NIDEK

Refractive Power / Corneal Analyzer

OPD-Scan III

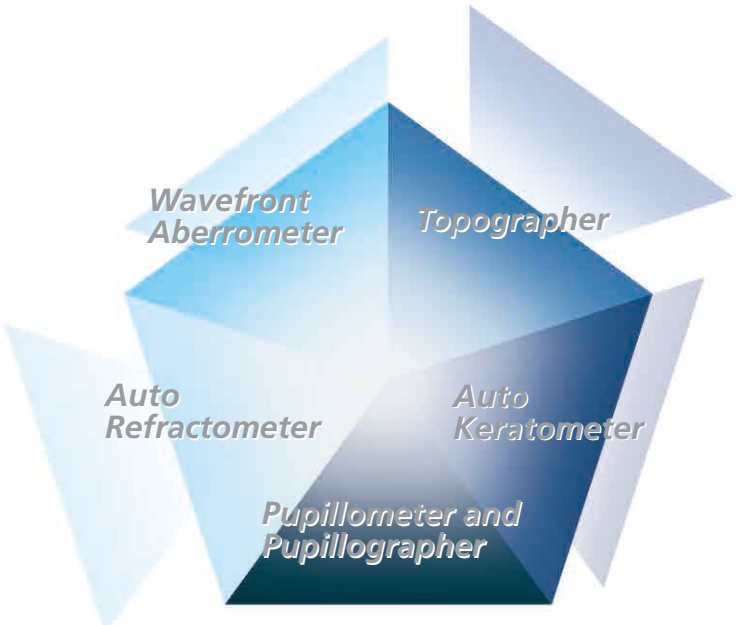
THE ART OF EYE CARE

Comprehensive Vision Analysis and

NIDEK CO., LTD., a global leader in the design, manufacture, and distribution of ophthalmic, optometric, and lens edging equipment, has created the OPD-Scan III, the third generation aberrometer / corneal topographer that is a true refractive workstation for all practitioners.

The versatility incorporated in one compact unit allows clinicians to obtain broad and precise information about the refractive status of the eye enabling comprehensive analysis and assessment, utilizing state-of-the-art data.

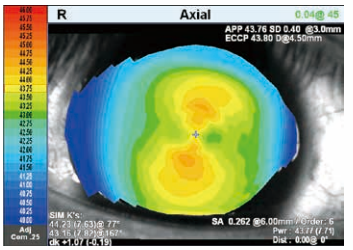
Multiple task based summaries allow the practitioner to better evaluate and treat a wide variety of patients from a simple glasses prescription to complex contact lenses and refractive surgery, and especially in pre- and post- operative cataract evaluations.



Assessment

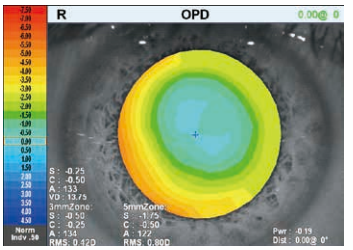
Wavefront Aberrometer

Wavefront aberrometry gives unprecedented assessment of visual acuity and quality of vision in addition to traditional refraction and keratometry. Simulation of retinal contrast sensitivity and visual acuity charts enable objective quantification of visual clarity.



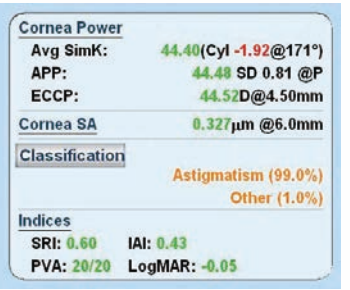
Topographer

Corneal topography provides intuitive maps and numerical data for the corneal surface and provides Classification/Indices of corneal pathology such as keratoconus suspect, keratoconus and pellucid marginal degeneration.



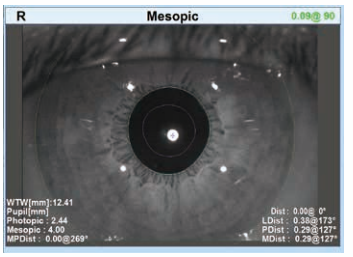
Auto Refractometer

The auto refractometer provides exceptionally accurate refractions for various pupil diameters including refractions under photopic and mesopic conditions, critical for proper assessment of both refractive surgery patients and common refractive problems.



