

# NW500

Non-Mydriatic Retinal Camera



# Reliable, Sharp-Quality Imaging with Enhanced Capability

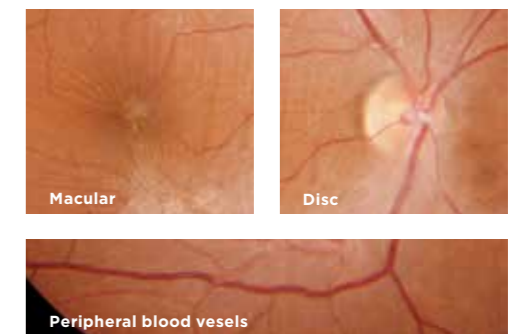
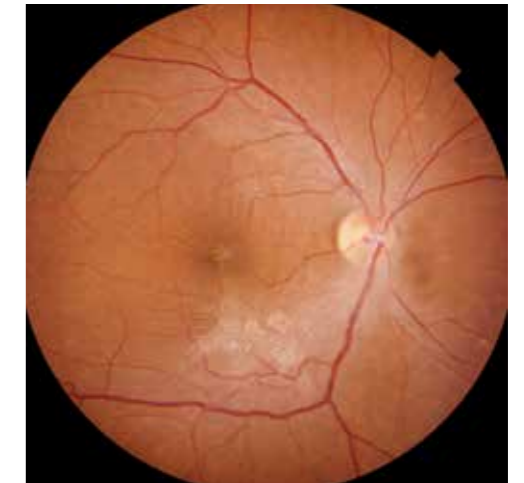
Small Pupil  $\Phi$  2.0mm or more<sup>1</sup>  
Wide 50° field of view



## Excellent Quality Fundus Image

At an angle of view of 50 degrees (approx. 74.9 degrees at the spherical center of the eye)<sup>5</sup>, the NW500 can capture a wider area than conventional models. Capable of capturing fundus images with a pupil diameter as small as 2.0mm, it provides sharp, detailed color fundus images in dark and brightly lit rooms.<sup>6</sup>

5.Xincheng Yao, Devrim Toslak, Taeyoon Son, Jiechao Ma. Understanding the relationship between visual-angle and eye-angle for reliable determination of the field-of-view in ultra-wide field fundus photography. Biomedical Optics Express, 2021 Sep 30;12(10):6651-6659.  
6. A room with a brightness of 623 lux or less



Courtesy: Tuskazaki Hospital, Japan

## OVERVIEW



Small Pupil Photography with  $\Phi$ 2.0mm or More<sup>1</sup>



Enhanced Quality 12MP Image Sensor<sup>2,3</sup>



Rapid and Fully-Automatic Capture by Single Touch



Rotating Monitor Allows Operator to **Optimise Position to Patients**



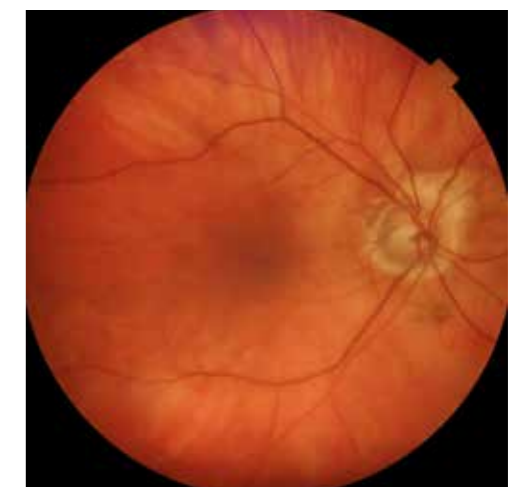
Small Footprint, **Space-Saving**



**Wide Variety** of Connectivity Options<sup>4</sup>

## Introducing New Slit Scan Photography

Innovative slit scan illumination and rolling shutter mechanism available in the NW500 make obtaining an excellent quality colour fundus image with less flare and less shadow possible.<sup>2</sup> The slit scan mechanism helps to overcome one of the known causes of poorly graded images in its ability to effectively image smaller pupils. This innovative technology also contributes to the NW500's ability to capture sharp-quality fundus images regardless of the miosis and lighting conditions, unlike conventional fundus cameras.



