MediWorks

DEA 520

2 in 1

Ocular Diagnostic Master

Corneal Topographer

DEA 520

1 Ring 3 Illuminations 9 Functions

DEA 520 is a multi-purpose corneal topographer that integrated dry eye and corneal topography analysis.

Placido Ring

Thousands of points measurements – ensure more data available and accurate analysis

Smaller cone design – bigger projection area

3 **Illuminations** – white illumination, infrared illumination, cobalt blue illumination

9 Functions

Dry Eye Diagnosis

- ☐ Non-Invasive Tear Film Break Up Time
- ☐ Cornea Sodium Fluorescein Staining
- ☐ Non-Invasive Tear Meniscus Height
- ☐ Eyelid Margin
- ☐ Meibomian Glands Function Evaluation
- ☐ Conjunctival Redness Analysis
- ☐ Lipid Layer Thickness

Topography

- ☐ Topography Analysis
- ☐ Pupil & Corneal Diameter Measurement

Built-in computer

Integration design enables maximum treatment room utilization
Dry eye diagnosis and Tomography analysis integrated
10.1″touchscreen, ease of operation

Doctor-Patient Communication

Visualized diagnosis report, easy to understand
External display connection enables real-time observation

Ergonomic Design

Switch illumination and magnification intelligently under various function modes
Compact cone, specially designed for various orbits
50°adjustable display
Auto OS/OD recognition

Clinical Application

- Dry Eye Analysis
- Lens Fitting
- Cornea Morphology Diagnosis

Dry Eye Diagnosis

Make dry eye visualized

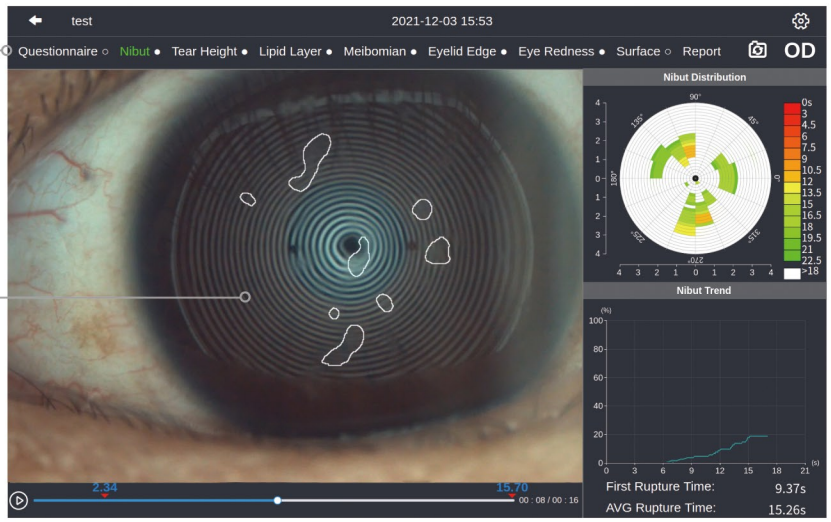
Non-Invasive Break Up Time

Interface

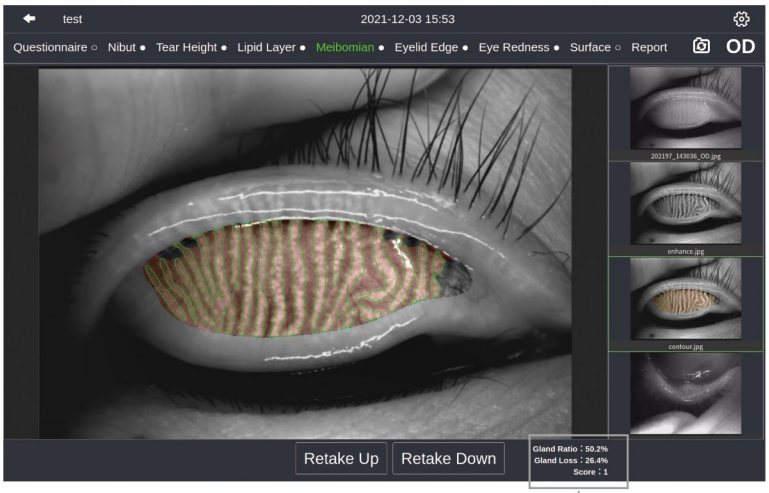
Comprehensive 7 dry eye examinations.

