Marco OPD-Scan III OPTIMIZING PATIENT OUTCOMES
Over 20 diagnostic measurements are acquired in 10 seconds. Easy alignment and automatic capture of data ensures accurate readings. Wavefront data is gathered from available zones up to a 9.5mm area, adding the capability to provide for calculation of mesopic refractions. Blue light, 33 ring, placido disc topography is gathered in one second.

**ACCURATE DIAGNOSTICS**

Options available include beach scene and ETDRS chart. Great for patient education.

Ectasia, as in Keratoconus

Typical pellucid marginal degeneration pattern

**OPTIONS TO VIEW THE DATA INCLUDE:**

- Axial
- Gradient
- Instantaneous
- Numeric K display
- Numeric power display
- PSF (Point Spread Function)
- Zernike Graph (including Corneal)
- Contact lens summary
- VA-ETDRS simulations
- Internal OPD
- Eye Image
- Comparison maps
- Difference Maps
Cataract and refractive surgeries have now been taken to another dimension. Detailed patient summaries are available in just a matter of seconds. Pre-op toric axis alignment can be mapped to iris or other physical landmark positions. Retro illumination images can be used post-op to verify IOL axis alignment.

**RETOU ILLUMINATION IMAGES – DOCUMENTS THE OPTICAL CONDITION**

- **Cortical cataract documented in file**
- **One day post-op Toric**
- **Toric IOL post YAG off axis 22°**
- **Post-op ReStor® IOL**
- **Post-op YAG debris**
- **Vacuoles-easy to show patient**

**DYSFUNCTIONAL LENS SYNDROME (DLS)**

The above map is a measurement of a prior myopic LASIK patient with Dysfunctional Lens Syndrome (DLS). The Point Spread Function (PSF) maps show that the cornea is contributing to the problem but the majority of the patient’s issue is lenticular change. The patient thought she needed another LASIK treatment, when in actuality, the lens changed. A refractive lens exchange is recommended.
Pupillometry measurements are utilized to allow for the calculation of separate wavefront refractions at 4mm and 6mm pupil sizes (or mesopic if smaller than 6mm). This provides information on the stability of the refractive error as pupil size changes, and the individual starting points for separate day and night refractions, if indicated. Your patients can receive a state-of-the-art printout of their ‘before’ and ‘after’ correction chart to understand why they are not able to achieve 20/20. Welcome to the next generation of refractive eye care.

Available Data Displays Include:
- Axial Map
- OPD Map
- Internal OPD Map
- Eye Image With Pupils
- Wavefront
- Zernike Graph
- Point Spread Function
- Visual Acuity Simulation
- Retro Illumination

Captured in 10 seconds:
1. Corneal SA for Aspheric IOL Selection
2. Lenticular – Residual Astigmatism
3. Angle Kappa, Angle Alpha
4. Pre/Post Toric IOL Measurements
5. Pathologies (Keratoconus, Pellucid)
6. Mesopic/Photopic Pupil Size
7. Retro Illumination Image
8. Zernike Graphs: Total, Cornea, Internal
9. Corneal Refractive Power Map
10. IOL Tilt Eye Image or Decentration

‘XFRACtion™ Process’ is a perfect example of a foundational refractive solution that combines integrated technologies with new algorithms, to gain far greater insight into each patient’s complete optical pathway. XFRACtion integrates the OPD-Scan III with the TRS-5100/EPIC Refraction System to output Wavefront Optimized Refraction providing:

- Significantly shorter exam times
- Patient verification of old vs. new Rx – instantly
- Educational tools that graphically display all diagnoses
- More time with you in face-to-face consults
- Time to spend in optical selection and fittings
- Fewer remakes in their lens Rx
- Solutions to day/night vision frustrations
- A completely enhanced, high-tech patient experience
OPD-Scan III: Multi-Modality Functions

The new OPD-Scan III is the latest diagnostic/refractive instrument that serves the practice as an autorefractor, kerometer, pupillometer, corneal topographer and wavefront aberrometer.

**FUNCTIONAL HIGHLIGHTS**
- 10 second eye measurement
- Auto alignment
- Auto tracking
- Auto-capture
- Electronically adjustable chinrest
- Touch screen keyboard
- Verification after each measurement
- Easily integrates with EPIC and TRS-5100

Specific maps have been developed to order lenses directly from these

**SPECIALTY CONTACT LENS PARTNERS:**

![Specialeyes](...)  
![SynergEyes](...)  
![Zenlens](...)  
![Paragon CRT](...)  
![AccuLent](...)  
![ART Optical](...)  
![AVT](...)

**IOL APPLICATIONS**
- APP – Average Pupil Power for Post Myopic LASIK calculations
- Angle Kappa, Angle Alpha
- Corneal Aberrations including Corneal Coma and Spherical Aberration
- Pupillometry – photopic and mesopic pupils
- Corneal Topography
- Placido Rings for detection of any Ocular Surface Disease (OSD)
- Zernike Graph of Total, Corneal and Internal Aberrations
- White to White corneal diameter measurements
- Retro Illumination – Displays post-op Toric lens markings, opacities, etc.
- ECCEP – Effective Central Corneal Power for IOL power calculation
- Toric IOL Summary to mark axis pre-op
- Eye image can allow for marking the cornea based on landmarks
- Cataract Summary displays the pertinent data together
- Point Spread Function graphs and VA simulation charts

For more information visit www.marco.com or contact your Local Marco Area Manager
## OPD-Scan III Specifications

### Power Mapping
- **Spherical power range**: -20.00 to +22.00 D
- **Cylindrical power**: 0.00 to ±12.00 D
- **Axis**: 0 to 180°
- **Measurement area**: 2.0 to 9.5 mm (7 zone measurement)
- **Data points**: 2,520 points (7 x 360)
- **Measuring time**: <10 seconds
- **Measurement method**: Automated objective refraction (dynamic skiascopy)
- **Mapping methods**: OPD, Internal OPD, Wavefront maps, Zernike graph, PSF, MTF graph

### Corneal Topography
- **Measurement rings**: 33 vertical, 39 horizontal
- **Measurement area**: 0.5 to 11.0 mm (r = 7.9)
- **Dioptic range**: 33.75 to 67.5 D
- **Axis range**: 0 to 359°
- **Data points**: More than 11,880
- **Mapping methods**: Axial, Instantaneous, "Refractive", Elevation, Wavefront maps, Zernike graph, PSF, MTF graph

### General Information
- **Working distance**: 75 mm
- **Auto tracking**: X-Y-Z directions
- **Observation area**: 14 x 11 mm
- **Operating system**: Windows 10 embedded
- **Display**: 10.4-inch color LCD touch panel
- **Printer**: Built-in thermal type line printer for data print
- **Power supply**: 100 to 240 Vac
- **Power consumption**: 50 / 60 Hz
- **Power consumption**: 110 VAC
- **Dimensions / Mass**: 286 (W) x 525 (D) x 530 (H) mm / 23 kg

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