made out of metal, long life span is guaranteed.

Spherical Power	Range: +16.75D ~ -19.00D When applied with auxiliary lenses +10.00D, -1O.OOD(option): +26.75D ~ 29.00D Step: 0.25D When applied with auxiliary lens +0.12D: Step: 0.12D
Cylindrical Power	Range: 0.00D~ -6.00D When applied with auxiliary cylinder lens -2.00D: 0.00D~ -8.00D Step: 0.25D When applied with auxiliary cylinder lens +0.12D: Step: 0.12D
Cylinder Axis	Range: 0 ° ~180
Cross Cylinder	Step: 5 ° ±0.250 Cross Cylinder Lens Synchronized with Cylinder Axis.
Rotary Prism	(±0.370, ±0.500, Cross Cylinder Lens (option)) 0 to 20 prism diopter with a minimum of 1 Δ steps
P.D Adjustment	48~ 75mm
Forehead-rest Adjustment	16mm
Vertex Distance	12mm (From corneal point to standard lens surface)
Dimensions	338(L) x 99(W) x 292(H) mm
Weight	5 kg
Accessories	Auxiliary lens A kit for near point vision chart Sanitary face shield

Standard accessories

Auxiliary Cylinder-2.00D 2 pieces
Auxiliary Cylinder -0.12D 2 pieces

Near point rod Card 1 piece
Inner Hexagon 1 piece

Near point rod 2 pieces
Near point rod holder 1 piece

Dust cover 1 piece

Operation manual

Innerpacking
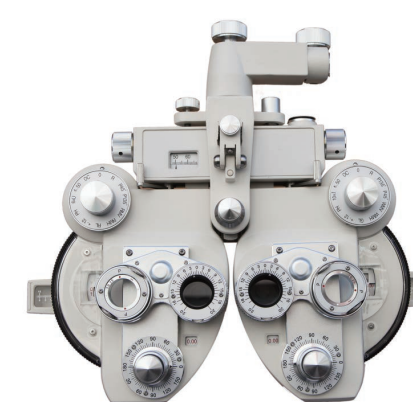
Manual Refractor
Model: Vista Regular

Top 1 quality phoropter designed to North America Market.
the Vista Regular manual refractor is specifically designed for the north and south American market.
you might have seen many different phoropters from China while yet none of them is comparable to
our Vista Regular in terms of the optical quality, test accuracy, and reliability. Our Vista regular
stands for the highest quality in phoropter made in China.
Once you get your hands on the Vista regular phoropter, you can feel the smooth rotation of the
dials, there is no absence of the play during the whole mechanics. consisting of nearly 1000 pcs
parts, the Vista Regular are all assembled by the hands in Hongdee factory.
With more than 95% gears made of metal like copper, alloy etc, the longer life span is tremendously
guaranteed , it can be up to almost 10 years of usage.
With the detachable illumination cabinet, you can decide whether to make it an illuminated
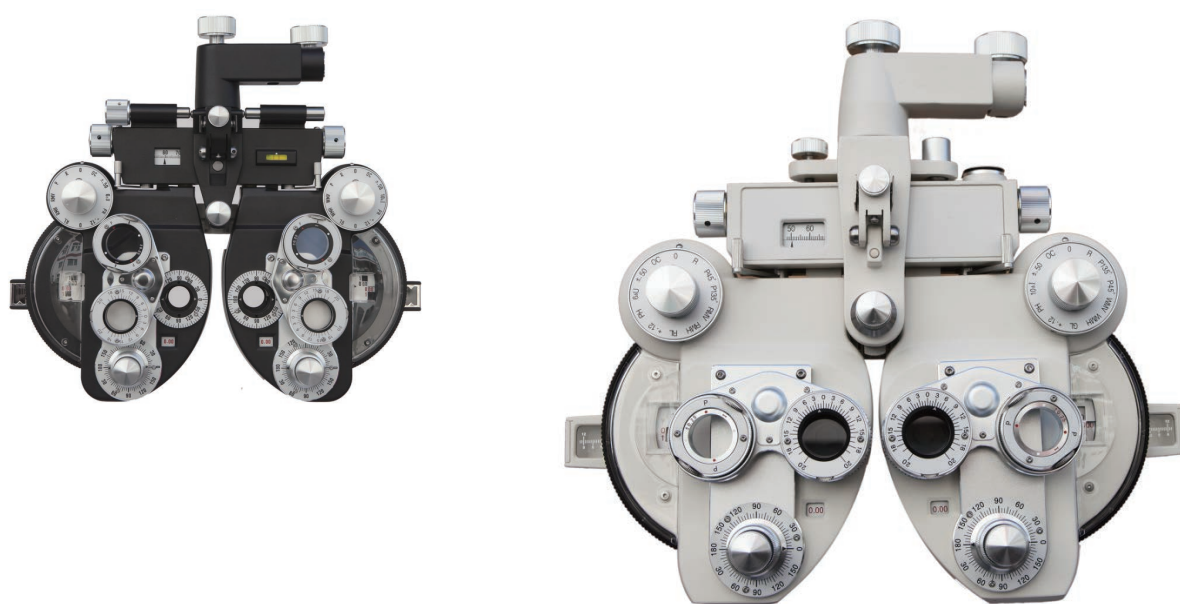phoropter at your own choice.

