chroma®

Chromatic Corneal Topographer



EVOptica

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Chromatic Corneal Topographer



Modules

- Import examinations from other corneal topographers. Ask the distributor or representative which formats are supported.
- Axial maps (Color Map in the legacy Eyesys format), tangential maps and multimaps with two to six maps on one screen.
- Contact lens simulation with fluorescein and a fully editable virtual trial lens set.
- Anterior corneal wavefront, PSF and MTF analysis using Zernike polynomials.
- Automatic examination backup.
- Examination export for viewing on an internet-connected computer. The original brochure described this exporter as free; current availability and terms are available from EVOptica.
- Network map viewing and printing, including DICOM.

Developed in Brazil by a team specializing in ophthalmic instrumentation, CHROMA brings chromatic Placido technology and multidimensional image processing to corneal topography.

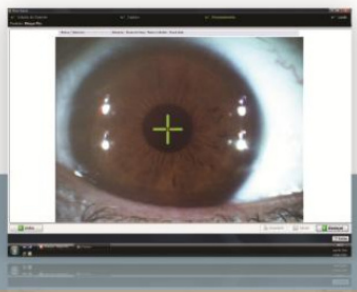


pupillometry system; side cameras; modern, ergonomic design.

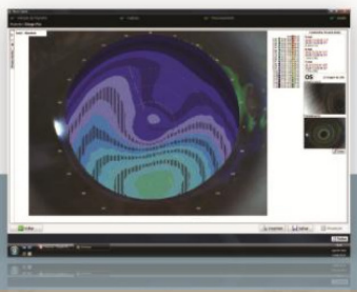
The rapid focusing system uses two side cameras and one central camera, all connected by USB, to support precise, reproducible examinations. The central and side capture images are also printed in the report so capture quality can be assessed.



Chromatic Placido disc image processing supports assessment of corneal distortion, including advanced keratoconus and post-keratoplasty eyes.



The integrated pupillometry and Placido disc system detects the pupil under different lighting conditions. The physician can view the pupil contour and dimensions on all topographic maps, with measurements of decentration relative to the apex and ablation center, and mean pupil diameter.



Several maps and viewing options are available, including Color Map with an absolute scale in the Eyesys format. Dynamic point data appear when the cursor passes over a map: radius of curvature, dioptric power, distance from the apex, axis and other measurements.

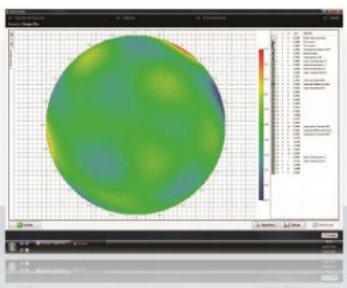
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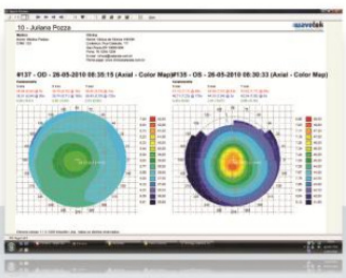


The fluorescein module lets physicians simulate fitting different contact lens types using virtual trial sets. The virtual fluorescein map includes apical clearance and tear thickness across the surface, helping reduce fitting time and identify a comfortable lens.

CHROMA combines design, hardware, software, maintenance and technical support in a system intended to offer practical value, including for practices updating an older topographer.

Multiple physicians can be registered, each with an individual login and password. Examination review lists only the selected physician's patients, helping make searches faster and easier.

