POMEAS®

Image Dimension Measurement System

NEW IMAGE 3 SERIES

https://www.pomeas.com

Supplier Of Machine Vision And Industrial Automation Core Components

Maximum Support 300*200mm Field Of View Range

Just press one button to complete various measurements.

Movement Measurement Platform
Both Large And Small Fields Of View

Rapid measurement of large field of view, high-precision measurement of small field of view, measurement accuracy up to 1um.

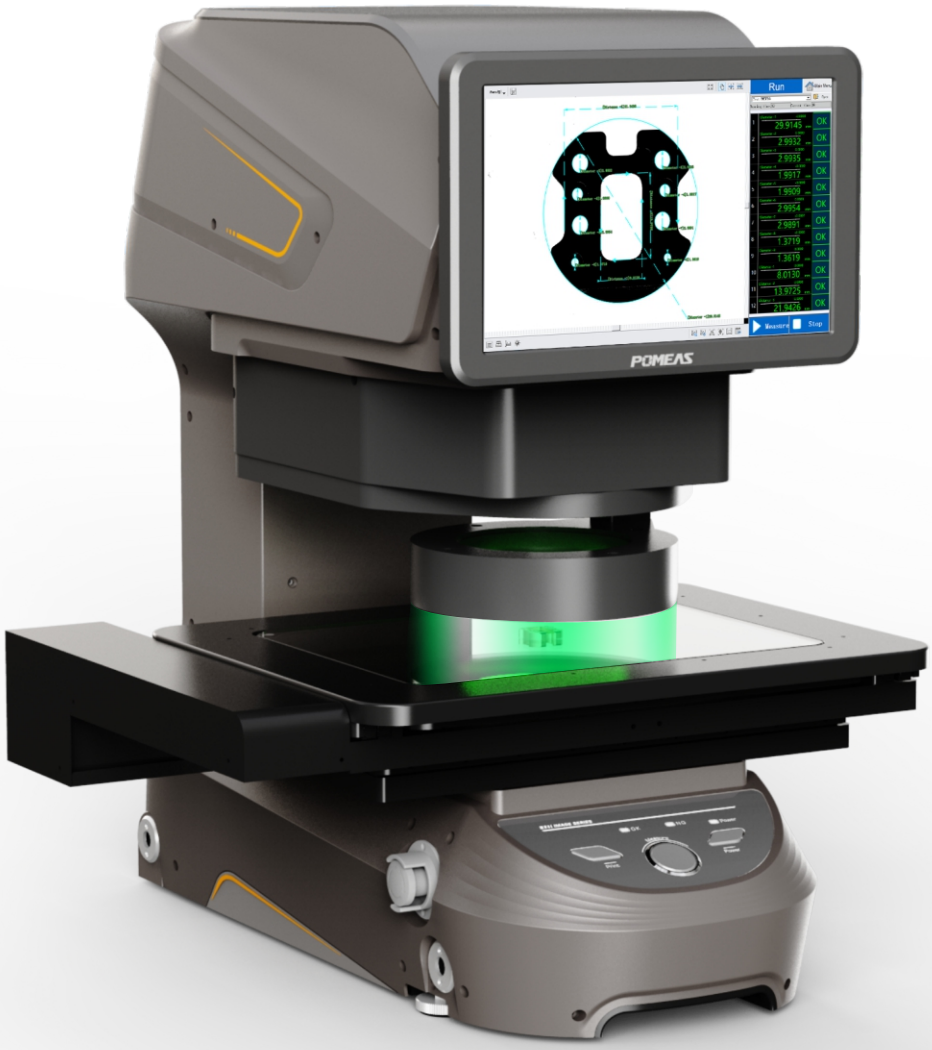


IMAGE 3 SERIES Products Introduced Into The Automated Production Line

Solve The Common Problems Of Dimension Measurement

Fast

- 100 parts of measurement in 1 second, greatly reducing the measurement time.
- Reports can be automatically uploaded to the customer data management system.
- With auto focus, auto positioning and auto measurement functions, anyone can get consistent and stable measuring result.

Accurate

- Double telecentric lens with two 20MP cameras and automatic lifting multi-angle surface light and surface coaxial light.
- Powerful AI edge computing algorithm, easily realize precise edge finding on the surface, and filter the invalid area of boundary noise.
- Achieve high-precision measurement of surface dimensions, and the measurement repeatability of surface light can reach the same level as that of bottom light.

