



# Kowa nonmyd WX<sup>3D</sup>

2D/3D non-mydratiatic retinal camera



Now  
approved  
by the NDESP

The Kowa nonmyd WX<sup>3D</sup> camera for retinal screening has been approved for digital photography use in Diabetic Eye Screening by the NHS Diabetic Eye Screening Programme

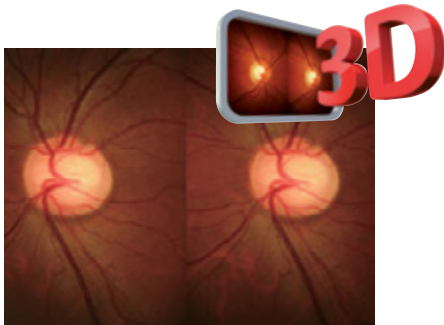
[www.kowamedical.com](http://www.kowamedical.com)

The Kowa **nonmyd WX<sup>3D</sup>** is a versatile retinal camera offering both stereo 3D and 2D images whilst maintaining Kowa's values of high quality imaging and ease of use

#### Key benefits

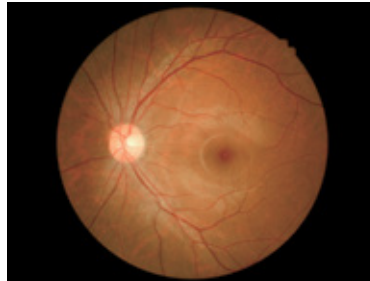
- Quick, incredibly detailed simultaneous stereo images in just one click
- Easy to use, reduced operator time
- High patient throughput
- Confidently assess and monitor patients suspected of having glaucoma
- Accurately verifies the physiological state of the cup and disc
- Proven Virtual Glaucoma Pathway solution
- Efficient work flow through advanced networking & connectivity

## 3 photography modes to choose from – simply change the photography mode in just one click!



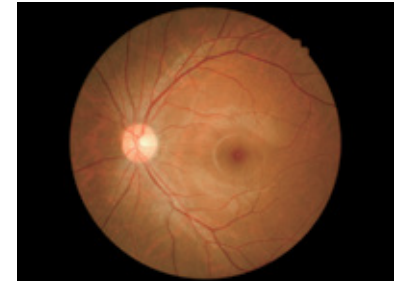
### Stereo 3D

- Field Angle 34°
- Instant & simultaneous  
3D photography available in 1 shot
- Stereoscopic images are captured  
without the camera shifting
- Stereoscopic 3D view of the ONH  
(Optical Nerve Head)



### Normal 2D

- Field Angle 45°
- Delivers extremely detailed images  
with SLR
- Automated 9 points fixation system  
allows mosaic photography  
covering a large retinal area and to  
identify peripheral pathologies



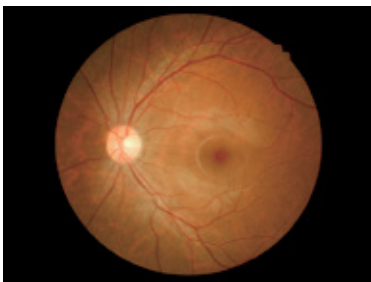
### Small pupil 2D

- On screen guides indicate if the  
pupil size is within the  
sufficient range (above 3.5mm)  
for photography

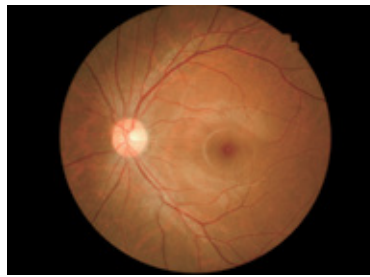


## Kowa VK-2 WX is a sophisticated software analysis tool for use with stereo images from the Kowa nonmyd WX<sup>3D</sup> camera

High quality 2D retinal images in one click in combination with the high resolution digital SLR camera. What's more, the nonmyd WX<sup>3D</sup> offers a small pupil mode of 3.5mm, together with an integrated 9 point fixation system for mosaic photography covering a wider area of the retina.



2D Normal mode. 45° field angle



2D Small Pupil mode below 3.5mm



Mosaic merge function

Examine the optic nerve quickly, easily and in far more detail than is possible from a standard 2-dimensional 2D image. This simple to use system provides a detailed quantitative display of optic disk parameters, including the vertical cup to disc ratio, neuroretinal rim area and rim to disk area along with many others.

