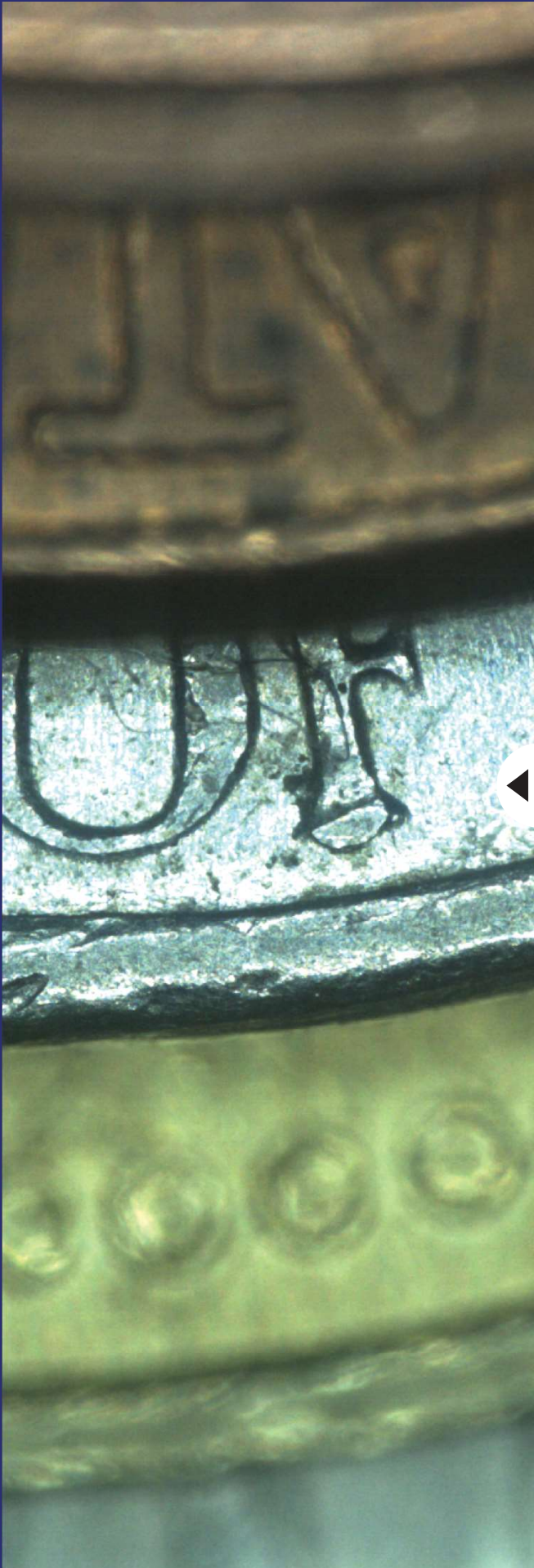


Wise Topo

Technology by MALS™

The World's First Real-time

All-in-Focus Optical Module

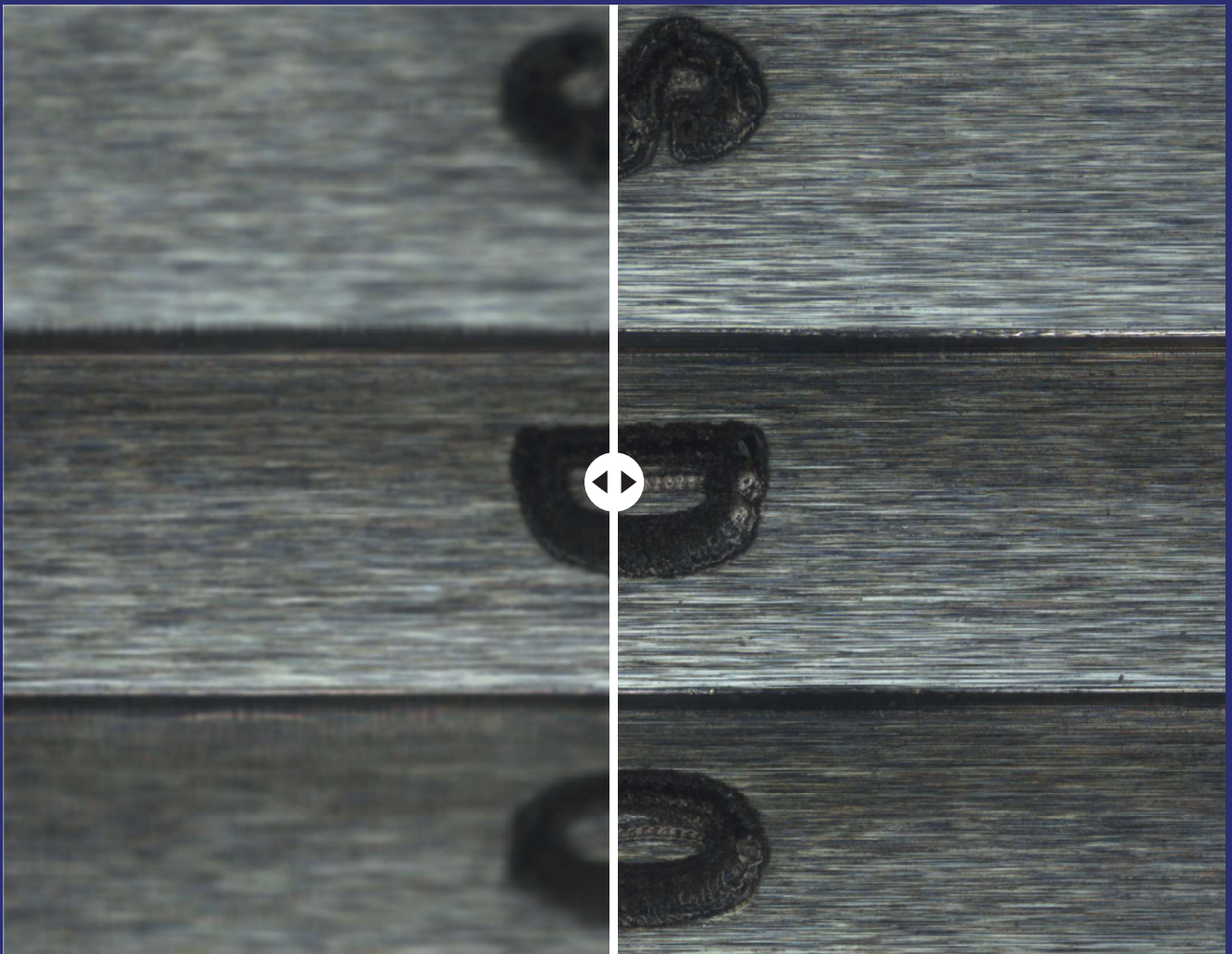


Imaging with Conventional
Microscope



Imaging with Microscope
+
WiseTopo

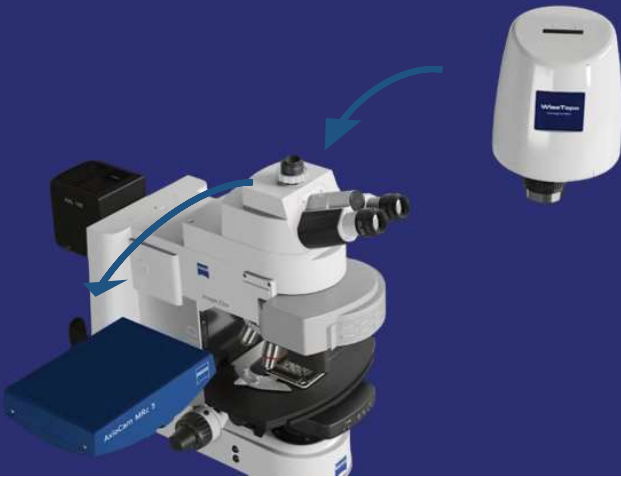
THE MOMENT INVISIBLE BECOMES **VISIBLE**



