OPD-Scan III Specifications

**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.

**Pupillometry 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.

Questions 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.

**Refractive Power / Corneal Analyzer**

OPD-Scan III
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.

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.

Wider Measurement Area
The OPD-Scan III's nine-diagonal 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.

A Map and Guide for Optimal Clinical Decisions

A number of summaries are available in the OPD-Scan III for optimal clinical decisions. These summaries encompass a variety of applications to assist with vision correction.

Interpreting the Overview Summary:
- The Overview provides a high level view of the entire test, showing the most important data.
- The Overview is interactive and can be customized to show any of the available data.
- The Overview allows users to easily compare data from different examinations.

Interpreting the Wavefront Summary:
- The Wavefront Summary provides detailed information about the wavefront characteristics of the eye.
- The Wavefront Summary includes data on higher order aberrations, which can help in the selection of contact lenses or intraocular lenses.

Interpreting the Pupil Summary:
- The Pupil Summary provides information about the pupil size, shape, and symmetry.
- The Pupil Summary can be used to assess the impact of pupil dilation on visual performance.

Interpreting the Refraction Summary:
- The Refraction Summary provides information about the refractive status of the eye, including spherical and cylindrical components.
- The Refraction Summary can be used to assist in the calculation of prescription.

Interpreting the Astigmatism Summary:
- The Astigmatism Summary provides information about the astigmatism of the eye.
- The Astigmatism Summary can be used to help in the implantation of toric intraocular lenses.

Interpreting the Cataract Summary:
- The Cataract Summary provides information about the presence and severity of cataracts.
- The Cataract Summary can be used to inform patients about their treatment options.

Interpreting the Refractive Surgery Summary:
- The Refractive Surgery Summary provides information about the results of refractive surgery.
- The Refractive Surgery Summary can be used to assess the success of surgery.

Interpreting the Corneal Summary:
- The Corneal Summary provides information about the corneal morphology.
- The Corneal Summary can be used to assess the impact of corneal disease on visual performance.

Interpreting the Optical Quality Summary:
- The Optical Quality Summary provides information about the optical quality of the eye.
- The Optical Quality Summary can be used to assess the potential for successful refractive surgery.

Interpreting the Total Irregularity Summary:
- The Total Irregularity Summary provides information about the total irregularity of the eye.
- The Total Irregularity Summary can be used to assess the potential for successful refractive surgery.

Interpreting the Corneal Irregularity Summary:
- The Corneal Irregularity Summary provides information about the irregularity of the cornea.
- The Corneal Irregularity Summary can be used to assess the potential for successful refractive surgery.

Interpreting the Internal Irregularity Summary:
- The Internal Irregularity Summary provides information about the irregularity of the internal structures of the eye.
- The Internal Irregularity Summary can be used to assess the potential for successful refractive surgery.

Interpreting the Color-coded Classification Indices:
- The Color-coded Classification Indices provide a quick and easy way to identify abnormalities in the eye.
- The Color-coded Classification Indices can be used to inform patients about their treatment options.

Interpreting the Astigmatism Index:
- The Astigmatism Index provides information about the astigmatism of the eye.
- The Astigmatism Index can be used to help in the implantation of toric intraocular lenses.

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Comprehensive Vision Analysis and Assessment

**Pupillometer and Pupillographer**

Auto Keratometer

Auto Refractometer

Wavefront Aberrometer

Topographer

A Map and Guide for Optimal Clinical Decisions

**OPD-Scan II**

**OPD-Scan III**

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**Wider Measurement Area**

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

**Tiltable color LCD touch screen**

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

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

Greater Topography Resolution, Blue Placido Rings

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Enhanced Measurement Accuracy and Ease of Use

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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:

- **PSF images** help determine the best strategy for vision correction. Separation into Total, Central and Peripheral components allow determination of the source of the optical pathology.
- **Wavefront-based analysis** includes the selection of custom IOLs and contact lenses.
- **Wavefront-based classification indices** include identification of specific wavefront errors, for example, coma, trefoil, and spherical aberration.
- **Retroillumination image** of cataracts captured during the OPD exam allows better understanding of pupillary effects on vision and in patient education.
- **Optical Quality summary** helps determine the best strategy for vision correction. Separation into Total, Corneal and Internal components allows determination of the source of the optical pathology.
- **Color coded Classification Indexes** help identify and monitor corneal and internal disease, and intervention.
- **Color coded Analysis Indexes** for the separation of front IOLs from internal astigmatism and the posterior surface.
- **Interpretation summary** of 10D data points, allowing better understanding of wavefront effects on vision and in patient education.
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OPD-Scan III Specifications

<table>
<thead>
<tr>
<th>Measurement Parameter</th>
<th>Description</th>
<th>Range/Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spherical power</td>
<td>Range: -20.00 to +22.00 D</td>
<td></td>
</tr>
<tr>
<td>Cylindrical power</td>
<td>Range: 0 to ±12.00 D</td>
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</tr>
<tr>
<td>Axis</td>
<td>Range: 0 to 180˚</td>
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</tr>
<tr>
<td>Measurement area</td>
<td>D = ø2.0 to 9.5 mm (7 zone measurement)</td>
<td></td>
</tr>
<tr>
<td>Data point</td>
<td>2,520 points (7 x 360)</td>
<td></td>
</tr>
<tr>
<td>Map type</td>
<td>OPD, Internal OPD, Wavefront, Zernike graph, PSF, MTF graph, Visual Acuity</td>
<td></td>
</tr>
<tr>
<td>Topographer</td>
<td>Measurement rings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measurement area</td>
<td>1.0 to 1.0 mm (7 x 3 mm)</td>
</tr>
<tr>
<td>Auto Refractometer</td>
<td>Measurement area</td>
<td>ø2.6 mm</td>
</tr>
<tr>
<td></td>
<td>Measurement area</td>
<td>ø2.0 to 9.5 mm (7 zone measurement)</td>
</tr>
<tr>
<td></td>
<td>Measurement area</td>
<td>33 vertical, 39 horizontal</td>
</tr>
<tr>
<td>Auto Keratometer</td>
<td>Measurement area</td>
<td>ø0.5 to 11.0 mm (R = 7.9 mm)</td>
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<tr>
<td></td>
<td>Measurement area</td>
<td>11,880 points and more</td>
</tr>
<tr>
<td></td>
<td>Measurement area</td>
<td>Axial, Instantaneous, &quot;Refractive&quot;, Elevation, Gradient, Wavefront, Zernike graph, PSF, MTF graph, Visual Acuity</td>
</tr>
<tr>
<td>Auto Retinoscope</td>
<td>Measurement area</td>
<td>33 vertical, 39 horizontal</td>
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<tr>
<td></td>
<td>Measurement area</td>
<td>ø0.2 to 10.0 mm</td>
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<tr>
<td></td>
<td>Measurement area</td>
<td>10.4-inch color LCD touch screen</td>
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<td>External color printer (optional)</td>
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<td>Measurement area</td>
<td>AC 100 to 240 V</td>
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<tr>
<td></td>
<td>Measurement area</td>
<td>50 / 60 Hz</td>
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<tr>
<td></td>
<td>Measurement area</td>
<td>110 VA</td>
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<tr>
<td></td>
<td>Measurement area</td>
<td>284 (W) x 525 (D) x 533 (H) mm / 23 kg</td>
</tr>
<tr>
<td></td>
<td>Measurement area</td>
<td>11.2 (W) x 20.7 (D) x 21.0 (H) &quot; / 50.7 lbs.</td>
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</tbody>
</table>

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