## Incredibly detailed stereoscopic 3D images delivered through the 3D mode will help you diagnose your patients

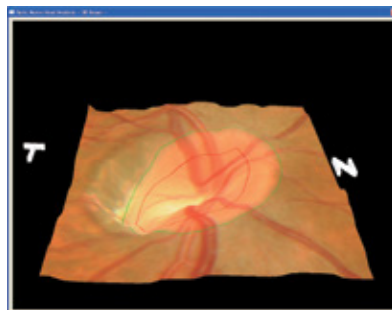
The Kowa nonmyd WX<sup>3D</sup> allows images of the ONH (Optical Nerve Head) and macula to be viewed in 3D, providing superior stereo images to support diagnosis of sight threatening conditions such as glaucoma.

## 3D analysis software

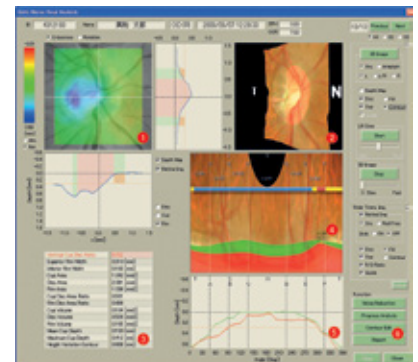
Kowa's 3D analysis software produces detailed quantitative analysis, including the DDLS (Disk Damage Likelihood Scale).



3D stereoscopic images in 1 shot



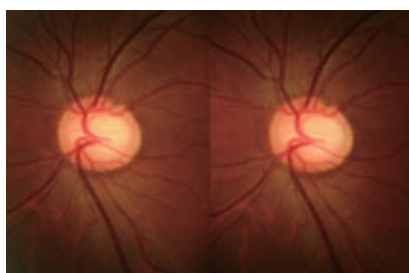
Stereo viewing of the optic cup and disk



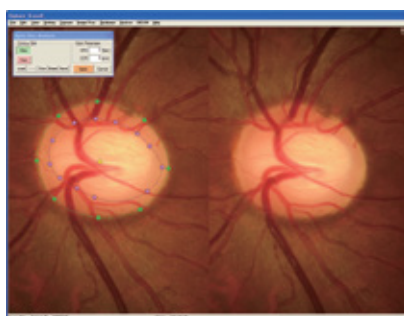


# Kowa VK-2 WX Analysis Software

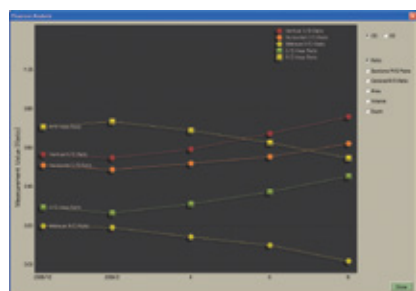
## 3D analysis in 5 simple steps



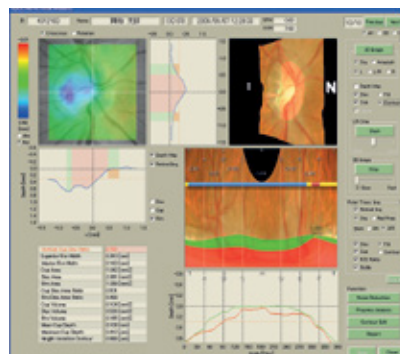
1 Photography by the Kowa nonmyd WX<sup>3D</sup>



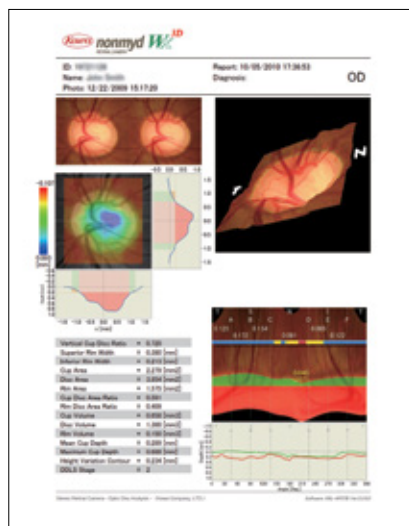
2 Determine the contour line for the cup & disc automatically or manually