Imaging with Conventional
Microscope

Imaging with Microscope
+
WiseTopo

Our Wise Way to See the World in Focus



Replace

WiseTopo, a simple-to-attach add-on module, transforms any conventional microscope into real-time All-in-Focus microscope

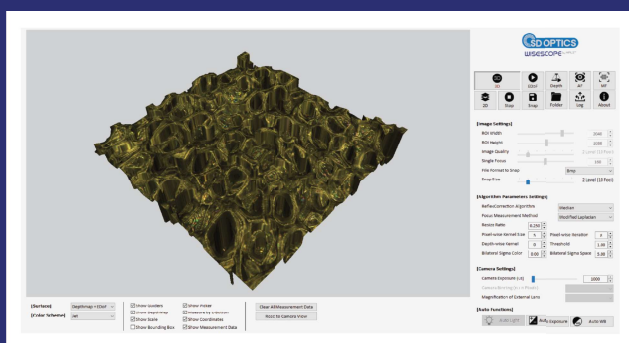
Install

WiseTopo optimized software provides multiple features for data acquisition, in-depth analysis and data visualization



View

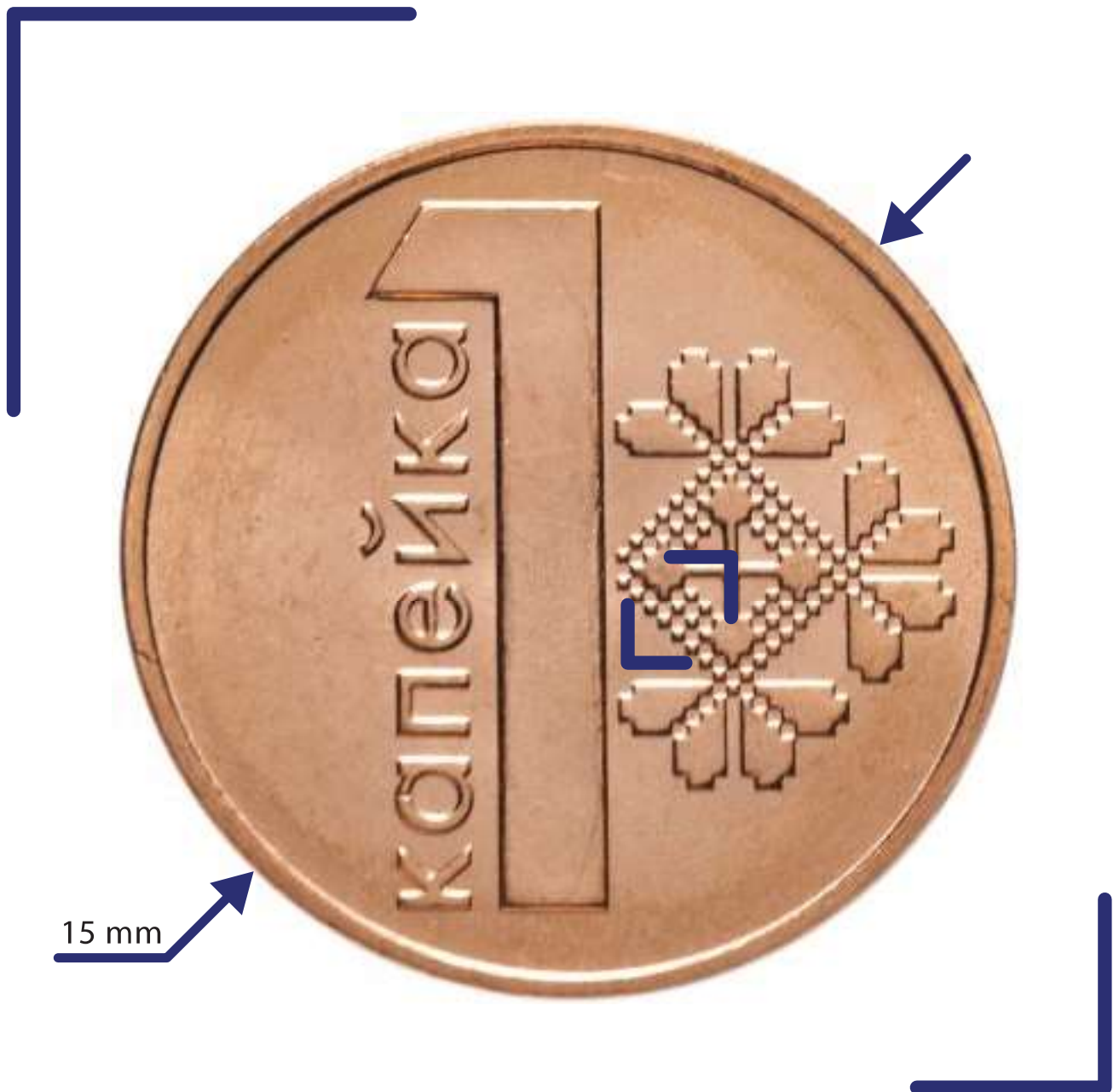
Explore real-time All-in-Focus images with WiseTopo. Enjoy intuitive understanding of your object



