Wavefront Aberrometer
Wavefront aberrometry offers unparalleled assessment of visual acuity and quality of vision in addition to standard refraction and keratometry. Simulation of refract contrast sensitivity and visual acuity charts enable objective quantification of visual clarity.

Topographer
Corneal topography provides detailed maps and numerical data for the corneal surface.

Auto Refractometer
The auto refractometer provides exceptionally accurate refractions for various pupil diameters including refractions under photopic and mesopic conditions, critical for the 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 and used in calculation during refractive surgery, and for lens IOL calculation.

Assessment
Comprehensive Vision Analysis and Assessment
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Comprehensive Vision Analysis and Assessment

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.

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:

- Irregularity helps determine the best strategy for vision correction. Irregularity ratio Total Corneal and Internal components allows determination of the source of the optical pathology.
- PSF images of OPD, Axial and Internal OPD map corneal objective retinal visual quality from each component of the eye for clinical assessment and patient education.
- Coronal Ectasia Detection aids in the detection of spherical (SC) and contact lenses.
- The Iris Registration Index is a measurement of iris ring integrity and central clear zone.
- Calcium Deposits index of corneal thickness helps predict the risk of corneal perforation and determine the validity of eye drops and medications.

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

Enhanced Measurement Accuracy and Ease of Use

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 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 more stable patient experience.

Tiltable Color LCD Touch Screen

The 10.4-inch color LCD touch screen 90°, 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.

Pupillometer and Pupillographer

Auto Keratometer

Auto Refractometer

Wavefront Aberrometer

Topographer

The Overview summary provides refractive data and incorporates corneal disease analysis software and data for cataract and refractive surgery.
OPD-Scan III Specifications

**Wavefront Aberrometer**
- Measurement principle: Wavefront aberrometry
- Spherical power range: -20.00 to +22.00 D
- Cylindrical power range: 0 to ±12.00 D
- Axis range: 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

**Auto Refractometer**
- Measurement range: Sphere -20.00 to +22.00 D
- Minimum measurable pupil diameter: ø0.5 to 11.0 mm (R = 7.9 mm)
- Data point: 11,880 points and more

**Auto Keratometer**
- Measurement range: Sphere -20.00 to +22.00 D
- Minimum measurable pupil diameter: ø3.3 mm (R = 7.7 mm)
- Data point: 1.0 to 10.0 mm
- Map type: Photopic, Mesopic

**Pupillometer / Pupillographer**
- Measurement diameter: ø0.5 to 11.0 mm (R = 7.9 mm)
- Image type: X-Y-Z directions

**Topographer**
- Measurement rings: 33 vertical, 39 horizontal

**Power supply**
- AC 100 to 240 V, 50 / 60 Hz
- 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.

Wavefront Aberrometer gives unprecedented assessment of visual acuity and quality of vision in addition to standard on-axis and keratometric. Simulation of retinal contrast sensitivity and visual acuity allows easier objective judgment of visual clarity.

Topographer
- Corneal topography provides solution maps and numerical data for the corneal surface.

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 aid in calculation and interpretation of data.
- Identification of the first Purkinje image (corneal light reflex) and pupil center are provided. The distance between these two landmarks is calculated and used in calculation during refractive surgery and to assess IOL centration.

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Caution: U.S. Federal Law restricts this device to sale, distribution, and use by or on the order of a physician or other licensed eye care practitioner.
Specifications may vary depending on circumstances in each country. Specifications and design are subject to change without notice.
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 Combined Multiple Instruments

Pupillometer and Pupillographer

Auto Keratometer

Auto Refractometer

Wavefront Aberrometer

Topographer

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:

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.

PSF images of OPD, Axial, and Internal OPD map correlate objective retinal visual quality with each component of the eye for clinical assessment and patient education.

Corneal OPD data helps to identify lamellar (FLS and contact lenses). Separation into Total, Corneal and Internal components allows determination of the source of the optical pathology.

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

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

Enhanced Measurement Accuracy and Ease of Use

Wider Measurement Area

The OPD-Scan III's 9.5 mm diameter corneal wavefront measurement allows 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 Revolution, 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 more 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

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A Map and Guide for Optimal Clinical Decisions

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- Irregularity helps determine the best strategy for vision correction. Separation into Total, Corneal, and Internal components allow determination of the source of the optical pathology.
- PSF images of OPD, Axial, and Internal OPD map corneal and internal visual quality. Two components of the eye may clinical assessment and patient education.
- Corneal Spherical Aberration helps determine the best strategy for vision correction. Separation into Total, Corneal, and Internal components allows determination of the source of the optical pathology.
- Corneal Spherical Aberration aids in the selection of aspheric IOLs and contact lenses.
- Astigmatism index aids the implantation of toric IOLs such as incision placement and lens alignment.
- 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.

Enhanced Measurement Accuracy and Ease of Use

Wider Measurement Area
The OPD-Scan III’s 9.5 mm diameter enlarged aberrometer enables full coverage of almost any pupil. This feature ensures high accuracy in the measurement of corneal topography.

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 definition. This results in better corneal and internal wavefront measurements.

Tiltable Color LCD Touch Screen
The 10.4-inch color LCD touch screen provides a comfortable patient experience by allowing viewing from different angles for easier measurements.

High Speed Printer with Easy Loading and Auto Cutter
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Auto Refractometer
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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 postoperative 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.

### OPD-Scan III Specifications

<table>
<thead>
<tr>
<th>Feature/Function</th>
<th>Measurement Range</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Automated objective refraction (dynamic intra-eyes)</td>
<td>Sphere -20.00 to +22.00 D</td>
<td>Cylindrical 0 to +12.00 D (± 12.00 D)</td>
</tr>
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<tr>
<td>Measurement area (panning)</td>
<td>430 x 5.5 mm (7 zone measurement)</td>
<td>500 x 5.5 mm (10 zone measurement)</td>
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<tr>
<td>Measurement area (topography)</td>
<td>250 mm x 250 mm</td>
<td>250 mm x 250 mm</td>
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<tr>
<td>Measurement area (pupillometer)</td>
<td>40 mm x 36 mm</td>
<td>40 mm x 36 mm</td>
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<tr>
<td>Measurement area (photopic)</td>
<td>ø2.0 to 9.5 mm (7 zone measurement)</td>
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<tr>
<td>Measurement area (mesopic)</td>
<td>ø1.0 to 5.0 mm</td>
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**Notes:** 1.6, Refractive power in diopters with 16.00 D + 16.00 D. Specifications may vary depending on country's decision to change software version.