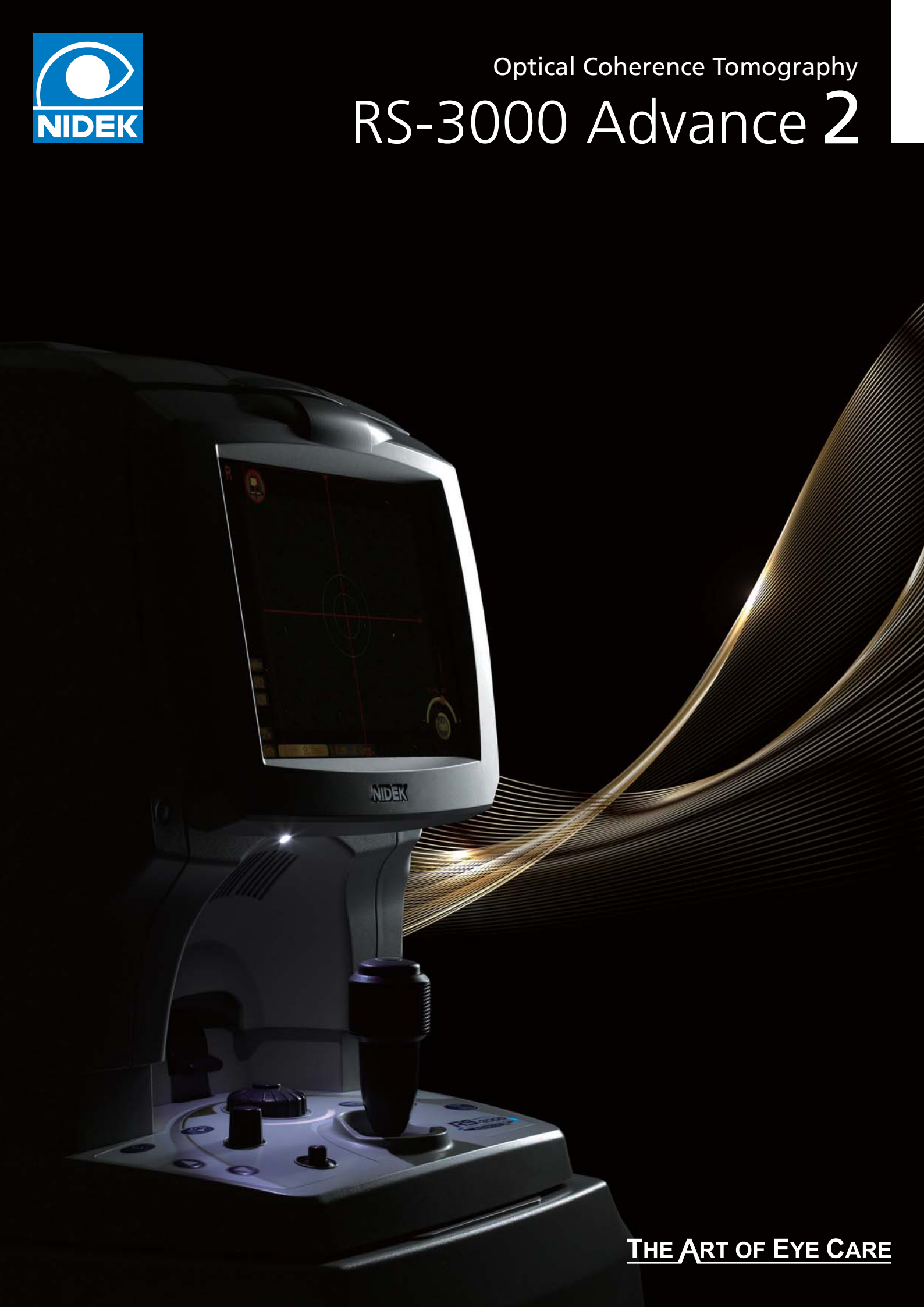
NIDEK

Optical Coherence Tomography

RS-3000 Advance 2

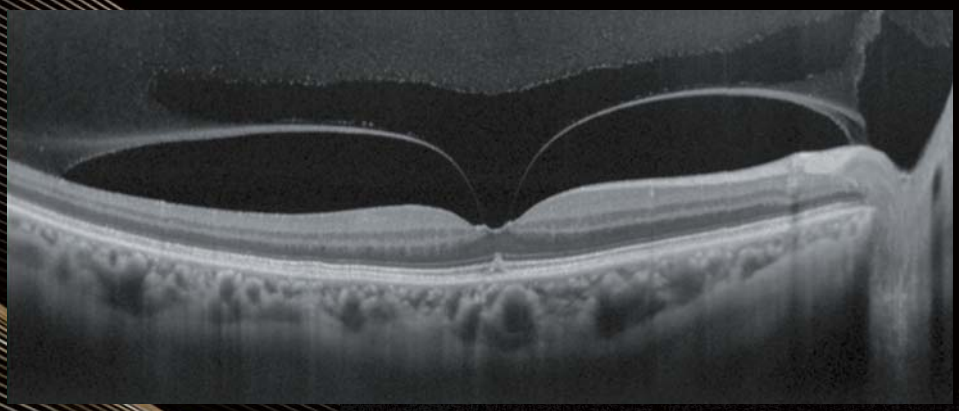


THE ART OF EYE CARE

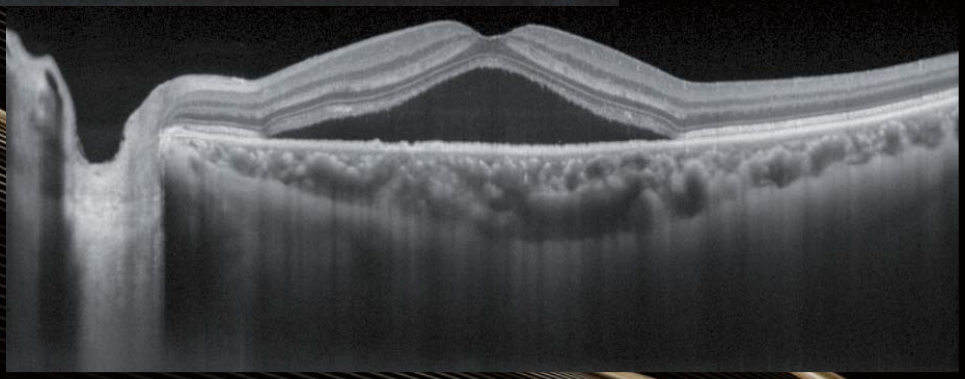
Premium OCT for your daily practice

-Providing a comprehensive solution for retina and glauco

Retina Analysis



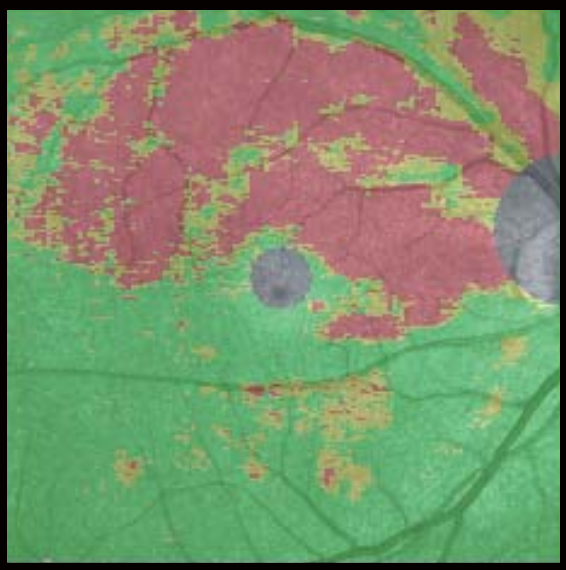
Retinal mode