WiseTopo is based on MALS™ technology. **WiseTopo** delivers real-time All-in-Focus inspection and data process. **WiseTopo** gives unique features to conventional microscopes.

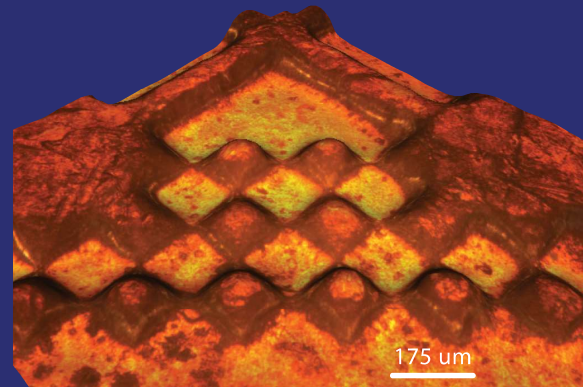


Easily Reveal Details in the Region of Interest



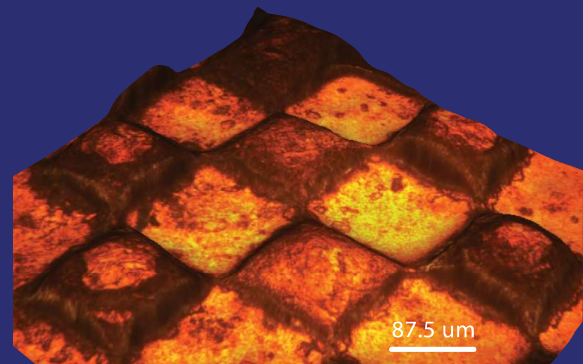
5x optical magnification

Identify a region of interest of the sample for more detailed inspection, navigate over your sample in 3D or 2D