4 Progression analysis

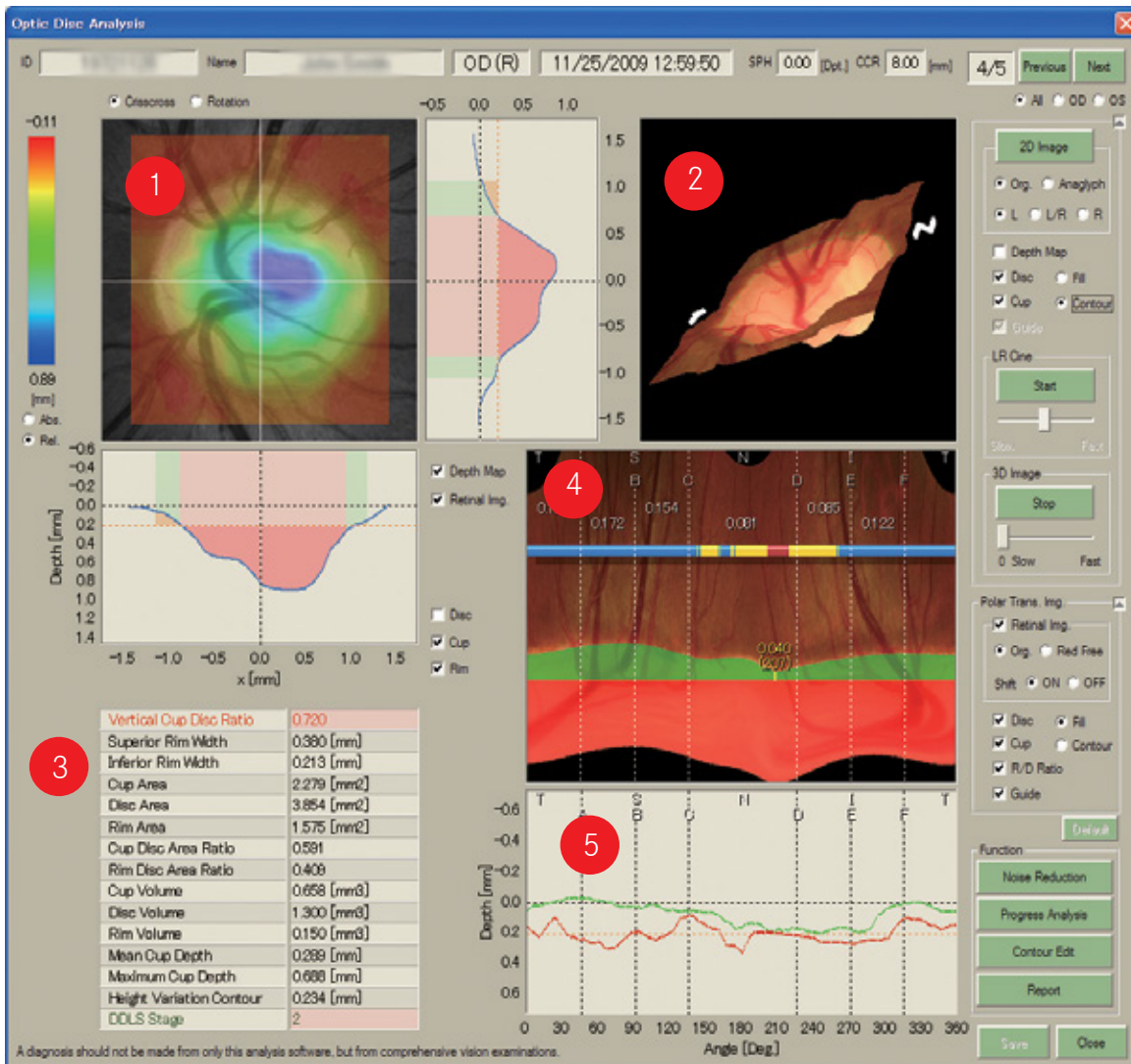


3 Immediate 3D analysis



5 Report print out

# Confidently diagnose your glaucoma patients with Kowa's VK-2 WX analysis software



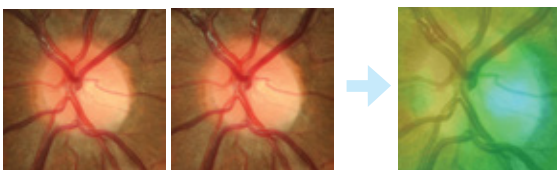
- 1 Depth Distribution**  
Colour-coded display of the depth distribution, with the ability to display graphically at any position
- 2 Cup & Disk**  
3D Display of Cup and Disk flickering
- 3 Numerical Data**  
Displays optic disk parameters including 'DDLS Stage' – Disk Damage Likelihood Scale
- 4 Polar Coordinates**  
Visually displays the location of the thinnest part of the disk rim
- 5 Contour line depth distribution graph**  
Graphical display of the depth distribution of cup and disk

Providing an incredibly detailed stereoscopic 3D view together with the comprehensive analysis system and report enables you to make an informed diagnosis for your patient

**Depth Distribution**

Colour-coded display of the depth distribution of the disk cupping and graphical cross section.