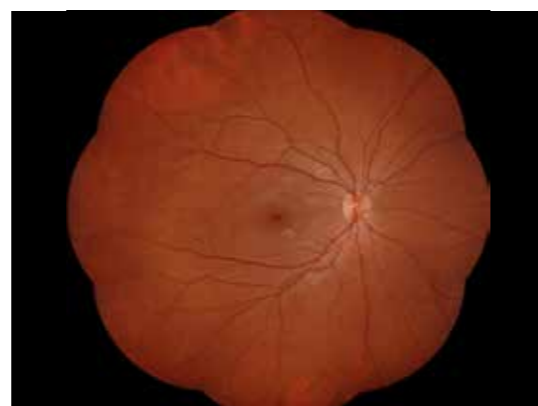
Cataract Eye, pupil size:  $\Phi$ 2.0mm  
Courtesy: Silicon Valley Eyecare Optometry and Contact Lenses in Santa Clara, CA

1. Confirmed with model eye  
2. As compared to Topcon non-mydratric retinal camera TRC-NW400  
3. Actual image size is 7.1MP  
4. Multiple connection with Direct DICOM, Ez Capture, IMAGEnet\*6, Shared folder and Direct Storage(USB/LAN)

## Panoramic Wide Field Photography<sup>7</sup>

In peripheral photography mode, up to 9 internal fixation positions are available to shoot peripheral areas, making it possible to create a wide panorama image with approx. 90 degree angle of view.

7. IMAGEnet\*6 is required to generate panoramic images.



## Ease of Use

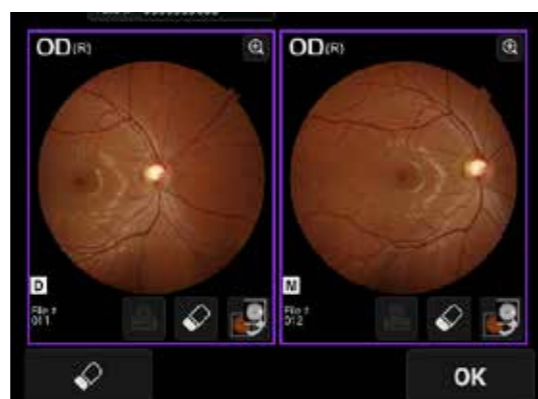
Alignment, Focusing, Shooting and movement between the right and left eye are operated automatically with a single touch, making the NW500 easy to operate<sup>10</sup>. The need to recapture is reduced even when taking pictures of eyes with small pupils, contributing to the overall efficiency of the fundus photography workflow.

10. In case auto-shoot setting is turned on.



## Bilateral 2-field photography

After capturing the optic nerve head, the fixation target automatically moves to the macula position and captures continuously. The NW500 allows users to confidently and smoothly shoot fundus photography at different fixation positions without the need for intermediate previews.



## Improved the Shooting Process Speed

The operation and shooting processing speed are improved compared to conventional fundus camera due to the new high-spec processor. Imaging of both eyes can now be completed in approx. 30 seconds<sup>11</sup>.

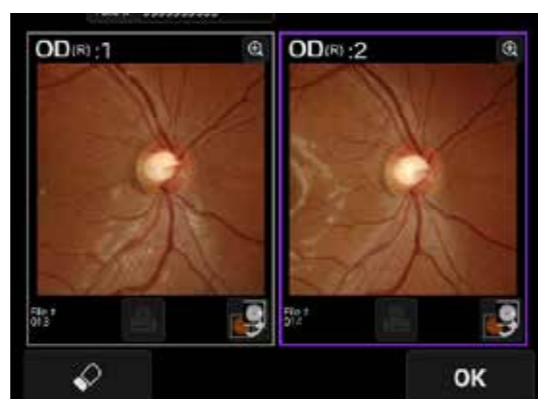
11. Based on the internal verification results. The shooting time depends on the environment of the examination room and the patient's conditions.



## Stereo Photography<sup>8,9</sup>

By displaying the left and right images side-by-side for stereoscopic viewing, it is possible to observe the shape and depression of the optic nerve head, as well as the state of compression and traction.