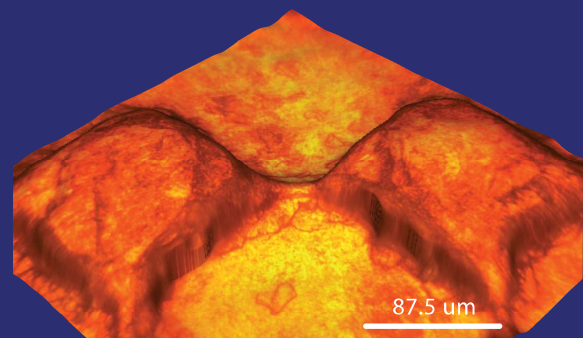
10x optical magnification

Inspect and measure with improved magnification in enlarged volume



20x optical magnification

Measure with high accuracy





Compatible Conventional

One Fits to





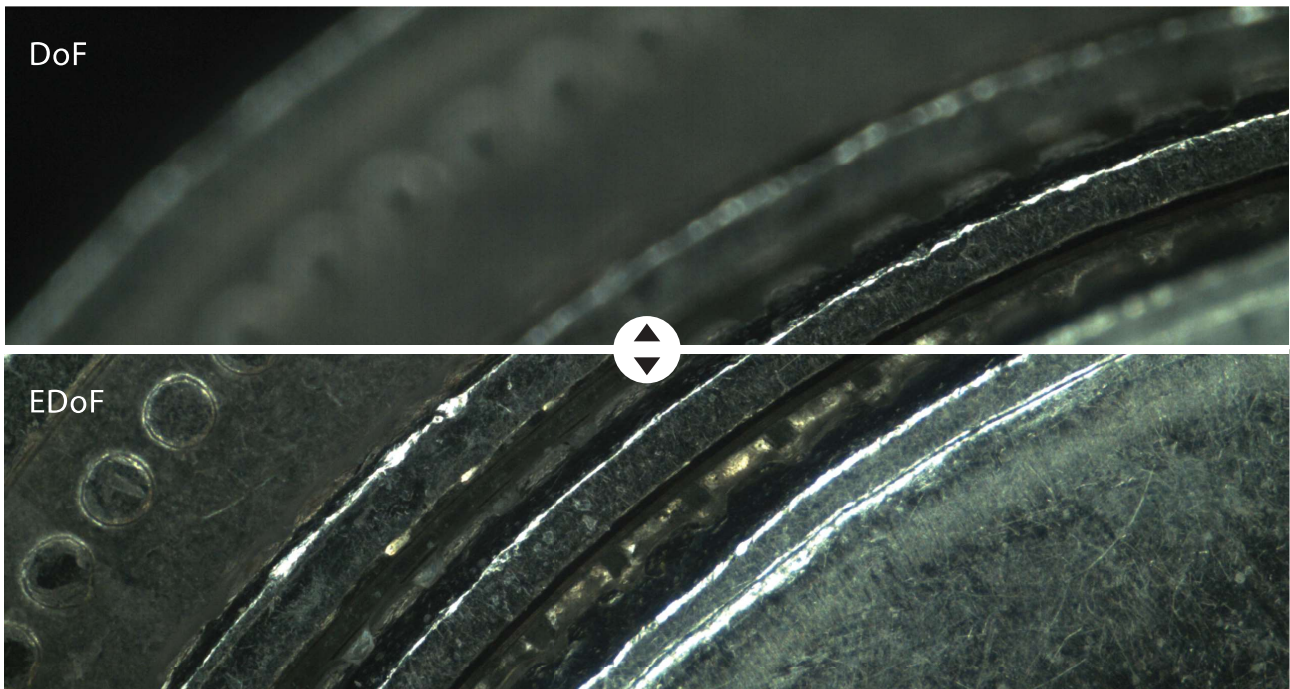
Compatible with Microscopes

of Any Type



Perfect Partner to Solve the Unsolved

Extended Depth of Field with no Mechanical Adjustment



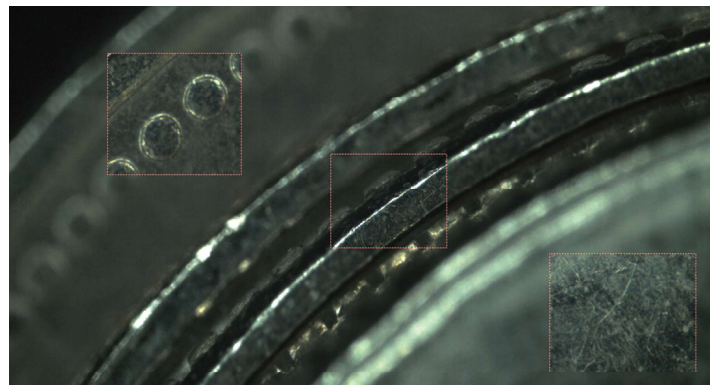
Extended Depth of Field (EDoF) is driven by fast variable focus lens MALS™ technology that provides:

- EDoF upto 40x DoF
- Control over accuracy
- Control over range
- Control over positions