Features:
1. Wider PD range from 48mm to 80mm to cater to testing more group of people with diiferent PD.
2. Inner surface of the viewing hole is threaded to be anti-reflection, which greatly improves the
comfort to the patient during the exam and guarantees the accuracy of the test.
3. With traceable mark on each part, it increases the better in-process control during the assembly,
reliability is secured
4. 16mm large diameter locking screw makes it very easy to tighten the reading rod, none of other
phoropter is comparable in this regard.
5. More than 95% gears inside the phoropter are made of metal, which makes it durable and long
standing use up to 10 years life span.

Vista

Vista

Vista

Optical Components

Sphere (SPH)	-19.00D ~ +16.75D (0.25D increments, or 0.12D increments when auxiliary ±0.12D lens used) (or, -29.00D ~ +26.75D (0.12D increments) (when optional ±10D lens used))
Cylinder (CYL)	0D~ -6D (0.25D increments, or 0.12D increments when auxiliary ±0.12D lens used) (0D~ -8D (0.12/0.25D increments) (when optional -2.00D lens used))
Axis (AX)	0° ~ 180° (5° increments)
Cross-Cynlinder	±0.25D, reversed-type (synchronized AX) ±0.50D (optional)
Built-In Optical Filters	Red, Green, Polarized, Maddox Vertical, Maddox Horizontal, Cross-Cylinder ±0.50D
Rotation Prism	0 ~ 20 Δ (1 Δ increments)
Convergence Adjustments	57~ 80 mm (optical axes aligned at the distance of 400 mm from cornea vertex, 2 mm each for left and right)
PD Distance Adjustment (PD)	48~ 80 mm (1 mm increments)
Vertex Distance (VD)	13.75 mm
Field of view	19 mm

Other Information

Head-Support Adjustment :	±16 mm (front, back)
Dimensions :	338 x 320 x 96 mm
Weight :	5 kg (net)

Hongdee

Hongdee

Penguin Pro

Measurement range

Sphere	-40.00D~+25.00D
Cylinder	0~±10.00D
Axis	0°～180°（1°Steps）
ADD	0~10.00D
Prism	0~10 Δ

Minimum measuring value

Diopter	0.01/0.12/0.25D
Prism	0.01/0.12/0.25 Δ

Minimum measuring value

Cylinder	+/±/-
Prism	X-Y/P-B
Measure speed	0.05S
Light source wavelength	525nm
UV Wavelength	400nm
Blue light wavelength	425nm
Lens diameter	18-100mm
Display	480*640 True color capacitor touch
Printer	Thermal Printer
Data connection	RS232,Blue BLE,SPP
Size	244(L)*192(W)*409(H)mm
Weight	3.67Kg
Power supply	110V-240V 50Hz-60Hz
Power	5V 6A

Features:
1.fully graphic vertical 5.6" capacitor screen for easy operation and visibility.
2.Wide range of measurement for spherical lens from -40D--+25D;
3.UV, Blue ray and visible light transmittance measurement available
4.Screen color can be changed into high contrast color mode black or white depending on the marking color for greater visibility, very useful to measure the dark color lens.
5.Hartman sensor equipped to be able to measure a wide variety of lens.
6.Built in automatic calibration program can automatically calibrate the fine errors during the measurement.
7.Blue tooth available enables the data and readings to be viewed through the smart phone.
8.It comes with RS-232C port and USB ports as standard. data transfer and software upgrade becomes a lot easier than ever before.