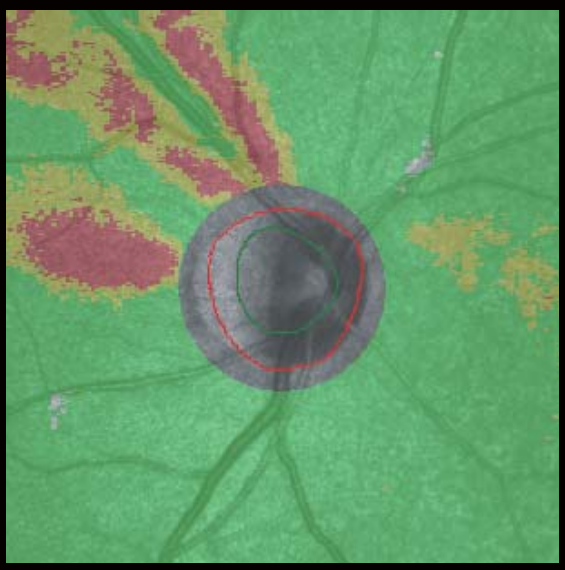
Choroidal mode

Image courtesy of Hokkaido University Hospital

Glaucoma Analysis



9 x 9 mm
Normative database (macula)



6 x 6 mm
Normative database (disc)

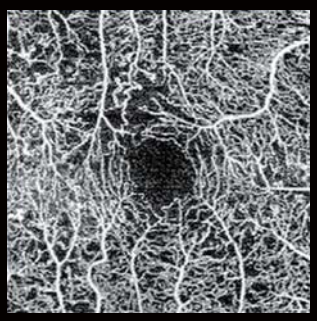
ma analysis-

RS-3000 OCT RetinaScan Advance 2

AngioScan

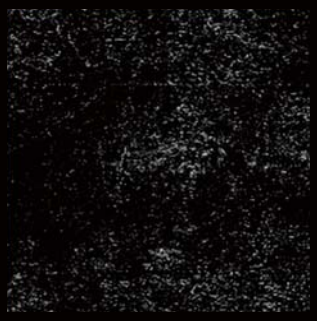
*AngioScan is optional software.