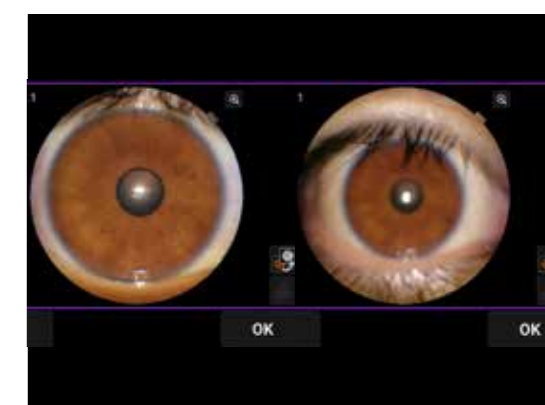
8. Performed on the monitor screen or IMAGEnet\*6  
9. Glasses for stereo viewing are not included



## Manual Photography

In manual mode, the camera will switch to the shooting screen without auto alignment or auto focus. While observing the live image displayed on the monitor, it is possible to capture any area including the pupil, iris, conjunctiva, etc.<sup>12</sup>

12. The intended use of manual photography mode is to capture the eye's appearance as a reference. It is not intended for diagnosis.



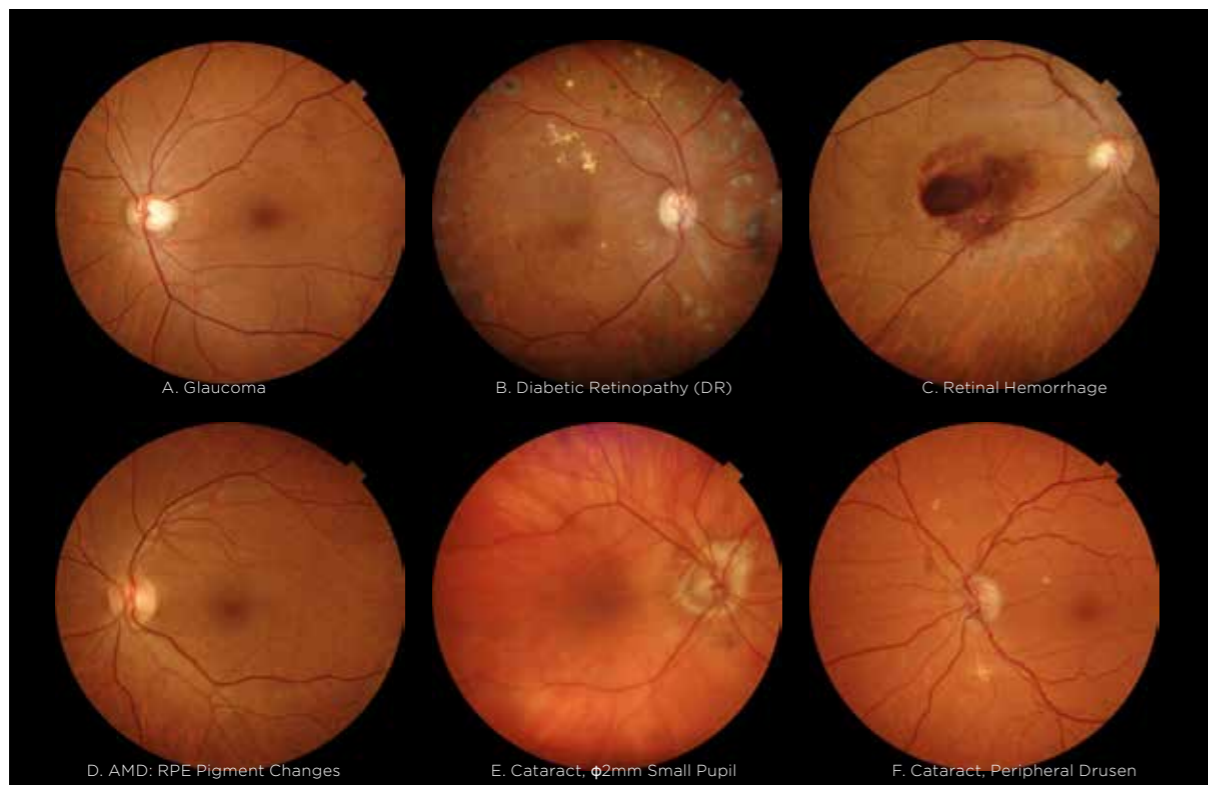
## OTHER FEATURES

### Space-Saving

The touch panel monitor offers 360 degrees of rotation, giving the operator the flexibility to capture fundus photography from virtually any position. The small footprint of the device means it can be installed virtually anywhere, allowing for optimal use of the examination room.