Koala

Features:
1.5.7" touch LCD screen allows for easy and simple operation;
2.advanced Hartman cluster algorithm guarantees the test of the multifocal progressive lens with improved accuracy and speed.
3.Adopting the high speed CPU, it can measure any kind of lens immediately even the smallest scan lenses such as ±0.12D and ±0.25D;
4.Easy and convenient to upgrade via the USB built-in port.
5.UV and blue ray measurement is available, can also measure the dark polarized sunglasses even only with 5% light transmittance rate accurately.
6.User-Friendly Graphic Interface provides intuitive guidance for easy operation;
7.Lightweight and compact design takes up much less table space than any other high tech units in its class.
8.Mobile app is available too, the readings can be seen on your phone through the wifi connection.
9.Customization is available, language, start up screen, private-labeling etc

Minimum measuring value

Sphere:	-25.00 ~ +25.00D (Steps 0.01/0.12/0.25D)
Contact lens	-25.00 ~ +25.00D (BC=6.00 ~9.00) (Steps 0.01/0.12/0.25D)
Cylinder:	-10.00 ~ +10.00D (Steps 0.01/0.12/0.25D)
Axis:	0° ~ 180° (steps 1°)
Add:	-10.00 ~ +10.00D (Add, Ad2, Ad3)
	(Steps 0.01/0.12/0.25D)
Prism:	0.00~15.00 Δ (steps 0.01 Δ)
UV and Blue light measure (Transmittance and Barrier)	1%~100%
PD:	Single eye: PD:20mm ~ 39.5mm; Double eye: PD: 40mm ~ 85mm (steps 0.05mm)
Lens diameter:	Φ15mm ~ Φ100mm
Display:	5.7" colorful capacitive touch LCD screen
Dot method:	Ink pad
Printer:	High speed thermal printer
Digital connector	USB
Power supply:	AC (90V~240V); 50/60HZ
Max power:	30W
Weight:	3.43kgs
Dimensions:	192mm×208mm×416mm

Swan

Swan manual lensmeter is a very compact and stylish manual lens measurement device with a full 90 degree inclination, which facilitates the operation of measuring the lens particularly in vertical direction.

The Swan Pro manual lensmeter has the external power and axis reading, halogen illumination, (LED illumination is optional) AC operation as standard configuration. It also has the prism compensator as an option to meet different needs. It covers the measurement of the lens from 30mm to 90mm in diameter. It is an ideal devices for the lab and office use.

Specifications:
Range of diopter measurement:
from 0D to ±20D
Minimum scale value: 0.125D at 0D to ±5D, 0.25 at ±5D to ± 20D
Astigmatism axis of cylindrical lens: 0 to 180°,
minimum scale value 5°
Prism base angle: 0 to 180°, minimum scale value 5°
Regulation of ocular visibility: ±5D
Size of lens: 30MM to 90MM
Overall dimensions of device: 46*17*24 (CM)
Weight: 7.35KGS
Lighting lamp: 220V 25W/110V 25W

Features:
1. full 90 degree inclination design for ease of measurement of lens;
2. Two types of illumination available, standard halogen and LED illumination available upon request
3. Magnification lens available for the ease of checking scale value of axis.
4.Diopter marked in two color (black and red) for easy differentiation.
5. External power and axis reading.
6. Prism compensator available as an option.

Elite

Elite is a complete innovative idea and solution to the vision testing, and changes the way the vision chart used to be defined.