Panorama image

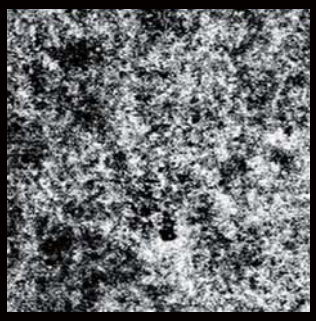


Superficial capillary

Deep capillary



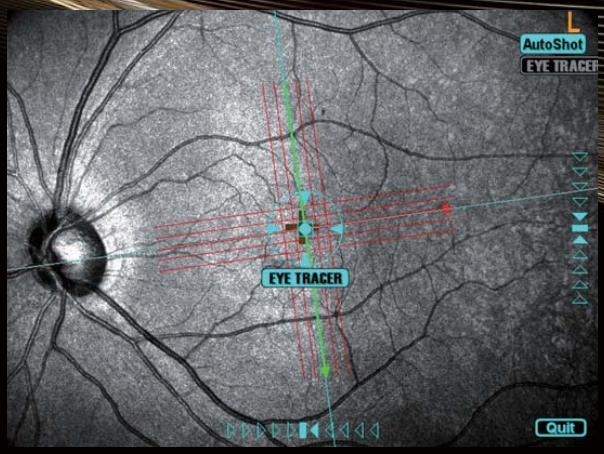
Outer retina

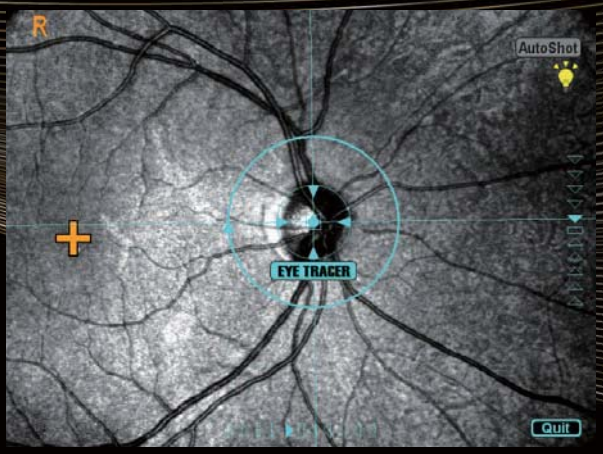


Choroid

Images courtesy of Kagoshima University Hospital

SLO





SLO-based eye tracer

Real time compensation for eye movements, resulting in more accurate scans, ensuring higher image quality and maximum reproducibility

Retina Analysis

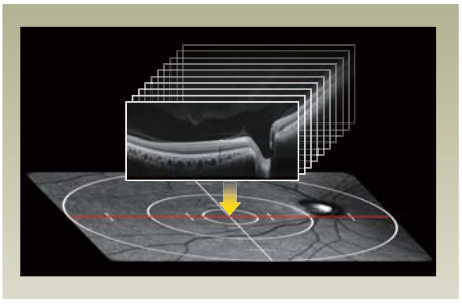
Selectable OCT Sensitivity

Selection of the appropriate OCT sensitivity allows acquisition of B-scan images through media opacities.

B-scan images in cataractous eye captured with ultra fine, fine and regular sensitivities

Tracing HD Plus

The tracing HD plus function traces involuntary eye movements to maintain the same scan location on the SLO image for accurate image capture. This function allows accurate averaging of up to 120 images. The tracing HD plus function combined with ultra fine sensitivity image capture results in high resolution and high contrast images of chorioretinal pathology.

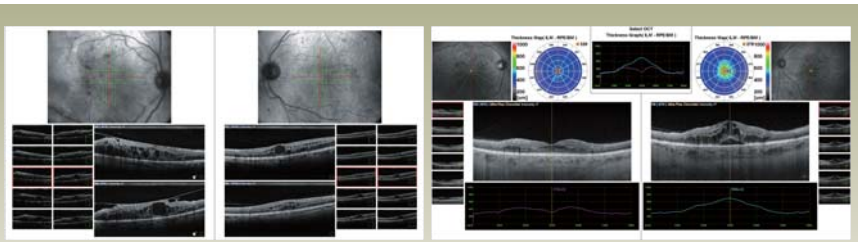


Enhanced Image

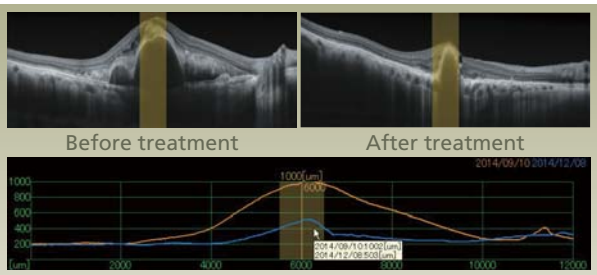
Enhanced image function allows greater resolutions of vitreous retina images by adjusting brightness of weak OCT signals.

Macula Multi and Macula Radial

- Macula multi and macula radial scan patterns enable multiple raster scans simultaneously, decreasing rescans.
- The tracing HD function centers the scan on the fovea or on the region of interest.



Tracing HD



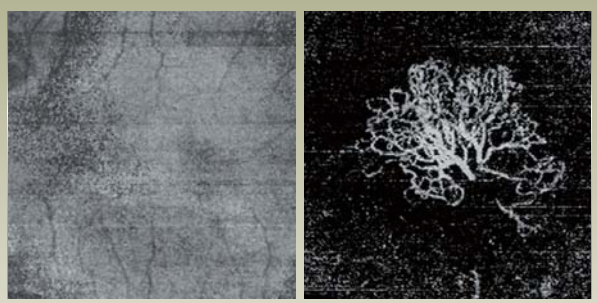
Thickness graph

Macula Comparison

- Users can select two images for comparison.
- Chronological change in retinal thickness can be analyzed with a graph indicating its trend by designating the area on the thickness graph based on user preference.

