



Refractive Power / Corneal Analyzer

# OPD-Scan III



THE ART OF EYE CARE

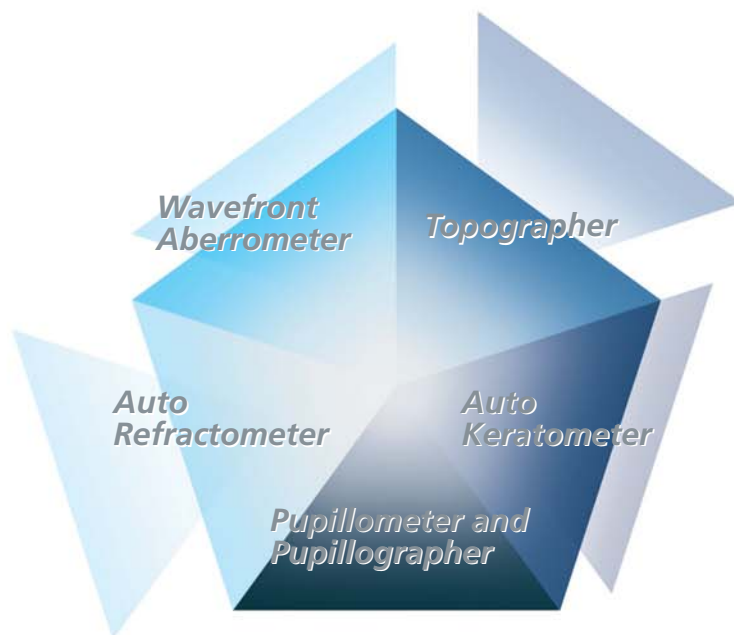
# Comprehensive Vision Analysis and

NIDEK, a world leader for vision examination and diagnostic instruments has created the OPD-Scan III, the third generation aberrometer / corneal topographer that is a true refractive workstation for all practitioners.

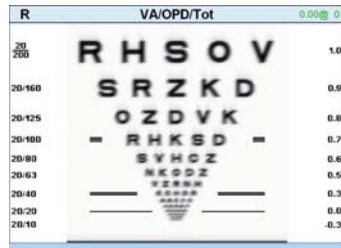
The versatility incorporated in one compact unit allows clinicians to obtain broad and precise information about the refractive status of the eye enabling comprehensive analysis and assessment, utilizing state-of-the-art data.

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.

NIDEK's innovative concept of combining multiple instruments in one unit was validated in its predecessor, the OPD-Scan II. Continuous development by NIDEK, the leader in the field, makes the OPD-Scan III a faster, more accurate, and more user-friendly instrument than ever before.

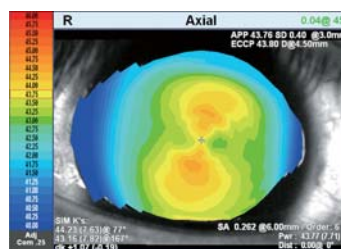


# Assessment



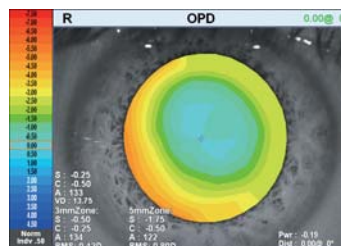
## Wavefront Aberrometer

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 neural network assisted detection of corneal pathology such as keratoconus suspect, keratoconus and pellucid marginal degeneration.



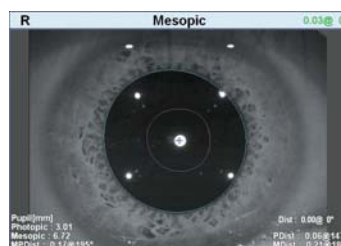
## Auto Refractometer

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

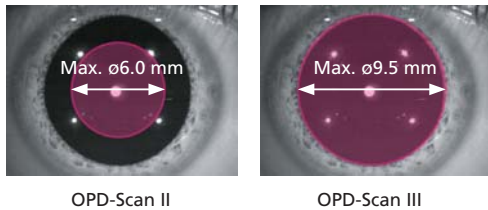
The auto keratometer provides conventional keratometry and novel corneal surface descriptors such as APP (Average Pupil Power) and ECCP (Effective Central Corneal Power) which aid in the calculation of the correct IOL power for post-operative corneas.



