Basic Information

cnoec.com

- Place of Origin:
- Brand Name:
- Certification:
- Model Number:
- Minimum Order Quantity: 1 pc
- Price:
- Packaging Details:
- Delivery Time:
- Payment Terms: T/T, West Union, Paypal

Opto-Edu (Beijing) Co., Ltd.

China

CE, Rohs

A64.5401

5~20 Days

5000 pcs/ Month

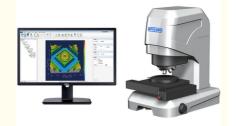
CNOEC, OPTO-EDU

FOB \$1~1000, Depend on Order Quantity

Carton Packing, For Export Transportation

Supply Ability:

OPTO-EDU



Product Specification

- Measuring Principle:
- Microscope Objective Lens: 10×(Standard), 20×, 50×, 100×(Optional)

Confocal Optical System

- Field Of View: 160×160 µm~1.6×1.6 Mm
- Scanning Frame Rate*1: ≥10HZ
- Z-direction Movement 100 Mm Range:
- Objective Lens Tower: 5-
- Highlight:

5-hole Motorized

t: OPTO EDU Laser Confocal Microscope, 10× Laser Confocal Microscope

► A64.5401 Features

1) The measurement and analysis software with integrated operation does not need to switch the interface for operation, and the configuration parameters are set in advance before measurement. The software automatically counts the measurement data and provides the data report export function, which can quickly realize the batch measurement function.

2) Provide automatic multi-area measurement function, batch measurement, automatic focus, automatic brightness adjustment and other automatic functions.3) Provide stitching measurement function.

4) Provide data processing functions of the four modules of position adjustment, correction, filtering and extraction. Position adjustment includes functions such as image leveling and mirroring; correction includes functions such as spatial filtering, retouching, and peak denoising; filtering includes functions such as shape removal, standard filtering, and spectral filtering; extraction includes functions such as extracting regions and extracting profiles.

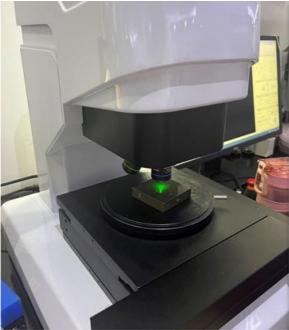
5) Provide five major analysis functions including geometric profile analysis, roughness analysis, structure analysis, frequency analysis and function analysis. Among them, the geometric profile analysis includes features such as step height, distance, angle, curvature and other functions, and straightness, roundness tolerance evaluation and other functions; roughness analysis includes line roughness according to international standards ISO4287, ISO25178 surface roughness, ISO12781 leveling Degree and other full-parameter analysis functions; structural analysis includes pore volume and trough depth, etc.; frequency analysis includes functions such as texture direction and spectrum analysis; functional analysis includes functions such as SK parameters and volume parameters.
6) Provide auxiliary analysis functions such as one-key analysis and multi-file analysis, set analysis templates, combined with the automatic measurement and batch measurement

analysis templates, combined with the automatic measurement and batch measurement functions provided in the measurement, it can realize the batch measurement of small-sized precision devices and directly obtain the analysis data.



Confocal microscope is a testing instrument used for nanometer measurement of various precision devices and materials. It is based on the principle of confocal technology, combined with porous disk parallel scanning technology, precise Z-direction scanning module, 3D modeling algorithm, etc. to perform non-contact scanning on the surface of the device and establish a surface 3D image. The 3D image of the device surface is performed through the system software. Data processing and analysis,

and obtain 2D and 3D parameters reflecting the surface quality of the device, so as to realize the optical inspection instrument for 3D measurement of the surface topography of the device.