Simple

- Simple software operation interface, easy programing and report parameter setting.
- One tap measure, an also be used with customer IO signal to realize automatic measurement.
- Desktop Structure, Small Size, Convenient Hanging, Suitable For Rapid Online And Office dimension Measurement.

Dual 20MP Cameras

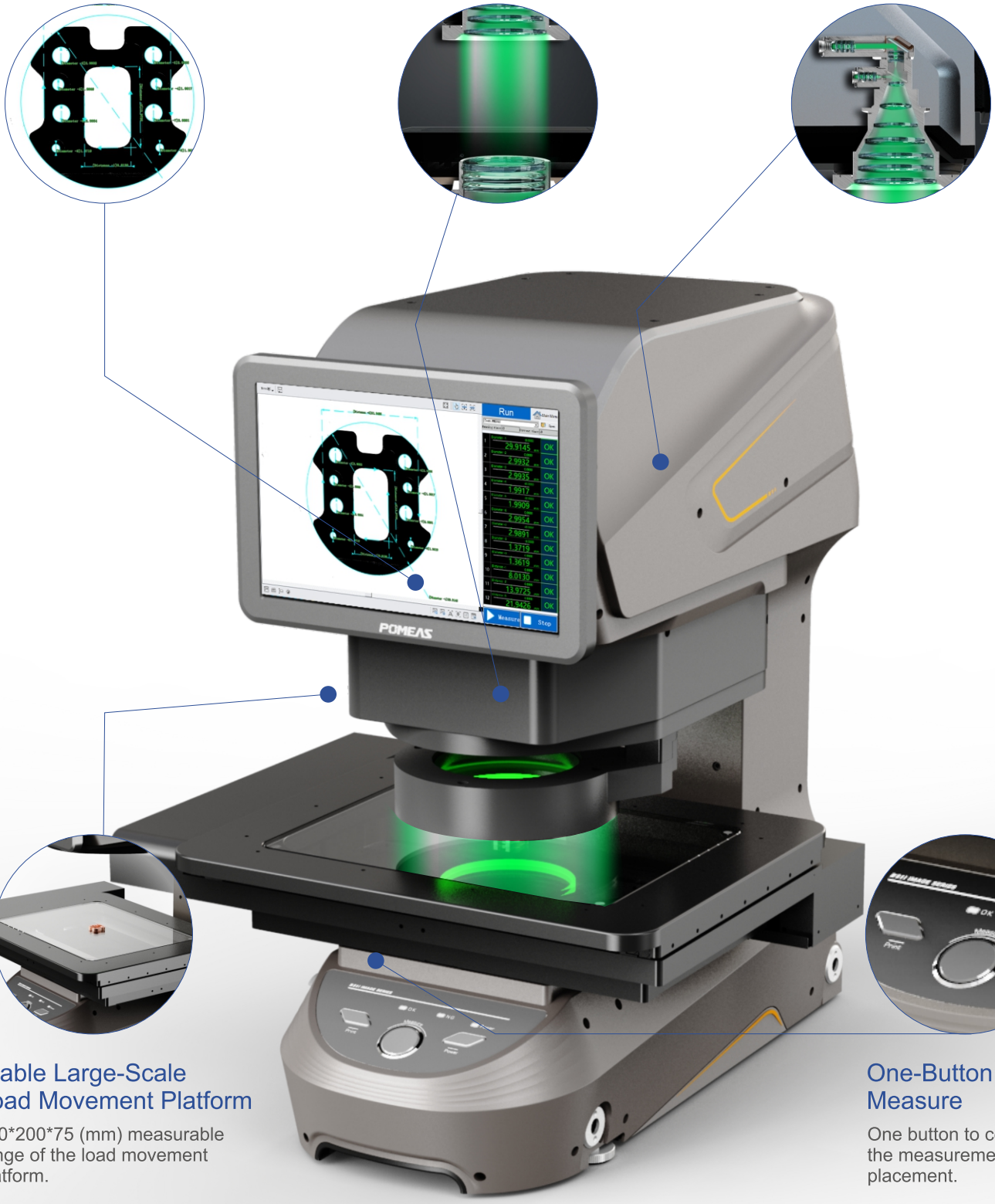
Dual 20 million pixel cameras, both large and small fields of view, with the latest edge detection algorithm.

Adjustable Light Source

Built-in brightness sensor, automatically adjust the light to achieve the best visual effect.

Double-Magnification, High-Telecentricity

Low distortion, no matter with step difference or on the edge. Image are not deformed, no need to worry about measuring position.



Stable Large-Scale Load Movement Platform

300*200*75 (mm) measurable range of the load movement platform.

