



Video Measuring System

# NEXIV

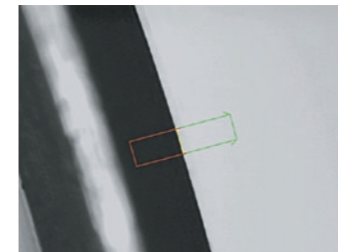
## VMZ-H3030

High-precision Model



# NEXIV VMZ-H3030

Achieves measurement at the highest precision of the NEXIV series, as well as advanced usability and performance.



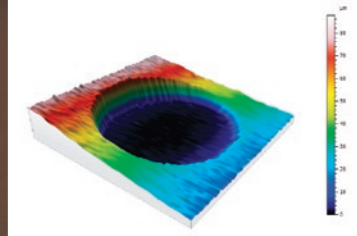
Finely machined part



Finely machined part



Molded part



3D image by MountainsMap X  
\*optional software



## Features

NEXIV model with the highest precision

E<sub>UX, MPE, E<sub>UY, MPE</sub> : **0.6 + 2L / 1000** μm</sub>

E<sub>UZ, MPE</sub> : **0.9 + L / 150** μm

XYZ Stroke: **300×300×150** mm

## Zooming heads

5 types of optical zoom systems

Type 1, 2, and 3 provide clear and low distortion image and high NA. Type 4 and TZ are designed to cover high magnification. 5 types are available to choose from to cover different fields of view and resolution requirements.

Zooming head	Optical magnification	Applications
Type 1	0.5X – 7.5X	Molds, mechanical parts (household, automobile), PCB, electronic parts, ceramic parts
Type 2	1X – 15X	
Type 3	2X – 30X	Electronic parts
Type 4	4X – 60X	High density package substrate (line width, height)
Type TZ	1X – 120X	Wafer pattern (WLP, bump height, rewiring mask, MEMS mask)

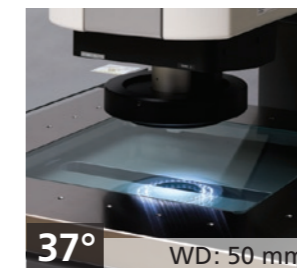
	0.5	1	2	4	7.5	8	15	16	30	32	60	64	120
Type 1	●	●	●	●	●								
Type 2		●	●	●	●	●	●						
Type 3			●	●	●	●	●	●	●	●			
Type 4				●	●	●	●	●	●	●	●	●	
Type TZ		●	●	●	●	●	●	●	●	●	●	●	●
Field of View	9.33 7.01	4.7 3.5	2.33 1.75	1.165 0.875	0.622 0.467	0.582 0.437	0.311 0.233	0.291 0.218	0.155 0.117	0.146 0.109	0.078 0.058	0.073 0.055	0.039 0.029

## Illumination

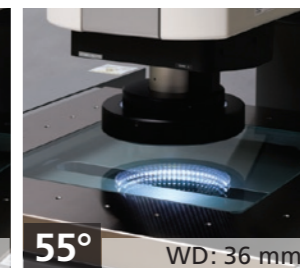
8-segment ring illuminator with three incident angles

The three different angles allow the ring illuminator to accurately capture edges. All illuminators employ white LED and provide stability and long life.

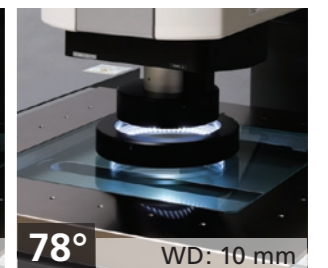
\*For Type4 and Type TZ, please refer to Specifications Chart of PG4



37° WD: 50 mm



55° WD: 36 mm



78° WD: 10 mm

Long WD

Short WD

## Software

Easy to use, streamlined software

Provides enhanced ease of use with the customizable GUI and versatility based on Nikon's years of extensive experience in developing the NEXIV series.