A64.5401 OPTO-EDU Confocal Microscope

Confocal microscopes can be widely used in semiconductor manufacturing and packaging process inspection, 3C electronic glass screens and their precision accessories, optical processing, micro-nano material manufacturing, automotive parts, MEMS devices and other ultraprecision processing industries, as well as aerospace, defense and military industry, scientific research In institutions and other fields. It can measure all kinds of object surfaces ranging from smooth to rough, low reflectivity to high reflectivity, and roughness, flatness, micro-geometric contour, curvature, etc. of workpieces ranging from nanometer to micrometer level. Provided in accordance with ISO/ASME/EUR/GBT The four major domestic and foreign standards total more than 300 2D and 3D parameters as evaluation criteria.

A64.5401 Specification







Measuring principle Confocal optical system Microscope objective lens 10-(Standard), 20x, 50x, 100-(Optional) Field of view 160x160 µm-1.6x1.6 mm Scanning frame rate*1 ≥10HZ Scanning frame rate*1 ≥10HZ Microscope objective lens Accuracy'2 ± (0.2+L/100) µm Display resolution 0.5mm repeatability*3 20x: 100nm; 50x: 30nm Accuracy*3 ± 2% Display resolution 1nm Accuracy*3 ± 2% Display resolution 1nm size 210x210 mm XY displacement Moving range 100x100 mm platform Control method electric Z direction movement range 100 mm Control method Objective lens tower 5-hole motorized Illumination light source LED Morking environment 459x, 330x540mm Yota weight 45kg Power supply AC220V/50Hz Working environment Temperature 10*C~35*C, temperature states 1*C/15 minutes, humidity 30~80%, Yibration <0.002g, less than 15H		A64.5401 C	onfocal Microscope Technical Specification Sheet
Field of view 160x160 µm^-1.6×1.6 mm Scanning frame rate*1 ≥10HZ Height measurement Accuracy*2 ± (0.2+L/100) µm Display resolution 0.5mm Width measurement Accuracy*3 ± 2% Display resolution 1mm Size 210×210 mm XY displacement Moving range 100×100 mm Load 10kg Control method electric Z direction movement range 100 mm Objective lens tower 5-hole motorized Ilight source LED Ilight source LED Working environment 540x390x540mm Total weight 45kg Power supply Ac2220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1°C/15 minutes, humidity 30~80%, Vibration <-0.002g, less than 15Hz	Measuring principle		Confocal optical system
Scanning frame rate*1 ≥10HZ Height measurement Repeatability*2 20x: 40nm; 50x: 20nm; 100x: 20nm Accuracy*2 ± (0.2+L/100) µm Display resolution 0.5nm Width measurement Accuracy*3 ± 2% Display resolution 1nm size 210x210 mm XY displacement Moving range 100x100 mm Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Illumination Iside source 540x330x540mm Total weight 45kg 45kg Power supply Accuracy (2 uvs 40 ming 100x100 mm concervent range Vortice: *1 Use a 20x lens to measure a 4.7µm standard step sample block at an ambient temperature of 20±2°C. *2 Measure the 4.7µm standard step sample block at an ambient temperature of 20±2°C. *2 Working environment Model Field of View Working Distance (W.D.) Numerical Aperture (N.A.) 100 *160 µm 0.25 20X 800x 91.31 mm 0.40 50x 320.x30 µm 0.38 mm 0.75 100X 160x1600 µm 0.21 mm 0.90 100 *160 µm 0.21 mm 0.90 1, A64.5401 Main body 2) Yer displacement stage 3) Brand computer <td colspan="2"></td> <td>10×(Standard), 20×, 50×, 100×(Optional)</td>			10×(Standard), 20×, 50×, 100×(Optional)
Repeatability*2 20x: 40nm; 50x: 20nm; 100x: 20nm Height measurement Accuracy*2 ± (0.2+L/100) µm Display resolution 0.5nm Width measurement Accuracy*3 ± 2% Display resolution 1nm XY displacement bize 210x210 mm Vidth measurement Accuracy*3 ± 2% Display resolution 1nm XY displacement Moving range 100x100 mm Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Illumination glipt source LED Working environment 45kg Power supply ACc220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Field of view		160×160 μm~1.6×1.6 mm
Height measurement Accuracy*2 ± (0.2+L/100) µm Display resolution 0.5nm Width measurement repeatability*3 20×: 100nm; 50×: 50nm; 100×: 30nm Accuracy*3 ± 2% Display resolution 1nm size 210×210 mm XY displacement Moving range 100×100 mm Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Illumination ight source LED Moving environment 590×390×540mm 590×390×540mm Total weight 45kg 4220V/50Hz Power supply AC220V/50Hz Temperature 10°C~35°C, temperature of 20±2°C. *2 Measure the 4.7µm standard step sample block at an ambient temperature of 20±2°C. *2 Measure the 4.7µm standard step sample block at an ambient temperature of 20±2°C. *2 Measure the 4.7µm standard step sample block at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of	Scanning frame rate*1		≥10HZ
Display resolution 0.5m Width measurement Accuracy'3 ± 2% Display resolution 1nm XY displacement Moving range 100×100 mm Load 10kg Control method electric Z direction movement range 100 mm Objective lens tower 5-hole motorized Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply Acc220V/50Hz Working environment 45kg Notice: *1 Use a 20x lens to measure a 4.7µm standard step sample block at an ambient temperature of 20±2°C. *2 Measure the 4.7µm standard step sample block at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C	Height measurement	Repeatability*2	20×: 40nm; 50×: 20nm; 100×: 20nm