All of the software are built into the USB size drive with a wide array of different charts and multiple functions. Just simply plug it into any monitor via HDMI cable, then you will have a fully functional and versatile acuity chart, with the monitor size at your own preference.
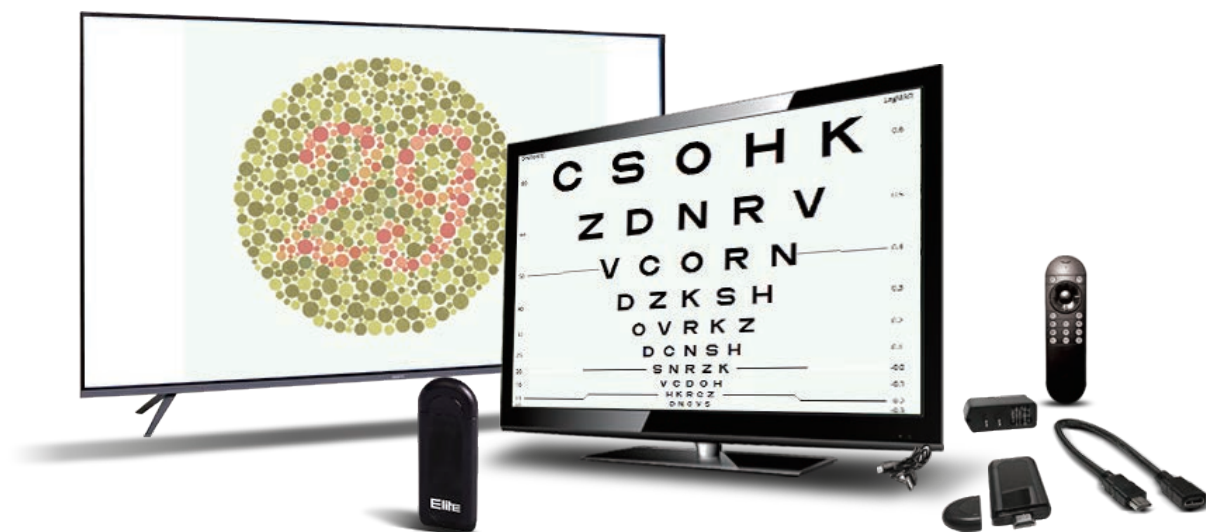
Connect with any of your TV or PC Monitor

ELITE Eye Chart Dongle

Perfect Match!

Specs:

Fluorescent remote, making it easier to recognize the buttons to do the test in the dark environment;

2.4G RF remote control, no need to point or aim the monitor; random control becomes possible; HDMI and VGA connection available (VGA cable adaptor is optional)

5G storage space available, storage of pictures; videos, audio etc at your own disposal;

Intelligent and simple calibration to adapt to any size monitor very conveniently and easily;

Continuously adjusted working distance from 1 meter to 7 meters; Random sequencing of the optotypes;Mirror function available;Wireless upgrade;

Imperial and Metric standard available;

Essence

Optical Characteristics

Screen	17-inch high-resolution LCD display (>160 cd/m2 luminosity)
Distance	2 ~ 7 m (optimal distance 5m) (digital parameters adjustable to 0.1m. incremental changes)
Optotypes	E*, C*, letters*, numbers* *randomized
Tests	Schober, Worth, EDTRS cross-grid, coincidence, stereo, astigmatism, fixation point, ishihara, cross-cylinder, red-green panel, red-green balance, contrast
Masks	single, horizontal, vertical, red/green, altered background
Visus Units	5-grade, decimal, LogMAR, Snellen(ft), Snellen (M)

Included Accessories

-Remote Control (infra-red, AAA-type batteries)
-Table Support Stand

Other Information

Electrical Parameters	AC 100-240V / 50-60Hz / 20W
Weight	2 kg (net)

ARK-200

Features:
1.5.7" screen display,
2.Switch between manual capture and auto capture is available.
3.IOL measurement is available.
4.Rotary prism technology guarantees accuracy of test result.
5.Highly reliable, failure rate is less than 0.5%
6.Automatic paper cutting.
7.Auto focus。