NIBUT

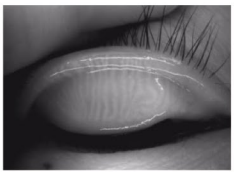
More than 8.8mm diameter Placido ring projection. Auto identify break up area and analyze NIBUT intelligently.



Meibomian Glands Function Evaluation



Automatically anlalyze meibomian glands loss caused by meibomian glands dysfunction with precise and quantified diagnosis results



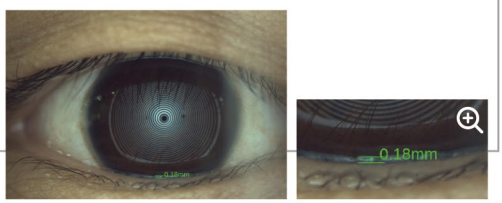
Original Image

Enhanced Image

Result Image

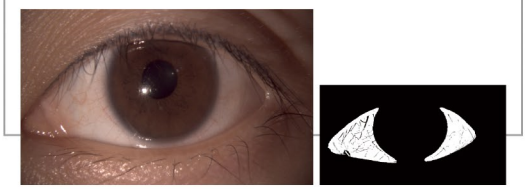
Auto identify and auto enhance of meibomian glands area

Non-Invasive Tear Meniscus Height

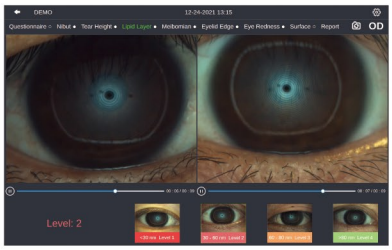


Automatic identification system depicts tear meniscus area and measures the tear height intelligently.

Conjuntival Redness Analysis



Identify and calculate percentages of conjunctival congestion and ciliary congestions and evaluate severity of eye congestion.

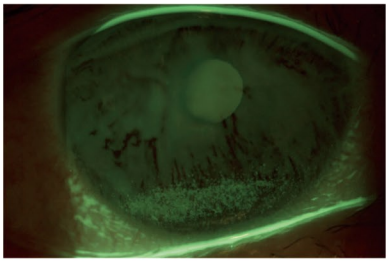


Lipid Layer Thickness

Observe lipid layer dynamic and distribution by video recording compared with standard templates. It's helpful for judging MGD.

Eyelid Margin

The high resolution image supports zoom in to meet examination requirements of overall shape of eyelid margin and its slight change.



Cornea Sodium Fluorescein Staining

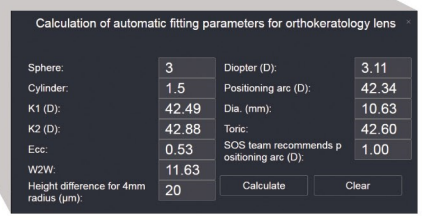
Specially designed built-in yellow filter, working with cobalt-blue illumination improves image contrast of cornea sodium fluorescein. Effectively increases positive rate of early corneal epithelial staining.