Tracing HD Ultra fine Choroidal

Images courtesy of Hokkaido University Hospital



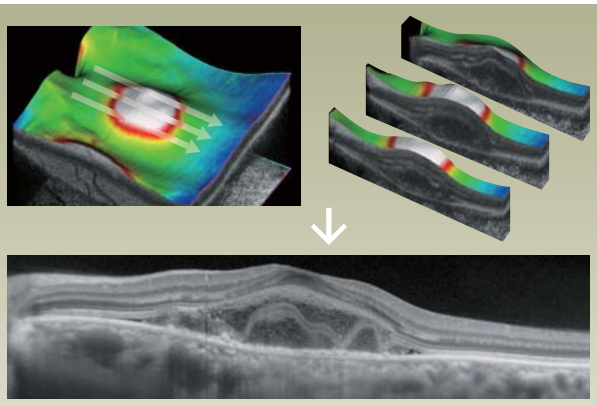
En face OCT

- En face view presents frontal sections of the retinal layers.
- Combined assessment of the B-scan and En face images defines the shape and the extension of lesions.

AngioScan

- AngioScan images illustrate retinal microvasculature using a non-invasive method.
- OCT-Angiography allows segmentation of layers of interest in exquisite detail for greater in-depth evaluation.

Images courtesy of Prof. Eric Souied, Centre Hospitalier Intercommunal de Créteil



Select and Rescan Mode (SR Mode)

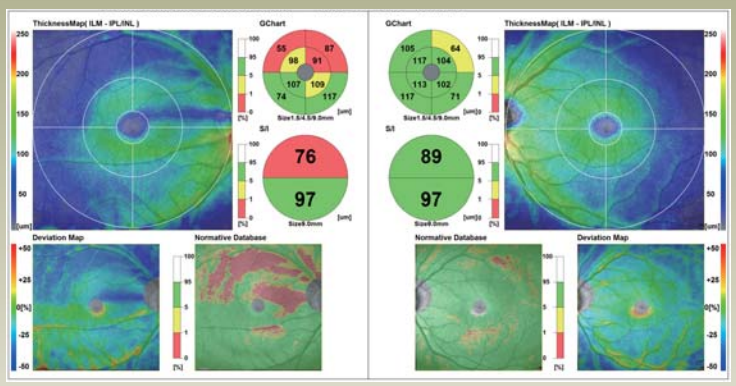
The select and rescan mode allows capture of an entire image of the retina with the macula map scan pattern and select a cross-sectional OCT image with the location of lesion from up to 256 images based on user preference.
Cross-sectional OCT images can be reacquired on the selected region with the tracing HD plus function.
This mode is useful in efficiently obtaining a high-quality image of a region of interest.

Images courtesy of Hokkaido University Hospital

Glaucoma Analysis

Macula Map

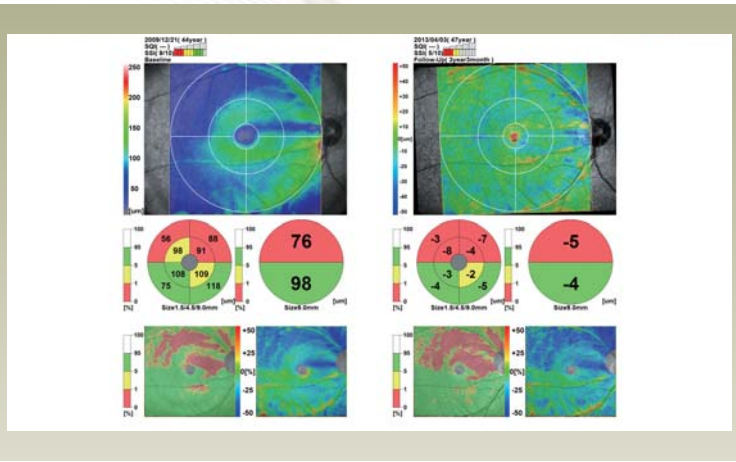
Wide area 9 x 9 mm normative database allows analysis of [NFL+GCL+IPL] thinning from optic disc to macula in a single report.



Right Left

Glaucoma Comparison

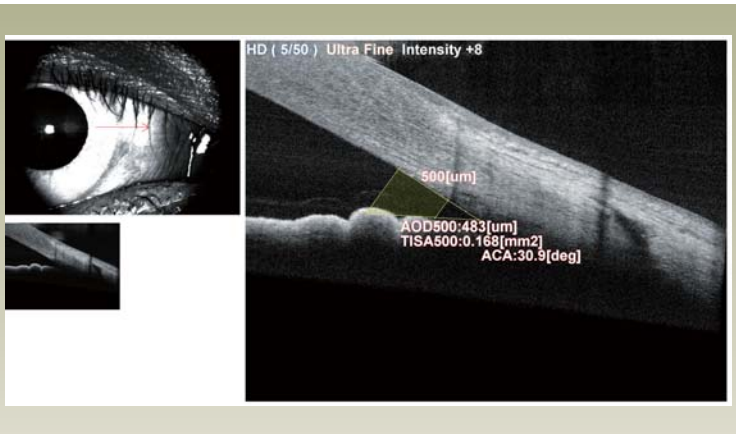
- User can select two images for comparison.
- The Torsion Eye Tracer (TET) ensures accurate image capture by correcting ocular cyclotorsion and fundus tilt.
- TET ensures high image reproducibility during image capture for follow-up examinations, enhancing the accuracy of comparative analysis.