ARK-710

Features:
1.9" touch screen control panel for easy operation
2.Fully automated measurement for R/L eye test; only one touch on the screen to do the whole measurement
3.360 degree rotatable control panel fit for installation in different eye exam room configuration.
4.Rotary prism technology guarantees accuracy of test result.
5.Adoption of the Cortex M7 chips increases the measurement efficiency, faster algorithm, captures the eye instantly, very useful to do the test for the patient with nystagmus.
6.Automatic print after test and automatic paper cutting.
7.Automatic self-checking after power on to make sure everything works fine before test.
8.Auto focus, auto eye tracking, auto measurement, and motorized chin rest.
9.Automatic restoration to original position for packing.

PD-400

Specs:

1) Effective range of measurement :
Binocular pupillary distance :
44-86mm; Left or right eye pupil
distance: 22-43mm.
2) Absolute value of indicated error:
<0.5mm.
3) Absolute value of asymmetrical error:
€0.5mm.
4) Absolute value of rounding error:
€0.5mm.
5) Distance of target 30 ~ 0.
6) Battery capacity: 3000mAh.
7) Instrument appearance size: 220mm
(L) x 160mm (W) x 65mm (H).
8) Weight: 0.9kg.

Features:
1) Redefine the way of measuring the PD:
　Completely change the traditional measuring pattern, doctors no long need to stay closer to the examinee and observe through the viewing window, just place the PD against the forehead, it is ready to measure.
The test distance has been greatly improved by which, the potential cross infection of virus and diseases can be effectively avoided.
2) Higher accuracy guaranteed.
　HD camera adopted completely minimizes the visual errors which are subject to be affected by the optometrist's monocular observation. both eyes' PD can be adjusted at the same time to increase the measurement speed.
The PD meter will go to sleep if there is no operation in 30 seconds, and then will power off if no operation in 4 minutes.
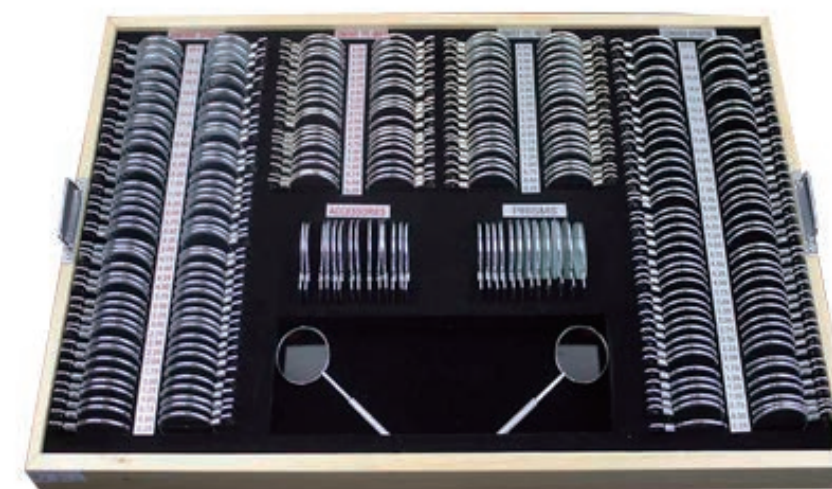3) Longer working hours
　The 3000MAh large capacity rechargeable battery provides the maximum working time, once fully charged, it can work up to 10 days based on the test of 15-20 people per day.
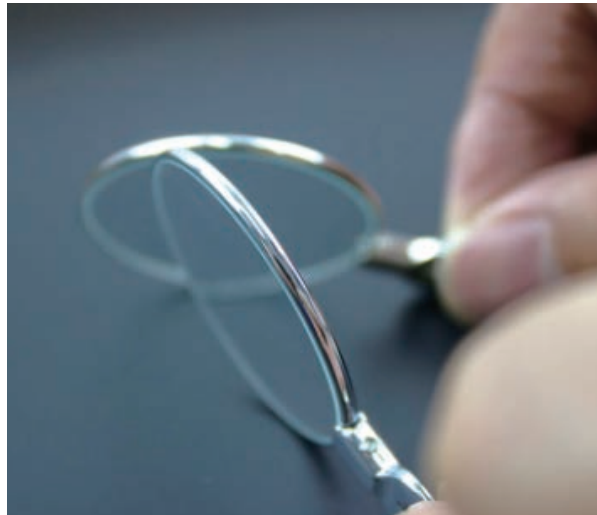
BOBO