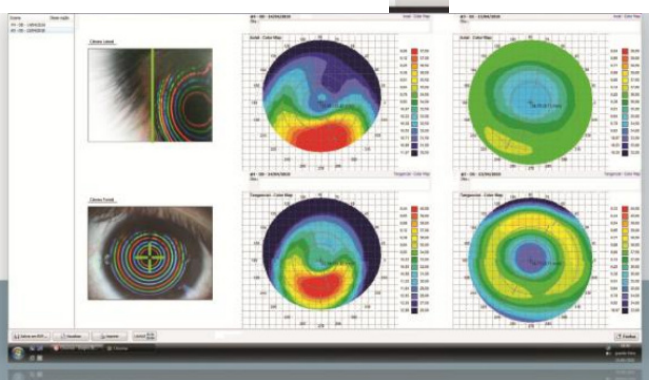


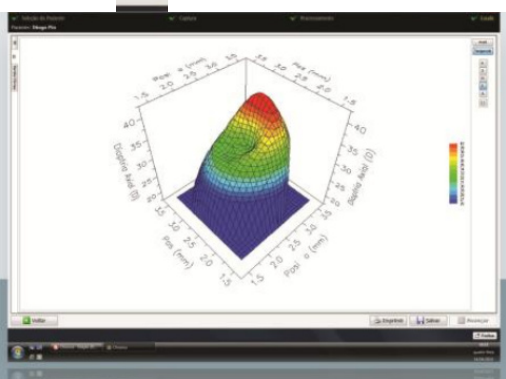


One image is processed three ways: R (red), G (green) and B (blue). This supports Placido ring detection in cases such as severe keratoconus and post-keratoplasty eyes.

The Zernike Polynomial module provides visualization of anterior corneal optical aberrations and applications in intraocular lens planning. Subtracting these coefficients from a conventional wavefront supports calculation of crystalline lens astigmatism for cataract surgery planning.

Maps from every module can be printed locally as complete reports, combined as a double map showing OS and OD to save paper, or exported to PDF for email and printing on other printers.





The multimap module includes front and side images for checking capture quality and allows two to four maps on the same screen, including Color Map, 3D, axial and tangential maps. Views can be customized case by case to the physician's and patient's needs.

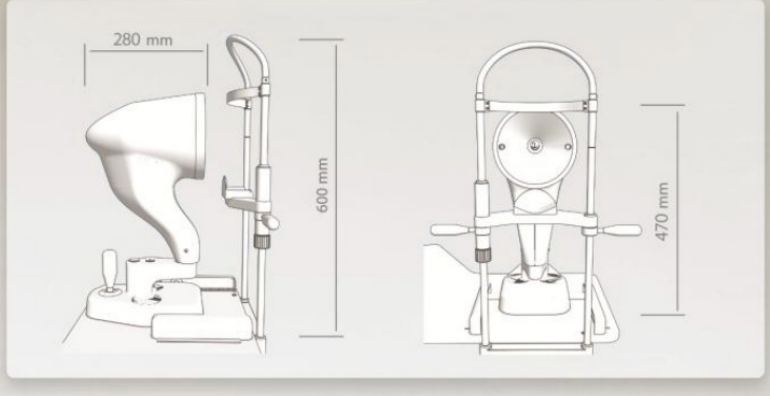
Tangential or axial 3D maps offer rotation, zoom and animation. They can be used as a screen saver and as a dynamic, accessible way to explain conditions to patients and their families.

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Technical Specifications

Specification	Value
Photographic coverage	10 × 10 mm central camera; 5 × 5 mm side cameras; USB cameras
Magnification	1.3×
Working distance	35 mm
Image processing	Chromatic / monochromatic
Focal distance	Approximately 50 mm
Number of rings	16
Measured points	Approximately 6,000
Interpolated points	100,000
Software	Windows Vista compatible, with the principal functions, maps and modules
Maps and modules	Axial; tangential (instantaneous); absolute and relative elevation using Van Saarlos-Arc Step; Zernike elevation; anterior corneal wavefront analysis including PSF, MTF and Zernike; contact lens simulation with three fluorescein-pattern methods; orthokeratology; 3D map with real-time surface rendering; multimap; differential; absolute; numerical; threshold
Database	Thousands of patients, virtually unlimited; backup to different media, including USB flash drives
Monitor - optional	15-19-inch color LCD
Computer - optional	Dual Core processor or higher; Windows Vista or Windows 7
Voltage	Automatic dual voltage, 110-240 V
Power consumption	Normal 65 VA; maximum 190 VA
Dimensions - original table	W274 × D485 × H200; units not stated in table
Weight	4.0 kg

Development supported by FAPESP



Representative: EVOptica.

Drawing dimensions: 280 mm horizontal dimension in the side view; 600 mm overall vertical dimension; 470 mm vertical dimension in the front view. These drawing measurements are distinct from the dimensions printed in the source table.

Historical regulatory note: the original brochure stated that ANVISA approval was in progress at the time of publication. This is an original instrument reference, not a statement of current U.S. clearance. U.S. clearance is in progress.

Import compatibility: ask the distributor or representative which formats are available.

Historical intellectual property note: the original manufacturer stated that it held a Brazilian INPI patent for this technology and was seeking international protection in several countries.

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