Width measurement repeatability'3 20x: 100nm; 50x: 50nm; 100x: 30nm Accuracy'3 ± 2% Display resolution 1nm size 210x210 mm Width measurement size 210x210 mm platform Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination Iight source LED Maximum output 840mW Dimensions 590x390x540mm Total weight 45kg Power supply AC220V/50Hz Working environment Vibration <0.002g, less than 15Hz		Accuracy*2	± (0.2+L/100) μm
Width measurement Accuracy'3 ± 2% Display resolution 1nm XY displacement Moving range 100×100 mm Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply Acc220V/50Hz Working environment Temperature 10°C ~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz		Display resolution	0.5nm
Display resolution 1nm XY displacement platform size 210×210 mm Moving range 100×100 mm Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Width measurement	repeatability*3	20×: 100nm; 50×: 50nm; 100×: 30nm
size 210×210 mm Y displacement Moving range 100×100 mm platform Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Illumination Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz		Accuracy*3	± 2%
Moving range 100×100 mm platform Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Illumination Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz		Display resolution	1nm
Interpretation Interpretation platform Load 10kg Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	· ·	size	210×210 mm
Internation Internation Control method electric Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Illumination fight source LED Maximum output 840mW S90×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <-0.002g, less than 15Hz		Moving range	100×100 mm
Z-direction movement range 100 mm Objective lens tower 5-hole motorized Illumination light source LED Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz		Load	10kg
Objective lens tower 5-hole motorized Illumination light source LED Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz		Control method	electric
Illumination light source Maximum output LED Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Z-direction movement range		100 mm
Illumination Instruction Maximum output 840mW Dimensions 590×390×540mm Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Objective lens tower		5-hole motorized
Maximum output840mWDimensions590×390×540mmTotal weight45kgPower supplyAC220V/50HzWorking environmentTemperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	III. main ati an	light source	LED
Total weight 45kg Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Illumination	Maximum output	840mW
Power supply AC220V/50Hz Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Dimensions		590×390×540mm
Working environment Temperature 10°C~35°C, temperature gradient <1 °C/15 minutes, humidity 30~80%, Vibration <0.002g, less than 15Hz	Total weight		45kg
Working environment Vibration <0.002g, less than 15Hz	Power supply		AC220V/50Hz
Notice: *1 Use a 20x lens to measure a 4.7µm standard step sample block at an ambient temperature of 20±2°C. *2 Measure the 4.7µm standard step sample block at an ambient temperature of 20±2°C with a lens of 20 times or more. *3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. Model Field of View Working Distance (W.D.) Numerical Aperture (N.A.) 10X 1600×1600 µm 10.6 mm 0.25 20X 800×800 µm 1.3 mm 0.40 50X 320×320 µm 0.38 mm 0.75 100X 160×160 µm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module	Working environment		
*3 Use a lens of 20 times or more to measure the standard reticle sample at an ambient temperature of 20±2°C. Model Field of View Working Distance (W.D.) Numerical Aperture (N.A.) 10X 1600×1600 µm 10.6 mm 0.25 20X 800×800 µm 1.3 mm 0.40 50X 320×320 µm 0.38 mm 0.75 100X 160×160 µm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module	Notice: *1 Use a 20x I	ens to measure a 4.7µm	
Model Field of View Working Distance (W.D.) Numerical Aperture (N.A.) 10X 1600×1600 µm 10.6 mm 0.25 20X 800×800 µm 1.3 mm 0.40 50X 320×320 µm 0.38 mm 0.75 100X 160×160 µm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module			
Objective lens specifications 10X 1600×1600 µm 10.6 mm 0.25 20X 800×800 µm 1.3 mm 0.40 50X 320×320 µm 0.38 mm 0.75 100X 160×160 µm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module			
Objective lens specifications 20X 800×800 µm 1.3 mm 0.40 50X 320×320 µm 0.38 mm 0.75 100X 160×160 µm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module	Objective lens specifications		
50X 320×320 µm 0.38 mm 0.75 100X 160×160 µm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module			· · · · · · · · · · · · · · · · · · ·
100X 160 μm 0.21 mm 0.90 1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module			
1) A64.5401 Main body 2) XY displacement stage: automatic displacement stage 3) Brand computer 4) System calibration module			
2) XY displacement stage: automatic displacement stage3) Brand computer4) System calibration module			
3) Brand computer 4) System calibration module			
4) System calibration module			
of objetion	Product configuration list		
Standard configuration:	, v		