Corneal Topography

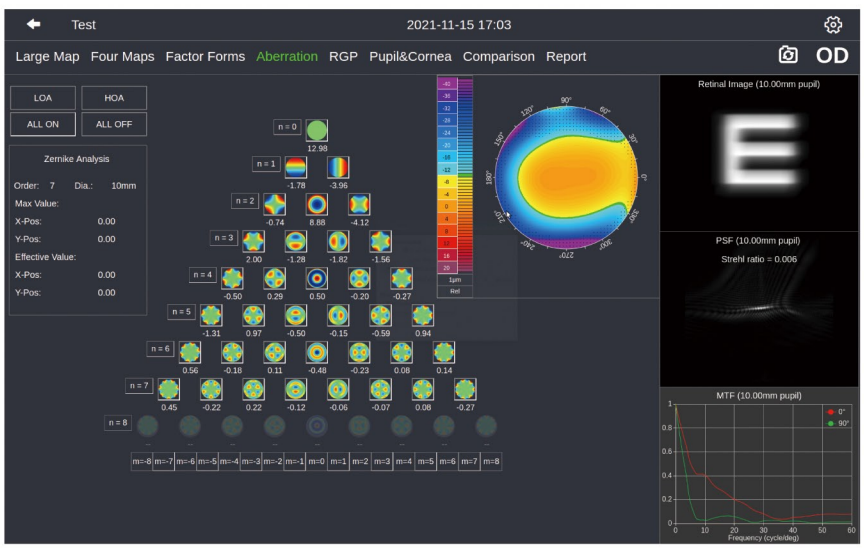
Sketch the contours of corneal

Lens Fitting

A simulated fluorescein image will be created based on patient's cornea. The system will recommend several suitable lens for choose, which accelerates work flow and excludes unfit lens to save the trouble for patient to do real several fluorescein staining.

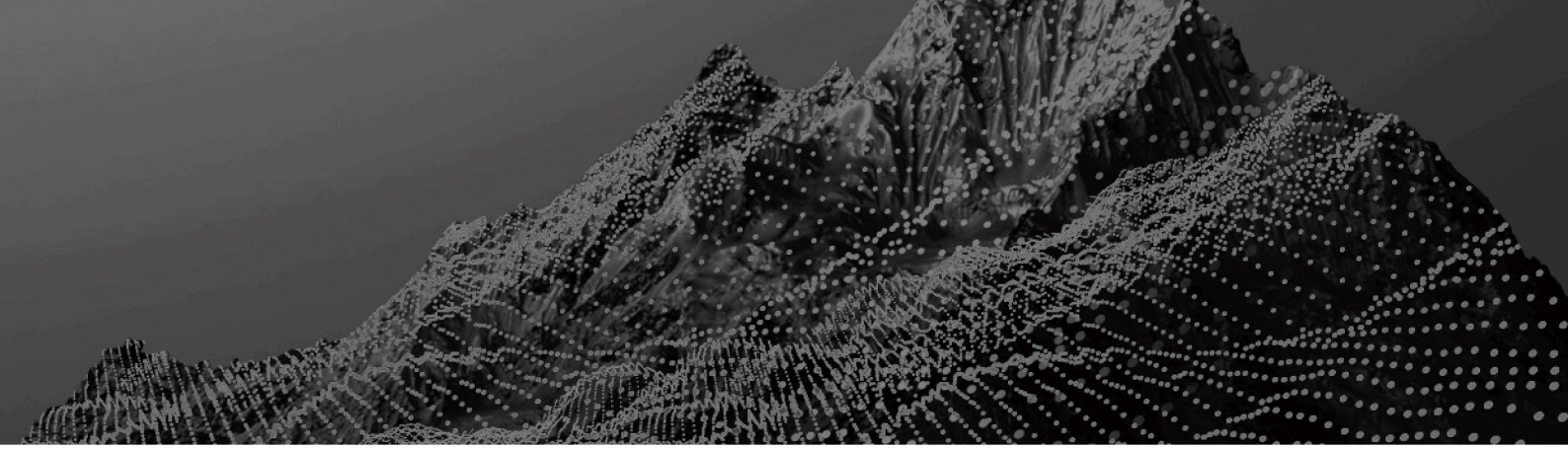


Research and develop with team SOS from EYE&ENT Hospital of Fudan University. Recommend the most precise lens based on the patient documentation.