Multi-ROI Imaging with Individual AF/ EDoF / 3D

WiseTopo Multi-ROI is:

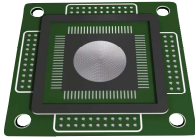
- Control of AutoFocus (fixed/continuous)
- Control of EDoF (range/accuracy/quality)
- Control of 3D Data Acquisition



Driven by MALS™ Technology

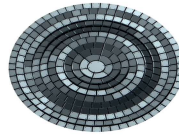
MALS™

Reflective type lens manufactured with semiconductor Wafer



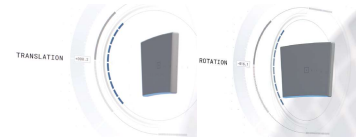
Micro-mirror Array

Consist of thousands of micro sized Micro-mirror Array



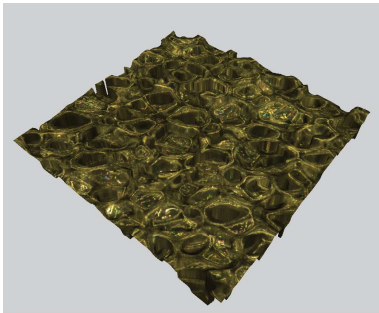
Micro-mirror

Fine control of each Micro-mirror in 3 axes



For further information visit: www.sdoptics.com

Intuitive 3D Image Display

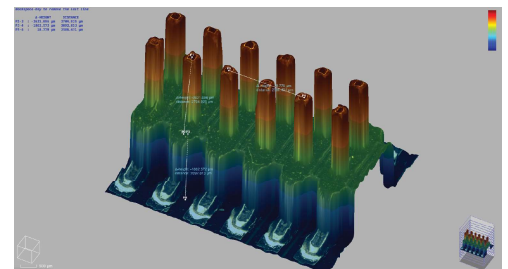


The speed of the data acquisition and processing by **WiseTopo** allows to visualize 3D structures in real-time. The visualization can be done on the PC screen or on the VR/AR glasses. Visualization on VR/AR glasses or specialized PC screen offers a stereo vision impression.

3D representation of the surface roughness

2D/3D Data Acquisition

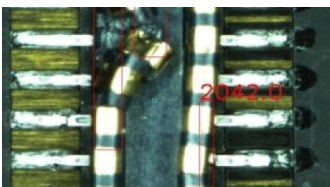
WiseTopo software offers a number of functions control 3D data acquisition, accurate measurements in 3D space and storing images and data in popular formats ready for sophisticated topography analysis software.



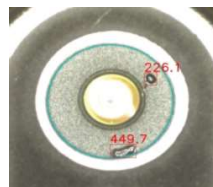
Results of the 3D measurements on 3D microscopic structure in real-time

Failure Analysis*

*Customization needed. Develop upon request



Damage on Connector



Chipping on Barrel

WiseTopo software offers multiple solutions for advanced failure analysis:

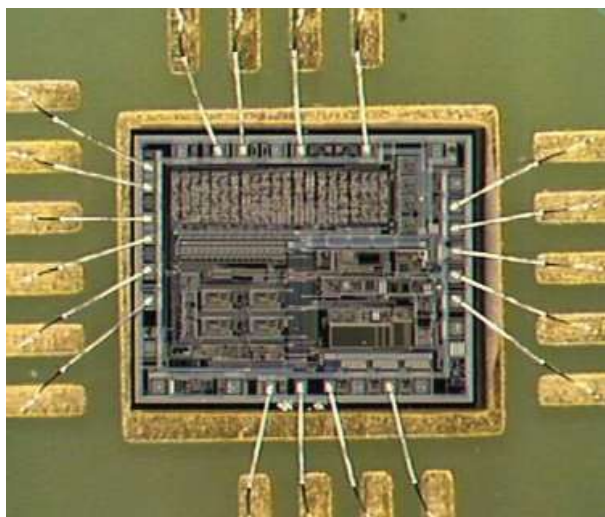
- Identification of damaged connectors
- Identification of Chipping on Barrel
- Wire inspection and more.