	6) Confocal microscope software
	7) Instrument accessories box
	8) Product manual
	9) Product certificate, warranty card
	1) Measuring objective lens:20×, 50×, 100×
Optional	2) Vacuum suction table (for semiconductor wafers): 6 inches, 8 inches;
	3) Automatic measurement splicing measurement function module (requires hardware
	support)

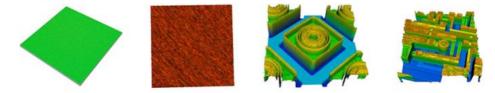
A64.5401 Application Areas



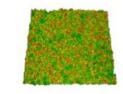
Perform surface topography features such as surface contours, surface defects, wear conditions, corrosion conditions, flatness, roughness, waviness, pore gaps, step heights, bending deformations, and processing conditions of various products, components and materials. Measurement and analysis.

Application example:

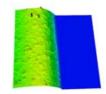
Semiconductor. Polished silicon wafers, thinned silicon wafers, wafer ICs



▶ 3C Electronics. Roughness of sapphire glass, flaws in mobile phone metal shell mold, and poor height of mobile phone ink screen

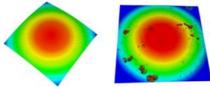


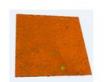




Ultra-precision processing. Optical lens

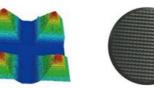
Precision machining. Engine blades



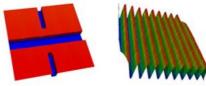




Precision machining. Pyramid diamond head

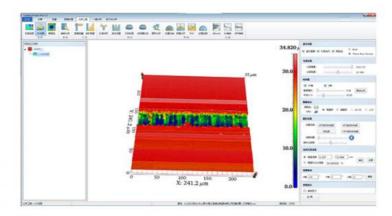






▶ 4.1 High Precision And High Repeatability

The measurement system composed of low-noise imaging sensors, high-performance optical components and encoders, and excellent 3D reconstruction algorithms ensure the measurement that meets the standards; rooted in the measurement industry for many years, the same line of industrial design and top processing level ensure a high level The measurement repeatability.