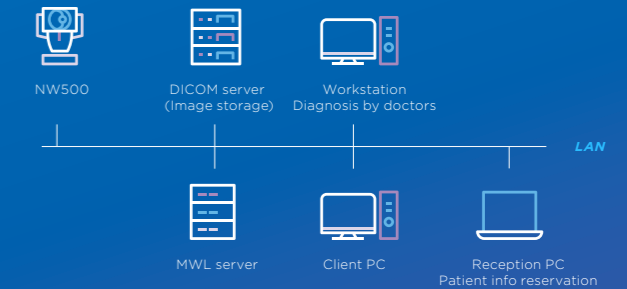
### Case Images



Images A-C: Courtesy of Tsukazaki Hospital, Hyogo, Japan.  
 Images D-F: Courtesy of Silicon Valley Eyecare Optometry and Contact Lenses in Santa Clara, CA.

### Direct DICOM

NW500 is DICOM compliant, making it easy to integrate with PACS and EMR programs.



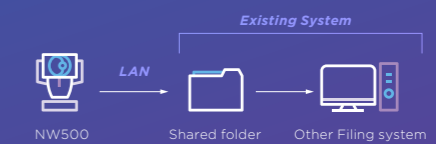
### Ez Capture/ IMAGEnet®6

Ez Capture is a standard capture software. NW500 also saves a digital image to IMAGEnet®6.



### Shared Folder

Save images directly into a shared folder on a network. By using a shared folder, third party software, such as AI diagnostic, can retrieve and save images from NW500 and save them into their software.



### Direct Storage

Direct Storage is the simplest configuration and does not require an external PC. Convenient for mobile stations or when a network is not used.



## CONNECTIVITY

## Specifications

<b>Angular field of view</b>	50°
<b>Operating distance</b>	35.5mm
<b>Pupil diameter for photography</b>	Normal : $\phi$ 2.5mm or more Small pupil: $\phi$ 2.0mm or more (confirmed with model eyes)
<b>Resolving power on fundus</b>	Color image-capturing <ul style="list-style-type: none"> <li>Center: 60 lp/mm or more</li> <li>Middle (r/2): 40 lp/mm or more</li> <li>Periphery (r): 25 lp/mm or more</li> </ul>
<b>Measuring range for the dioptric power of the patient's eye</b>	-33D to +40D -13D to +12D (When used without diopter correction lens) -33D to -12D (When used with the minus diopter correction lens) +11D to +40D (When used with the plus diopter correction lens)
<b>Internal fixation target</b>	OLED The display method is adjustable: <ul style="list-style-type: none"> <li>Positions</li> <li>Steady light/Blinking light</li> <li>Blinking speed</li> <li>Brightness</li> <li>Shapes</li> </ul>
<b>External fixation target</b>	LED <ul style="list-style-type: none"> <li>Auto-alignment</li> <li>Auto-focus (Usable only when used without diopter correction lens)</li> <li>Auto-shoot (Usable only when used without diopter correction lens)</li> <li>Auto-small pupil (Usable only when used without diopter correction lens)</li> </ul>
<b>Auxiliary functions for photography</b>	
<b>Power source</b>	
Source voltage	AC100-240V
Power input	70-120VA
Frequency	50-60Hz
<b>Dimensions and weight</b>	
Dimensions	332-426mm(W) x 540-680mm (D) x 519-769mm (H)
Weight	20kg

## Optional accessory



External fixation target  
**EF-2**



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**IMPORTANT** In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

Not available for sale in all countries. Please check with your local distributor for availability in your country.

**CAUTION** : Federal law restricts this device to sale by or on the order of a physician.

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