Normal Eye



Glaucoma Eye



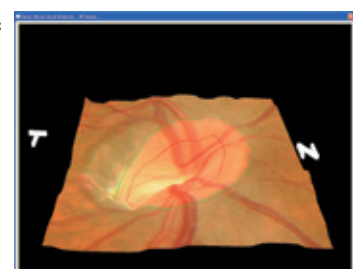
**DDLS (Disk Damage Likelihood Scale)**

Display of various optic disk parameters including the “DDLS” - Disk Damage Likelihood Scale; which was suggested by Dr. George L. Spaeth as a method to diagnose the optic disk using the disk size and rim/disk ratio. DDLS is a useful measurement to help categorize your patient’s glaucoma condition.

Numerical data analysis	
Vertical Cup DiskRatio	= 0.545
Superior Rim Width	= 0.265 (mm)
Inferior Rim Width	= 0.374 (mm)
Cup Area	= 0.382 (mm <sup>2</sup> )
Disk Area	= 1.591 (mm <sup>2</sup> )
Rim Area	= 1.209 (mm <sup>2</sup> )
Cup Disk Area Ratio	= 0.240
Rim Disk Area Ratio	= 0.760
Cup Volume	= 0.035 (mm <sup>3</sup> )
Disk Volume	= 0.418 (mm <sup>3</sup> )
Rim Volume	= 0.172 (mm <sup>3</sup> )
Mean Cup Depth	= 0.091 (mm)
Maximum Cup Depth	= 0.262 (mm)
Height Variation Contour	= 0.414 (mm)
DDLS Stage	= 2

	DDLS Stage	Narrowest rim width (rim/disk ratio) (Average disk size 1.50mm - 2.00mm)	Example
<b>At Risk</b>	1	<b>0.4</b> or more	
	2	<b>0.3</b> to <b>0.39</b>	
	3	<b>0.2</b> to <b>0.29</b>	
	4	<b>0.1</b> to <b>0.19</b>	
<b>Glaucoma Damage</b>	5	less than <b>0.1</b>	
	6	0 (extension: <b>less than 45°</b> )	
	7	0 (extension: <b>46° to 90°</b> )	
<b>Glaucoma Disability</b>	8	0 (extension: <b>91° to 180°</b> )	
	9	0 (extension: <b>181° to 270°</b> )	
	10	0 (extension: <b>more than 270°</b> )	

**Cup and Disc 3D display**



## Specifications

<b>Photography Modes</b>	Normal / SP / Stereo (electrically switched)	<b>Camera</b>	Specific Nikon digital SLR camera
<b>Stereoscopic photography method</b>	Simultaneous stereo photography	<b>Monitor</b>	5.7 inch LCD monitor
		<b>Internal fixation target</b>	Central, Disk, Macula, mosaic 9 positions
<b>Stereoscopic photography parallax</b>	7.4° (at the 0 diopter eye)	<b>External fixation target</b>	Red light (option)
<b>Field angle</b>	Normal mode: 45° SP mode: 45°* Stereo mode: 34° (20° x 27°) *Some eyes may cause flare around their circumference	<b>Optical head base adjustment range</b>	Moveable 40mm forward/backward Moveable 98mm leftward/rightward Moveable 27mm vertically (electric)
<b>Working distance</b>	30mm	<b>Chin rest adjustment range</b>	Moveable 55mm (electric)
<b>Minimum pupil size</b>	Normal mode: $\phi$ 4.0mm SP mode: $\phi$ 3.5mm Stereo mode: $\phi$ 4.0mm	<b>Interface</b>	USB
		<b>Power Supply</b>	Input: AC100~240V 50/60Hz Power Consumption : 150VA
<b>Compensation range of examined eye</b>	Without compensation : -12D ~ +13D Compensation - : -32D ~ -10D Compensation + : +10D ~ +35D	<b>Dimensions</b>	310(W) x 504(D) x 548(H)mm
<b>Focusing</b>	Split focusing bars coincidence	<b>Weight</b>	21kg / 46lbs (excluding attached digital SLR camera)
<b>Working distance adjustment</b>	2 luminous orbs		

## VK-2 WX Analysis Software system requirements

<b>CPU</b>	Celeron® 2.0GHz or higher
<b>Memory</b>	1GB or higher
<b>Monitor resolution</b>	SXGA or higher
<b>OS</b>	Windows® XP, Windows Vista®, Windows 7®

A diagnosis should not be made from only this analysis software, but from comprehensive eye examinations.

Images of the monitors are compositions.

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