Minimum measuring value

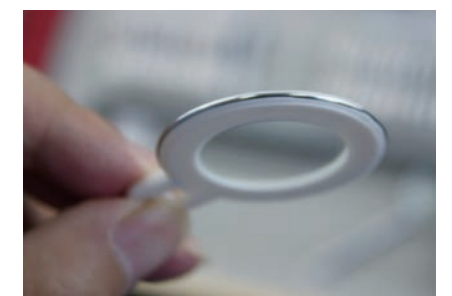| Design :	Trial Lens with Silver Metallic Frames 266 pieces, including2 cross-cylinders Wooden Box and Aluminum Case
Spheres (40 pairs, concave andconvex) :	0.25D ~ 6.00D (0.25Dincrements) 6.50D ~ 10.00D (0.50Dincrements) 11.00D ~ 15.00D (1.00Dincrements) 16.00D ~ 20.00D (2.00Dincrements)
Cylinders (20 pairs, concave and convex) :	0.25D ~ 4.00D (0.25Dincrements) 4.50D ~ 6.00D (0.50Dincrements)
Prismes (12 pieces) :	0.5D (2x) 1.0D ~ 10.00D (1.0Dincrements)
Accessories (14 pieces) :	RF, GF, BL, PL (2x), MR (2x), FL, CL (2x), PH (2x), SS cross-cylinder PF (x0.25, x0.5)

Model:Echo

Echo perimeter trial lens set contains 2x28 pieces spherical lens (concave and convex), 12 pieces of Minus cylinder lens. The lens has a silver metal rim to offer better protection. It comes with aluminum case as standard. Echo is a perfect lens set for visual field test.

Model:VIVI

The large diameter(26mm) plastic rim, VIVI tiral lens set adopts the innovative design, fixing tightly the colorful plastic rim with the silver ring hoop to prevent the plastic rim from breaking, and this guarantees the VIVI to be most classical trial lens set with durability and ease of use. It comes with 266/272 pieces as standard configuration with 2 extra piece of cross cylinders and aluminum carrying case.

HD-T4880

The HD-T4880 trial frame is a very fashionable optomeric tool for the optometrists to do eye exam. it features a very different design for the lens holder, with 4 slots in front and 2 behind.

Features:
· Space for a total of 10 tls trial lenses of 28 mm diameter
· PD range from 40 - 80 mm
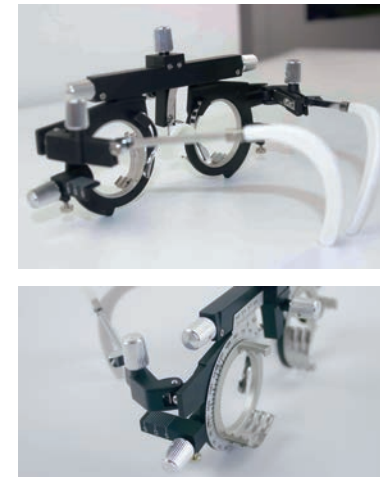· Adjustable temple tilt and length
· Smooth axis adjustment

Panda

Features:
Classic and traditional design, made out of the metal, strong and durable; Adjustable PD, temple length, and cylinder axis, making it easy to test;

Specifications
PD adjustable range: 48mm-80mm;
Weight: 74g-84g;Adjustment Range between Lateral Supports: 98 ~ 135 mm. (maximum distance of 200 mm)
Adjustment of Nasal Support :Horizontal Range : 0 ~ 14 mm Rotation Angle of Support (Left, Right) : 0° ~ 30°

Eagle

Features:
Made of titanium material, very lightweight;
Adjustable PD, and flexible adjustment of the nasal pad
Available for 4trial lenses of 38mm diameter inserted at each side
PD adjustable range: 54mm-70mm;
Net weight: 48g