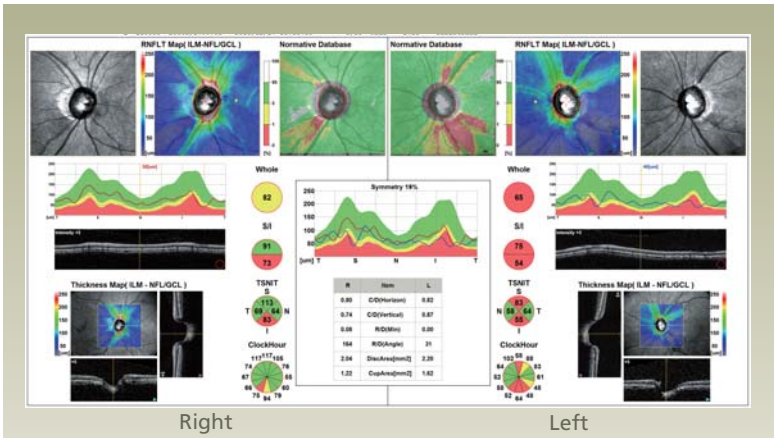


Anterior Chamber Angle

- The optional anterior segment module captures images of the anterior segment for refractive and lens implant cases.
- ACA, AOD500 (AOD750), and TISA500 (TISA750) can be measured.

Further details are available in the "Anterior Segment Analysis" section.

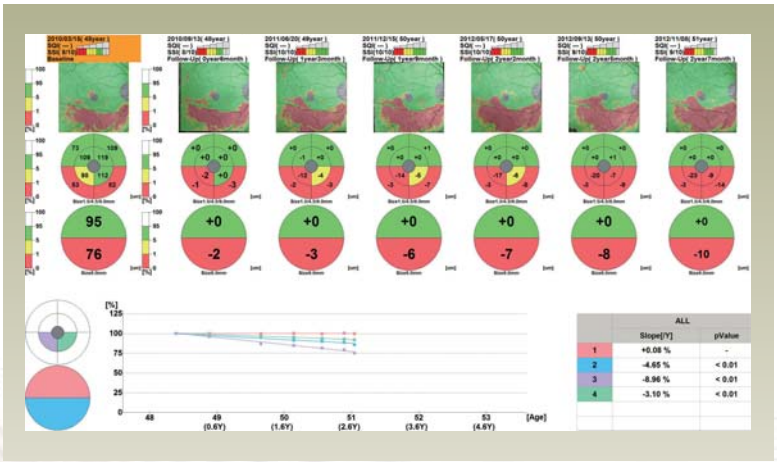




Right Left

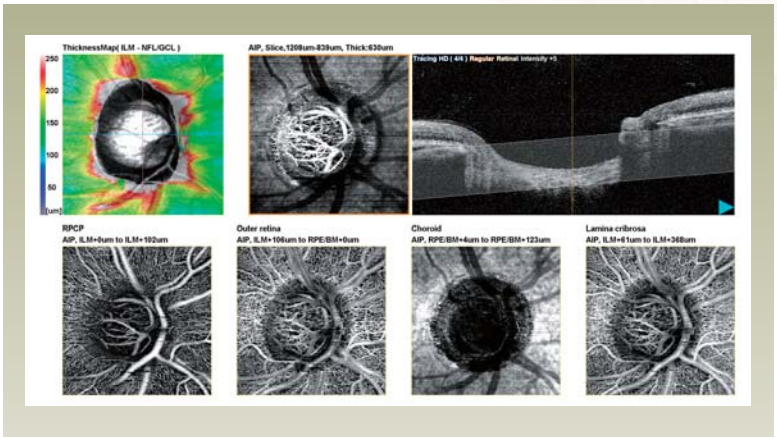
Disc Map

- Optic nerve head (ONH) and retinal nerve fiber layer (RNFL) thickness can be examined.
- Optic shape editor function allows greater accuracy of C/D ratio analysis by editing optic cup and disc segmentation in detail.



Glaucoma Progression

- Data from 50 different visits can be analyzed.
- The chronological change is presented for retinal thickness with various maps, charts, and graphs for trend analysis.
- Trend analysis allows long-term follow-up examination. It is available for user designated scan patterns.



AngioScan

- AngioScan image allows assessment of the structural vasculature of the optic disc.
- OCT-Angiography scanning of the optic disc is available for 3 x 3 mm up to 9 x 9 mm.

AngioScan

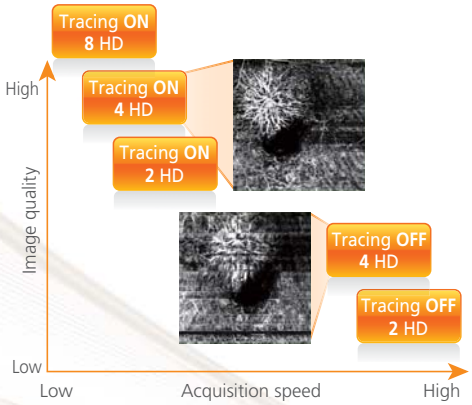
OCT-Angiography

This non-invasive method does not require contrast dye injection for examination of the layer-by-layer microvasculature within the retina and choroid. Radial peripapillary capillary plexus (RPCP), superficial capillary plexus (SCP), internal capillary plexus (ICP) and deep capillary plexus (DCP) can be analyzed. Images of the superficial capillary, deep capillary, outer retina and choroid can be displayed for clinical evaluation.

Flexible Functions

Tracing HD Plus

- The tracing HD function tracks eye movements to maintain the same scan location on the SLO image for accurate image capture.
- Based on the clinical requirement, the tracing function can be set for high definition and high contrast imaging. Images can also be captured within seconds without the tracing function.