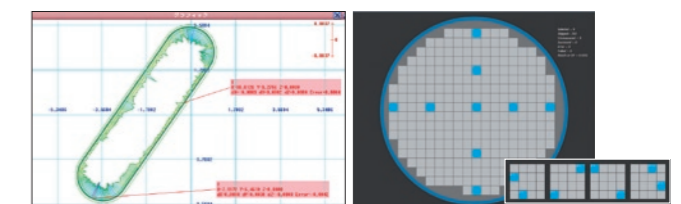
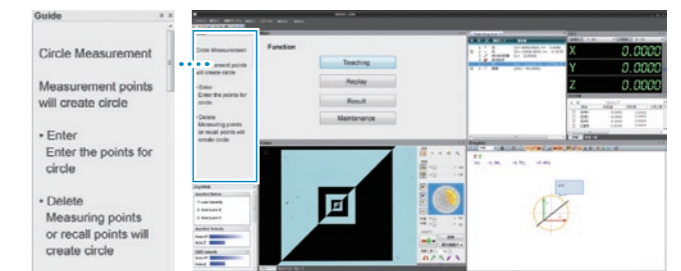
[Functions possible with software]

■ **Virtual (off-line)** ... CAD interface off-line teaching support program

■ **Profiler** ... CAD interface off-line teaching support program

■ **MountainsMap X (optional)** ... Sample surfaces can be analyzed, based on ISO, with the data exported from the NEXIV system.

■ **MapMeasure Pro (optional)** ... MapMeasure Pro creates wafer maps and is capable of automatically measuring any die on the wafer map. Tray maps can also be created.



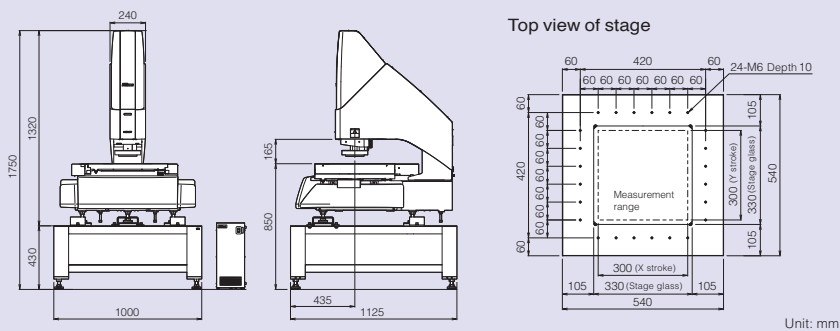
Profiler

MapMeasure Pro

# Specifications

Model		VMZ-H3030
XYZ Strokes	300×300×150 mm	
Minimum readout	0.01 μm	
Maximum sample weight	30kg (Accuracy guaranteed: 10kg)	
Maximum permissible error (for samples under 20 kg)	E <sub>UX</sub> ,MPE E <sub>UY</sub> ,MPE: 0.6+2L/1000 μm E <sub>UX</sub> ,MPE: 0.9+3L/1000 μm E <sub>UZ</sub> ,MPE: 0.9+L/150 μm	
Accuracy guaranteed temperature	20 °C ± 0.5 K	
Maximum driving speed XY, Z	100 mm/s , 50 mm/s	
Minimum driving speed XY, Z	0.01 mm/s , 0.001 mm/s	
Camera	VGA 1/3" B/W, Color *Color camera option is available only with Type 1, 2 and 3.	
Working distance	Type 1, 2, 3: 50 mm (10 mm when using 75 degree LED illumination) / Type 4: 30 mm Type TZ: 31 mm (low magnification), 11 mm (high magnification)	
Magnification and FOV	Type 1: 0.5~7.5×/9.33×7.01~0.622×0.467 mm Type 2: 1~15×/4.67×3.5~0.311×0.233 mm Type 3: 2~30×/2.33×1.75~0.155×0.117 mm Type 4: 4~60×/1.165×0.875~0.078×0.058 mm Type TZ: 1~120×/4.67×3.5~0.039×0.029 mm	
Autofocus	TTL Laser AF/Image AF	
Illumination		
	Type 1, 2, 3, and 4	Episcopic, diascopic, and 8-segment ring with 3 angles *All white LED/Type 4 has only 1 angle
	Type TZ	Episcopic, diascopic, darkfield
Power source	AC 100 - 240 V ± 10% 50/60 Hz	
Power consumption	5 A - 2.5 A	
Dimensions & weight		
	Main body with table (W×D×H)	1000×1125×1750 mm / approx. 500 kg
	Controller	190×450×440 mm / approx. 20 kg
Footprint (W×D)	3000×2800 mm	

## Dimensional diagram



Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. April 2023 ©2018-2023 NIKON CORPORATION  
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**WARNING** TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING THE EQUIPMENT.



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