WiseTopo at Line

WiseTopo meets requirements on speed and accuracy at modern laboratories, quality control centers and production lines.

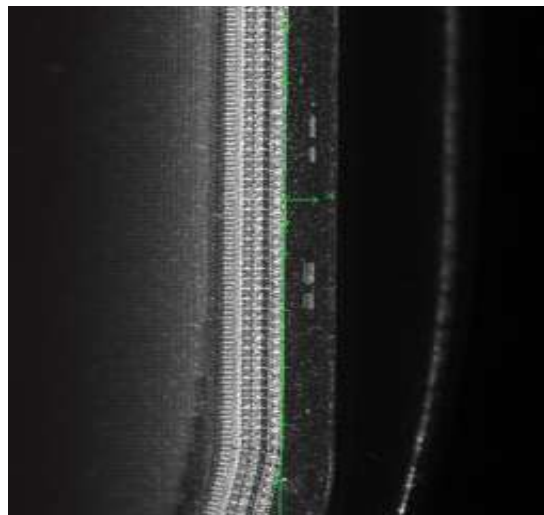
WiseTopo features suit various industries and improve productivity for operators of various skills.

Inspection

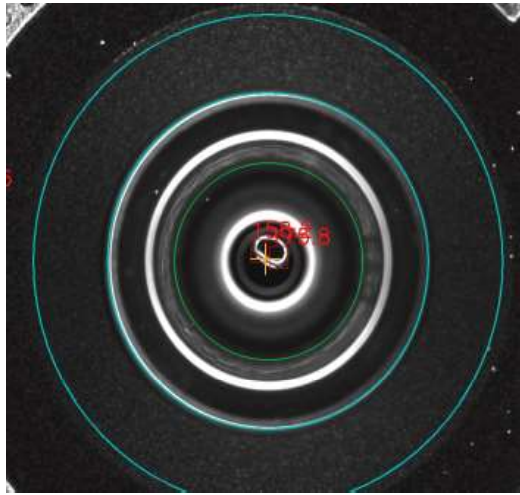


Wire - bonding Inspection

Display Panel Inspection



Major Process in Production



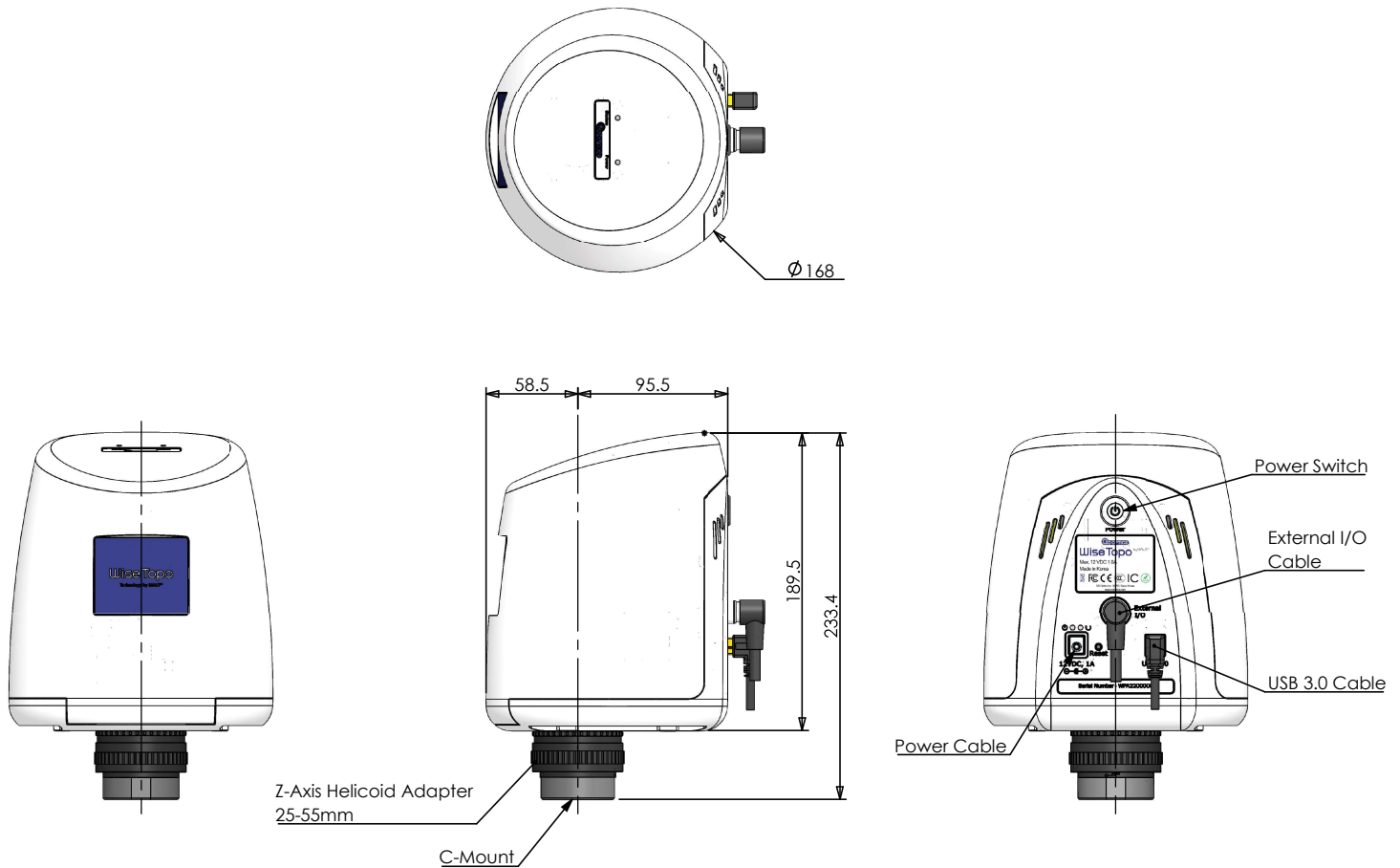
Camera Module Production

Alignment

Multi-chip Packaging



Specification



Mechanical Interface Parameters

Model	WiseTopo
Dimension [mm]	$\varnothing 168 \times 238$
Weight [kg]	< 3
Mount	C-Mount

Image Sensor Parameters

Sensor Size	2/3" (8.41 mm x 7.06 mm)
Resolution [px]	2448 x 2049 (5 MP)
Pixel Size [μm]	3.45

Magnification-dependent Imaging Parameters*

Objective Magnification	5x	10x	20x	40x
Objective NA ¹	0.13	0.25	0.5	0.65
Field of View [mm]	1.68 x 1.40	0.84 x 0.70	0.42 x 0.35	0.21 x 0.18
Depth of Field ² [um]	32.5	8.8	2.2	1.3
Extended Depth of Field ³ [um]	614.8	153.7	38.4	9.6

¹Objective NA: Typical sample values at each magnification to calculate Depth of Field.

²Depth of Field: Convert from NA values.

³Extended Depth of Field: Design Value.

*Note that parameters could be different depending on microscope system configurations.

Z-axis resolution differs relative to the objective parameter.

Electrical Interface Parameters

Mains Voltage	12V DC	PC Requirements	CPU: > Intel Core I5 RAM: > 16 GB Disk Storage: >1GB Port: USB 3.0 Windows 10 64-bit
Power Consumption	MAX 1A (<12W)		
External I/O Port	Isolated: Trigger1, Trigger2, Scenario End Non-Isolated: Strobe Out		
Data Interface	USB 3.0 (USB 3.2 Gen 1x1)		
Operation Temperature	15°C ~ 30°C		
Operation Humidity	RH ≤ 90% non-condensing		
Conformity	CE FCC IC CCC VCCI RoHS		

Subject to change in design and scope of delivery and as a result of ongoing technical development.
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