Selectable Definition

Two-, four- or eight-scan per line (2 HD, 4 HD, 8 HD) can be selected.
8 HD provides high quality images combined with the tracing HD function.

Fine Mode

Fine mode OCT angiography results in high-resolution images to enhance diagnosis.

Wide Area Image

Wide Area Scan

Scan size can range from 3 mm to maximum of 9 mm in 0.3 mm increment.

3 x 3 mm

4.5 x 4.5 mm

6 x 6 mm

Wide area scan 9 x 9 mm

Auto Panorama Imaging

During the panorama acquisition, the tracing HD plus is activated and multiple, consecutive image captures are performed automatically without moving the fixation target. The tracing HD plus feature reduces image overlap and/or gaps between images. Panoramas up to 12 x 12 mm can be automatically composed.

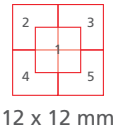
6 x 6 mm
(5 images / 3 x 3 mm each)

9 x 9 mm
(5 images / 4.5 x 4.5 mm each)

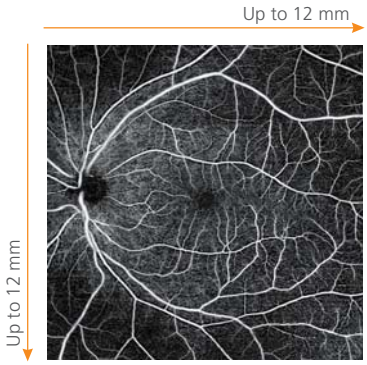
9 x 9 mm
(9 images / 3 x 3 mm each)

12 x 9 mm
(6 images / 4.5 x 4.5 mm each)

12 x 9 mm
(12 images / 3 x 3 mm each)



12 x 12 mm
(5 images / 6 x 6 mm each)



Panorama image

Analytics

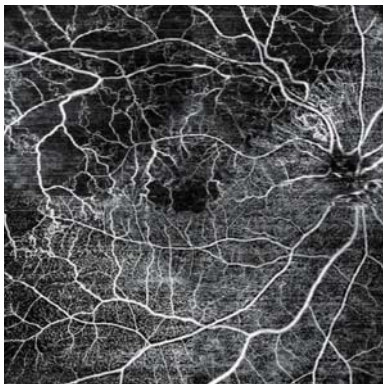
Area Analysis
This function pictorially represents the foveal avascular zone (FAZ) and the density, size and area of retinal vasculature.

Depth Color
Layer-by-layer color representation for visualization of the depth of retinal vasculature.

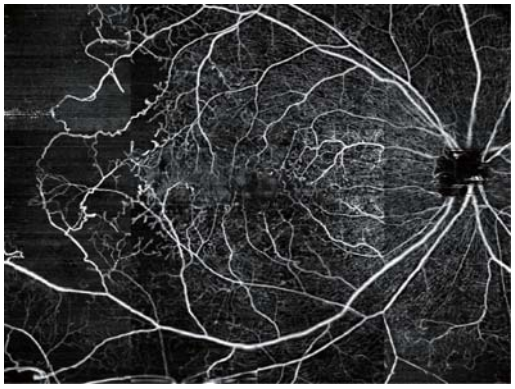
CNV Flow
This function allows for easy, rapid assessment of abnormal vessels in the outer retina.

Projection Artifact Removal
Shadows from the inner retina are removed enhancing the details of the outer retinal vasculature.

Clinical Case

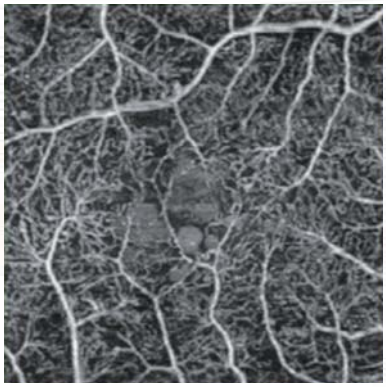


BRVO



DR

CNV



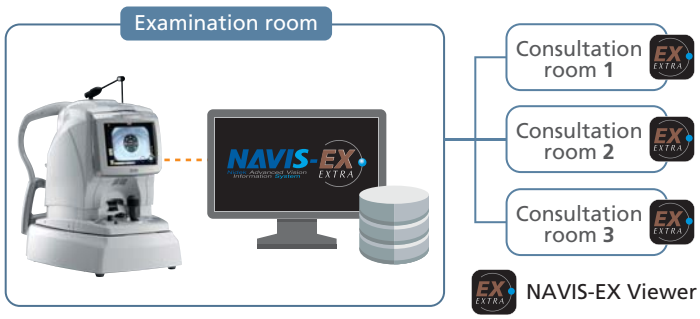
DME

Images courtesy of Kagoshima University Hospital
Dr. Manish Nagpal, Retina Foundation & Eye Research Centre
Prof. Giovanni Staurenghi, Sacco Hospital, University of Milan
Prof. Stanislao Rizzo, Careggi University Hospital, University of Florence

NAVIS-EX

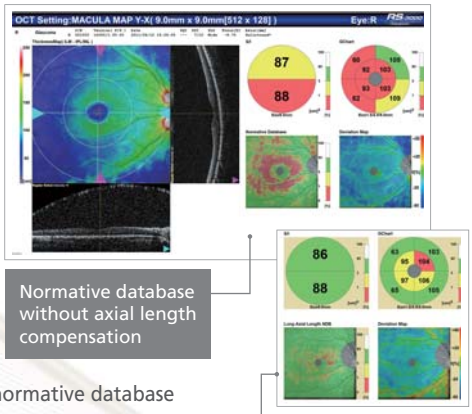
NAVIS-EX is an image filing software, which networks the RS-3000 Advance 2 and other NIDEK diagnostic devices. This functionality enhances the capability of the diagnostic device with additional features and increases clinical efficiency.