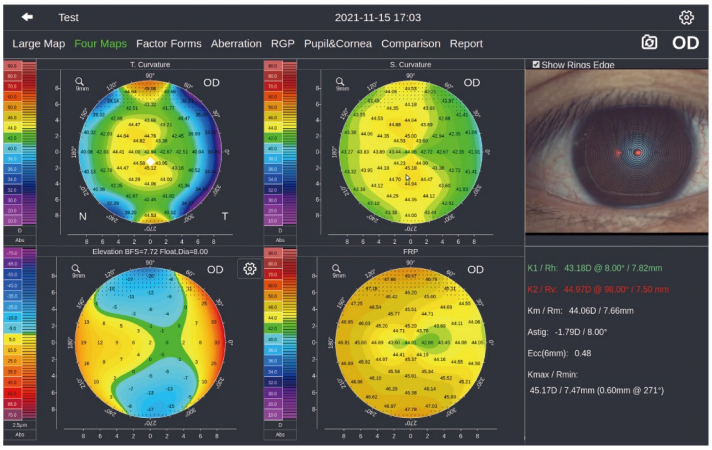
Aberration & Simulation

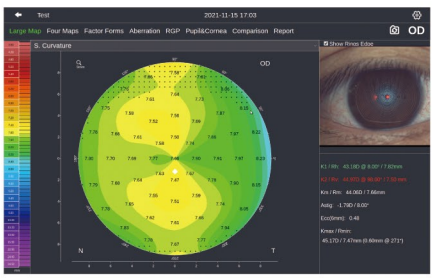
Zernike wavefront aberration analysis makes plan of cataract and refractive surgeries visualized and ensures patient's postoperative vision quality.



4 Maps

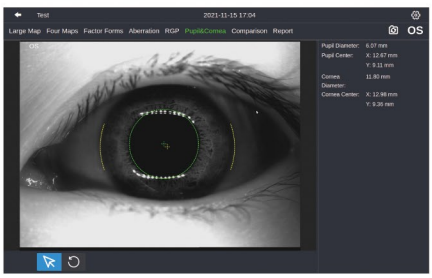
4 maps provide Axial Curvature,Tangential Curvature, Elevation Map, Refractive Power, and K1/K2/Km/Astig/Ecc value.



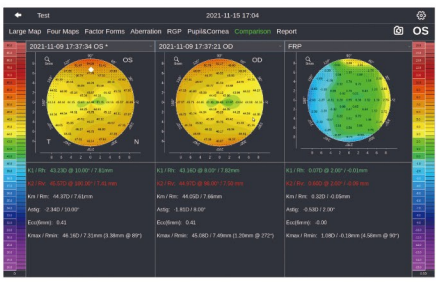


Topography

Form Factor



Pupil & Corneal Diameter Measurement



Cases Comparison

Specifications

Hardware

Dimension	53cm×30cm×54cm
Weight	12.7kg
Built-in CPU	intel
Hard Disk	1TB
Image Resolution	2048×1536
Display	10.1″ touchscreen
Illumination	White, Infrared, Cobalt-blue
Internet Connection	WIFI
Printer Connection	WIFI, USB
Power Supply	100~240VAC, 50/60HZ
Extension Display Interface	Display Port
OS/OD Recognition	Automatic
Chin Rest Control	Electrical
Left and Right	0~94mm work range
Front and Back	0~64mm work range
Up and Down	0~30mm work range
Language	Chinese / English
DICOM	Supported

Topography

Numbers of Rings	50 Rings
Diameter of Project Area	8.8mm (43D) 11mm (43D)
Radius of Curvature	32.14 dpt～ 61.36 dpt (5.5mm~10.5mm) Accuracy：±0.1 dpt (±0.02mm)
Astigmatism Axis	0～180°
White To White	6～17mm
Pupil Diameter	1～13mm
Topography Function	Axial Curvature Tangential Curvature Elevation Map Refractive Power
4 Maps	Four maps show
Form Factor	E, ecc, P, Q
Zernike	Corneal wavefront aberration, PSF map, MTF curve and Simulated image in different pupil diameters
Examination Result Comparison	Support 2 results comparison and difference calculation

Dry Eye Analysis

NIBUT	Automatic analysis, tear film rupture area and trend, first break-up time and average break-up time
Tear Meniscus Height	0.01～2mm
Meibomian Glands	Meibomian glands loss rate and grade
Lipid Layer	Template match
Eye Redness	Conjuntival congestion percentage
Eyelid Margin	Support digital images zoom in
Ocular Surface	Built-in yellow filter

CE NMPA FDA

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Details Make the **Difference**