► 4.2 High-speed Parallel Scanning

The multi-point parallel scanning of the profile using the porous disk greatly improves the work efficiency compared with the traditional single-point scanning scheme of the galvanometer, and the scanning can be completed in only a few seconds.



► 4.3 Strong Adaptability

The measurement system has an ultra-high dynamic range for different sample poses, surface complexity, and surface reflectivity.

► 4.4 Integrated Measurement And Analysis Software

1) The measurement and analysis are operated on the same interface, without switching, the measurement data is automatically counted, and the function of rapid batch measurement is realized;

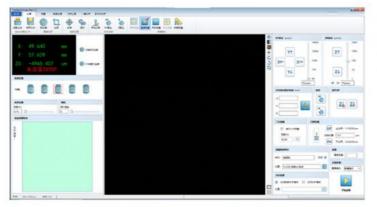
2) The visual window is convenient for users to observe the scanning process in real time;

3) Combined with the automatic measurement function of the custom analysis template, it can automatically complete the multi-region measurement and analysis process;

4) The five functional modules of geometric analysis, roughness analysis, structure analysis, frequency analysis, and function analysis are complete;

5) One-click analysis, multi-file analysis, freely combined analysis items are saved as analysis templates, oneclick analysis of batch samples, and data analysis and statistical chart functions are provided;

6) More than 300 2D and 3D parameters can be measured according to ISO/ASME/EUR/GBT and other standards.



► 4.5 Precision Joystick

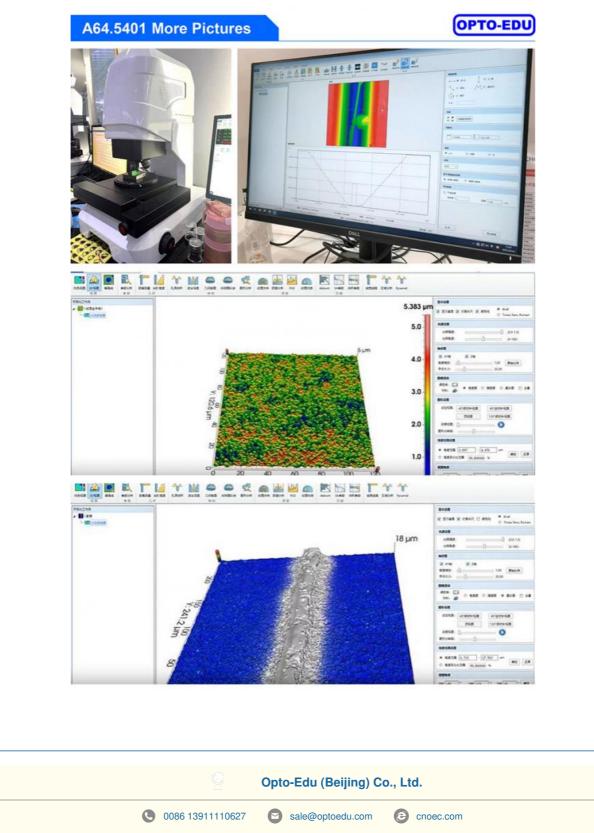
The joystick integrated with the function of displacement adjustment in the three directions of X, Y, and Z can quickly complete the pre-measurement work such as stage translation and Z-direction focusing.

► 4.6 Anti-collision Design

Avoid damage to the objective lens and the object to be measured due to collision caused by Misoperation.

► 4.7 Fully Electric Microscope

Equipped with a series of electric parts, these closely connected electric parts work together to make observation fast and simple.



F-1501 Wanda Plaza, No. 18 Shijingshan Road, Beijing 100043, China