- Analysis and report
- Normative database
- Long axial length normative database (optional software)
- DICOM connectivity

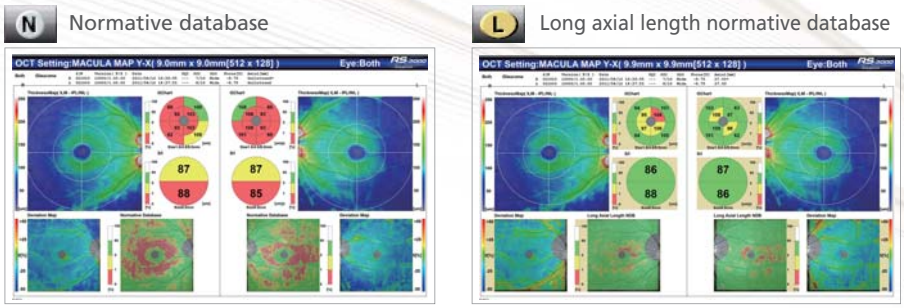


Long Axial Length Normative Database

The long axial length normative database is optional software for use with the RS series designed to assist clinicians in diagnosing macular diseases and glaucoma.
This normative database was developed based on data from normal eyes (free of ocular pathology) with long axial length. Data was collected from Asian cases by measuring the macular area in 3-D to obtain retinal thickness values, such as full retinal and [NFL+GCL+IPL] thickness, which is important for the diagnosis of macular diseases and glaucoma.

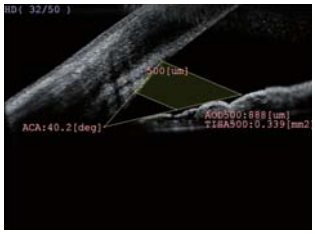


Sample analysis of a patient with long axial length



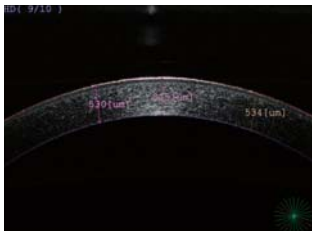
Anterior Segment Analysis

The optional anterior segment module enables observation and analyses of the anterior segment.



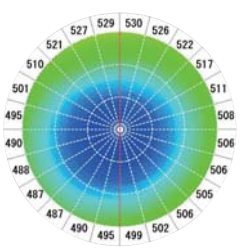
Angle measurement

- ACA
  Angle between posterior corneal surface and iris surface
- AOD500 (AOD750)
  Distance between iris and a point 500 µm (or 750 µm) away from scleral spur on posterior corneal surface
- TISA500 (TISA750)
  Area circumscribed with AOD500 (or AOD750) line, posterior corneal surface, line drawn from scleral spur in parallel with AOD line, and iris surface



Cornea measurement

- Corneal thickness
  Corneal thickness of apex and user's preferred sites
- Corneal thickness map
  Map indicating corneal thickness measured in radial directions



Anterior segment adaptor

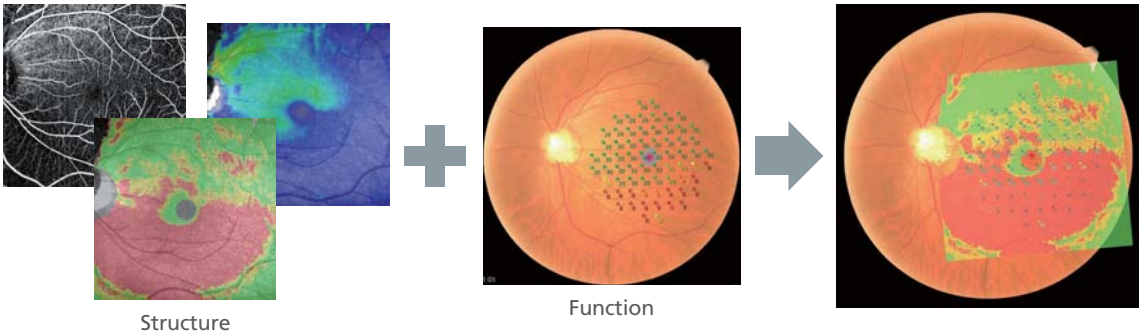
Multimodal Imaging

Evaluate retinal structure and function simultaneously using combined OCT and Microperimetry images

Various OCT modalities can be registered with Microperimetry.