Auto Keratometer

The auto keratometer provides conventional keratometry and novel corneal surface descriptors such as APP (Averaged Pupil Power) and ECCP (Effective Corneal Central Power) which aid in the calculation of the correct IOL power for post-operative corneas.

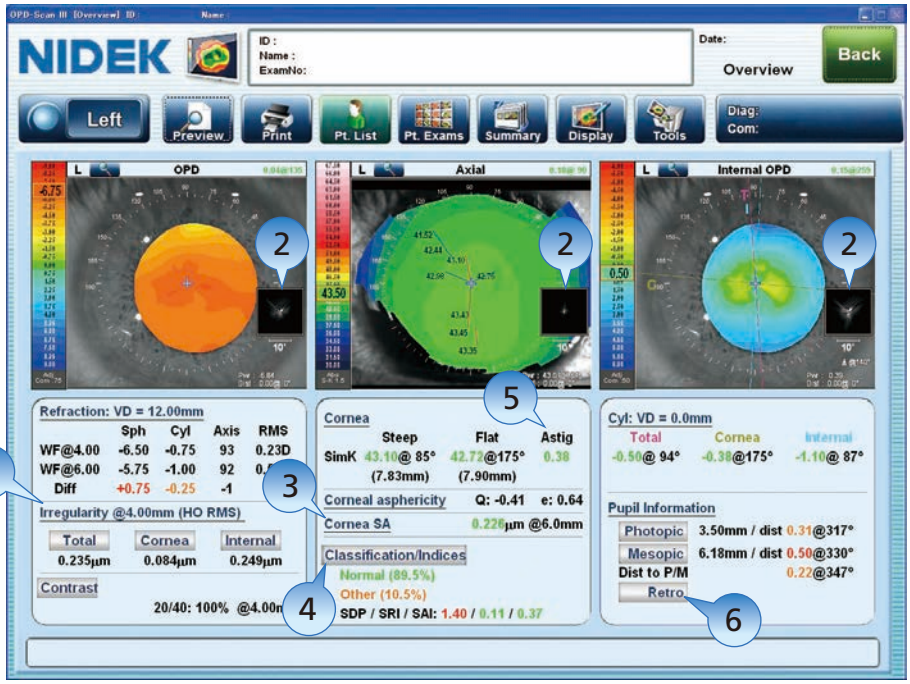


Pupillometer and Pupillographer

Pupillometry measures photopic and mesopic pupil diameters. Pupil images reveal the shape of photopic and mesopic pupils, which can alter refraction and important surgical data. Identification of the first Purkinje Image (corneal light reflex) and pupil center are provided. The distance between these two landmarks is calculated to assist in centration during refractive surgery and to assess IOL centration.

Assessment

A Map and Guide for Optimal Clinical Decisions

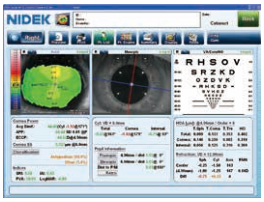


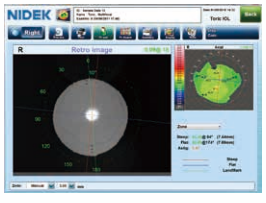
The Overview summary provides refractive data and incorporates corneal disease analysis software and data for cataract and refractive surgery.

Interpreting the Overview summary:

1. **Irregularity** helps determine the best strategy for vision correction. Separation into Total, Corneal and Internal components allows determination of the source of the optical pathology.
2. **PSF images** of OPD, Axial, and Internal OPD map simulate objective retinal visual quality from each component of the eye for easy clinical assessment and patient education.
3. **Corneal spherical aberration** aids in the selection of aspheric IOLs and contact lenses.
4. Color coded **Classification/Indices** help identify post-LASIK corneas and Keratoconus.
5. The **Astigmatism Index** aids the implantation of toric IOLs such as incision placement and lens alignment.
6. A **Retroillumination** image of cataracts captured during the OPD exam allows better understanding of pupillary effects on vision and in patient education.

A number of summaries are available in the OPD-Scan III, customizable to the clinician's preference.