## 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.

## 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. Data from 2,520 data points, 175% of the industry leading OPD-Scan II, increases 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 more than 170% of 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.



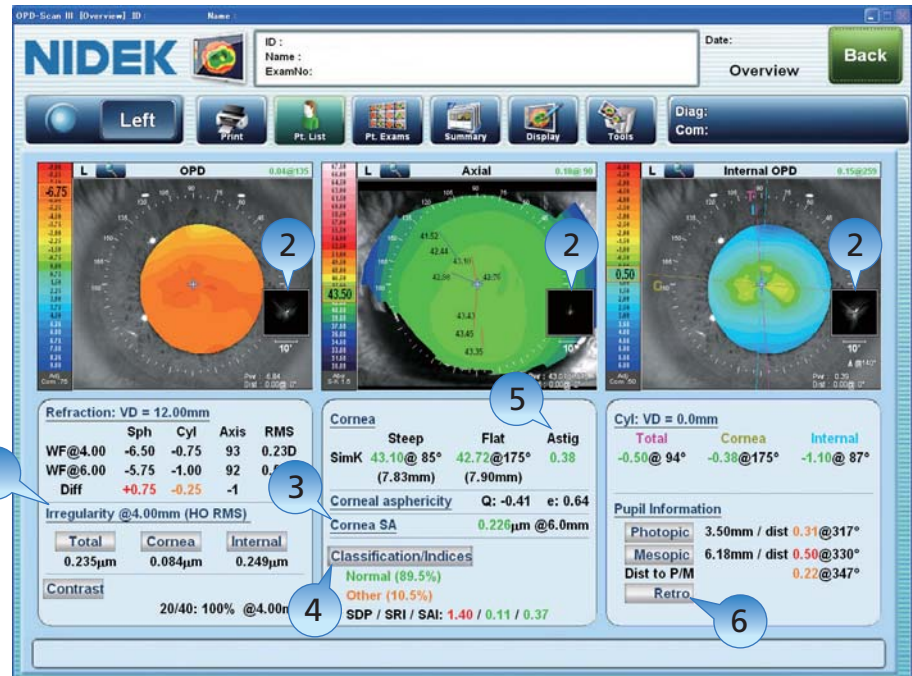
### ***High Speed Printer with Easy loading and Auto Cutter***

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.



# 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



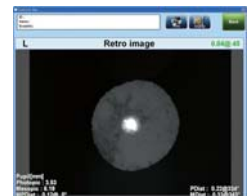
Toric IOL summary



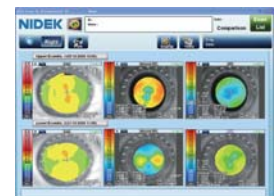
Optical Quality summary



White to White summary



Retroillumination image



Comparison map



## OPD-Scan III Specifications

Wavefront aberrometer	
Measurement principle	Automated objective refraction (dynamic skiascopy)
Spherical power range	-20.00 to +22.00 D
Cylindrical power range	0 to $\pm 12.00$ D
Axis range	0 to 180°
Measurement area	$\varnothing 2.0$ 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	$\varnothing 0.5$ 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 $\pm 12.00$ D Axis 0 to 180°
Minimum measurable pupil diameter	$\varnothing 2.6$ mm
Auto keratometer	
Measurement range	Radius curvature 5.00 to 10.00 mm Refractive power 33.75 to 67.50 D (n = 1.3375) Astigmatism 0 to $\pm 12.00$ D Axis 0 to 180°
Measurement area	$\varnothing 3.3$ mm (R = 7.7 mm)
Pupillometer / Pupillographer	
Measurement diameter	1.0 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	AC 100 to 240 V 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) " / 50.7 lbs.



Caution: U.S. Federal Law restricts this device to sale, distribution, and use by or on the order of a licensed practitioner.  
The Classification Indices are not available in USA.  
Specifications and design are subject to change without notice.



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