OCT
RS-3000 Advance 2

Microperimeter
MP-3

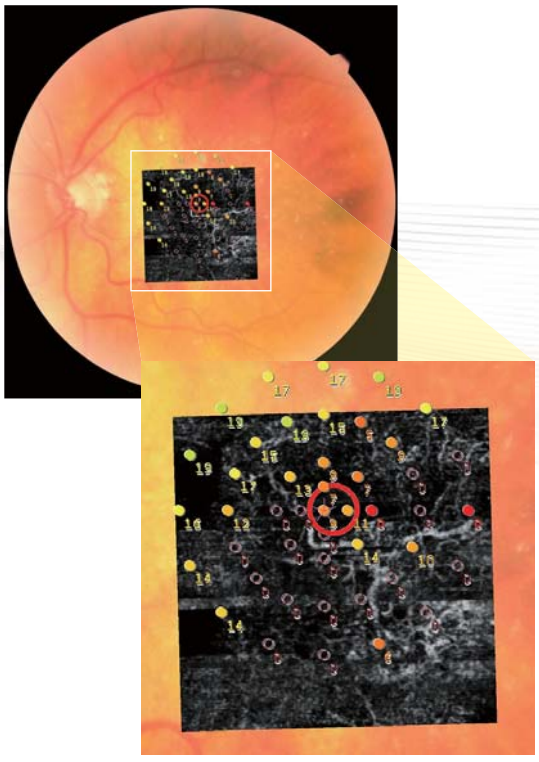


Structure

Function

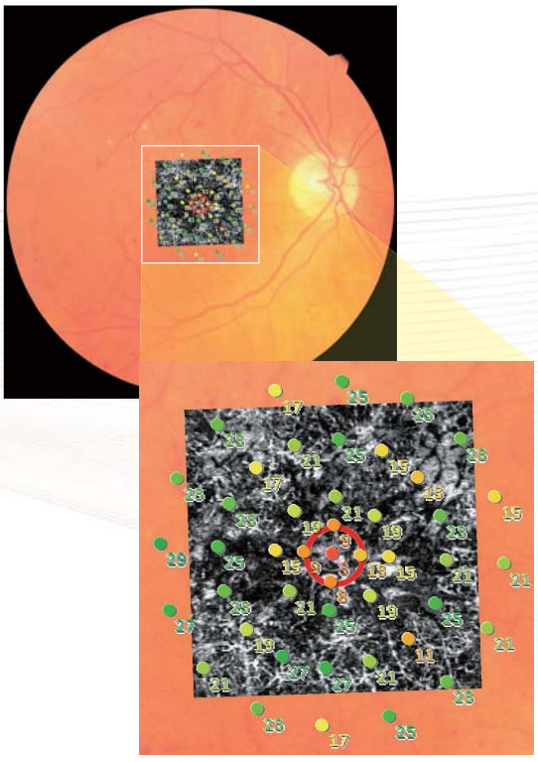
Clinical Case

Age-related Macular Degeneration (AMD)



OCT-Angiography + Microperimetry
(Outer retina)

Diabetic Macular Edema (DME)



OCT-Angiography + Microperimetry
(Deep capillary)

Images courtesy of Prof. S. Rizzo, MD and Dr. D. Bacherini, MD, University of Florence

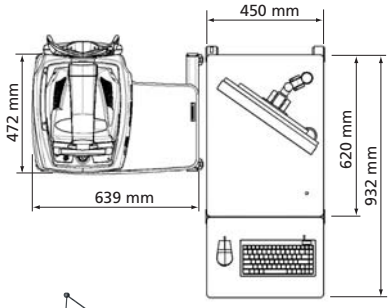
RS-3000 Advance 2 Specifications

OCT scanning	
Principle	Spectral domain OCT
Optical resolution	Z: 7 µm, X-Y: 20 µm
Scan range	X: 3 to 12 mm Y: 3 to 9 mm Z: 2.1 mm
Digital resolution	Z: 4 µm, X-Y: 3 µm
OCT light source	SLD, 880 nm
Scan speed	Up to 85,000 A-scans / s
Image averaging	Up to 120 images
Normative database area	9 x 9 mm (macula), 6 x 6 mm (disc)
Internal fixation lamp	637 nm
External fixation lamp	630/565 nm
Auto alignment	Z direction
Minimum pupil diameter	ø2.5 mm
Focus adjustment range	-15 to +10 D (VD=12 mm)
Working distance	35.5 mm
Software analysis	Segmentation of 6+1 retinal layers Macular thickness map RNFL thickness map [NFL+GCL+IPL] analysis Optic nerve analysis Follow-up analysis
Fundus surface imaging	
Principle	Confocal scanning laser ophthalmoscope (SLO light source: 785 nm)
Angle of view	40° x 30° (zoom: 20° x 15°)
PC networking	Available
Display	Tiltable 8.4-inch color LCD
Power supply	AC 100, 120, 230 V 50/60 Hz
Power consumption	300 VA
Maximum power output (transformer)	1,000 VA
Dimensions / Mass	380 (W) x 524 (D) x 515 (H) mm / 34 kg 15.0 (W) x 20.6 (D) x 20.3 (H)" / 75 lbs.
Optional accessories	Anterior segment module, motorized optical table, PC rack, long axial length normative database, AngioScan (OCT-Angiography)

Anterior segment module (optional)	
Software analysis	Corneal thickness measurement Corneal thickness map Angle measurement

Motorized optical table (optional)	
Dimensions/Mass	639 (W) x 472 (D) x 600 to 850 (H) mm / 28 kg 25.2 (W) x 18.6 (D) x 23.6 to 33.5 (H)" / 62 lbs.
Power supply	AC 100 V (available from the transformer) 50/60 Hz
Power consumption	150 W

PC rack (optional)	
Dimensions/Mass	620 (W) x 450 (D) x 700 (H) mm / 29 kg 24.4 (W) x 17.7 (D) x 27.6 (H)" / 64 lbs.



Product/Model name: Optical Coherence Tomography RS-3000 Advance
Brochure and listed features of the device are intended for non-US practitioners.
Specifications may vary depending on circumstances in each country.
Specifications and design are subject to change without notice.

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