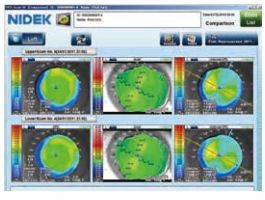

Cataract summary


Toric IOL summary

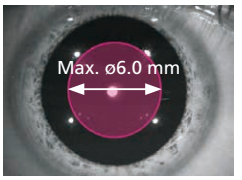

Optical Quality summary


White to White summary

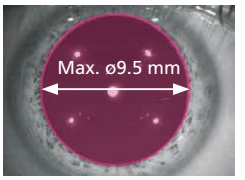

Retroillumination image


Comparison map

Enhanced Measurement Accuracy and Ease of Use



OPD-Scan II



OPD-Scan III

Wider Measurement Area

The OPD-Scan III's 9.5 mm diameter wavefront aberrometry ensures full coverage of almost any pupil. Incorporating 2,520 data points which is a 175% increase compared to the OPD Scan II, allows for enhanced measurement accuracy and spatial resolution.

Greater Topography Resolution, Blue Placido Rings

33 blue placido mires provide a minimum of 11,880 data points which is 170% greater than the OPD-Scan II. The blue wavelength allows greater precision in ring detection. The reduced illumination creates a comfortable patient experience.

Tiltable Color LCD Touch Screen

The 10.4-inch color LCD touch screen tilts, allowing viewing from different angles for easier measurements.

High Speed Printer with Easy Loading and Auto Cutter

The OPD-Scan III incorporates a high speed user-friendly printer. Printer paper can be easily changed. Printed data sheets are automatically cut for convenience.

OPD-Scan III Specifications

Wavefront aberrometer	
Measurement principle	Automated objective refraction (dynamic skiascopy) Spherical power -20.00 to +22.00 D Cylindrical power 0 to ±12.00 D Axis 0 to 180°
Measurement area	ø2.0 to 9.5 mm (7 zone measurement)
Data point	2,520 points (7 x 360)
Map type	OPD, Internal OPD, Wavefront, Zernike graph, PSF, MTF graph, Visual Acuity
Topographer	
Measurement rings	33 vertical, 39 horizontal
Measurement area	ø0.5 to 11.0 mm (R = 7.9 mm)
Data point	11,880 points and more
Map type	Axial, Instantaneous, "Refractive", Elevation, Gradient, Wavefront, Zernike graph, PSF, MTF graph, Visual Acuity
Auto refractometer	
Measurement range	Sphere -20.00 to +22.00 D Cylinder 0 to ±12.00 D Axis 0 to 180°
Minimum measurable pupil diameter	ø2.6 mm
Auto keratometer	
Measurement range	Curvature radius 5.00 to 10.00 mm Refractive power 33.75 to 67.50 D (n = 1.3375) Cylindrical power 0 to ±12.00 D Axis 0 to 180°
Measurement area	ø3.3 mm (R = 7.7 mm)
Pupillometer / Pupillographer	
Measurement diameter	ø1.0 to 10.0 mm
Image type	Photopic, Mesopic
Auto tracking	X-Y-Z directions
Display	10.4-inch color LCD touch screen
Printer	Built-in thermal type line printer for data print External color printer (optional) for map print
Power supply	100 to 240 V AC, 50/60 Hz
Power consumption	110 VA
Dimensions/mass	284 (W) x 525 (D) x 533 (H) mm / 23 kg 11.2 (W) x 20.7 (D) x 21.0 (H) " / 51 lbs.
Standard accessories	Printer paper, Power cord, Dust cover, Pack of chinrest paper, Fixing pins for chinrest paper, Spherical model eye, Touch-screen pen, Touch-screen pen holder, Ferrite core, Installation CD for OPD software (for external PC), USB license key for OPD software (for external PC), Operator's manual for OPD software (for external PC)
Optional accessories	Communication cable, Eye Care card system, Color printer, USB flash drive Advance software (for license setting), Corneal Score

Product/model name: REFRACTIVE POWER / CORNEAL ANALYZER OPD-Scan III
Brochure and listed features of the device are intended for non-US practitioners.
The availability of products differs from country to country depending on the status of approval.
Specifications may vary depending on circumstances in each country.
Specifications and design are subject to change without notice.

Eye & Health Care
NIDEK CO., LTD.

HEAD OFFICE [Manufacturer]
34-14 Maehama, Hiroishi-cho, Gamagori, Aichi 443-0038, JAPAN
Phone: +81-533-67-8895
Group Website www.nidek.com
Product Information www.nidek-intl.com/product/

Distributor in your country
Please contact our distributor
for more information.
www.nidek-intl.com/dist/