One-Button Quick Measure

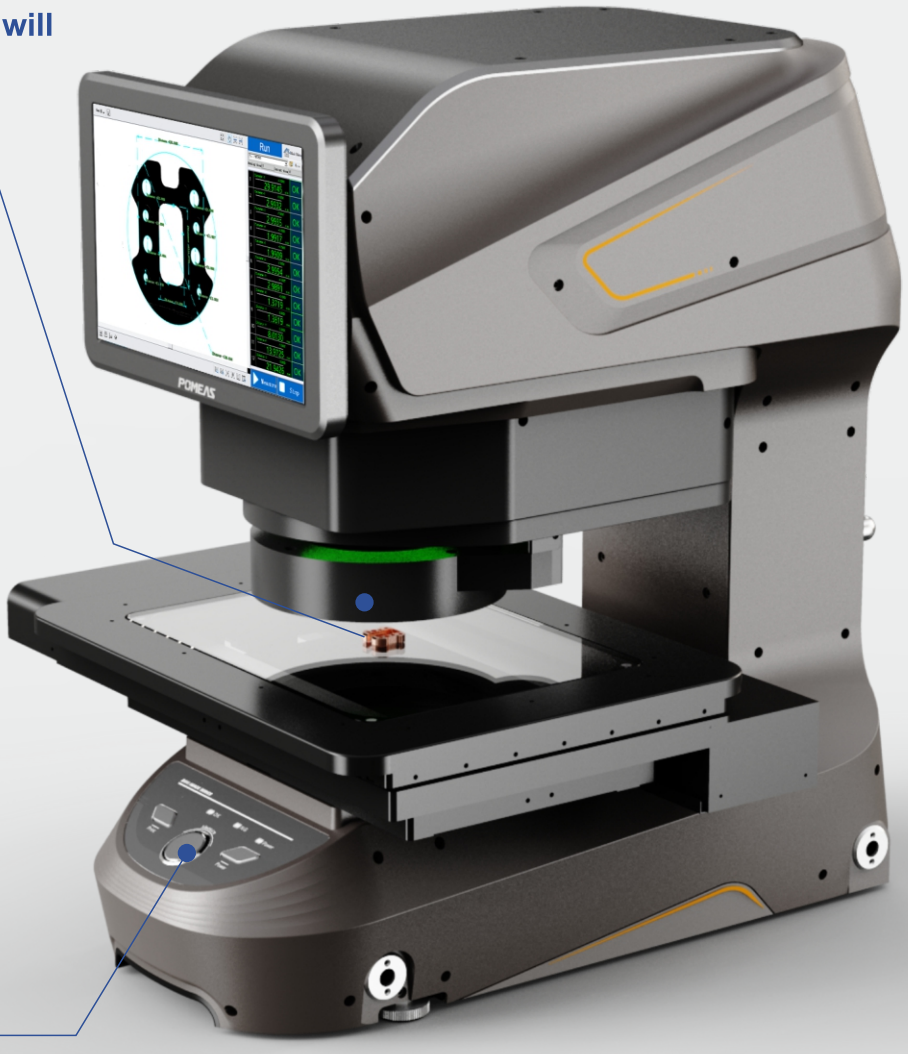
One button to complete the measurement after placement.

IMAGE 3 SERIES | Light And Convenient

Light And Convenient

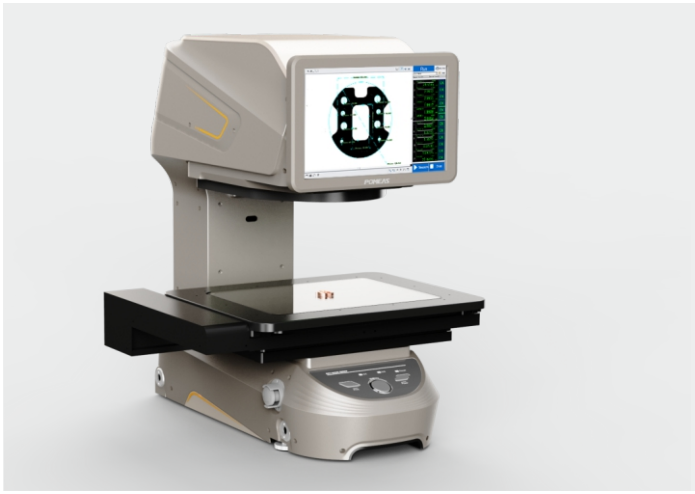
One-tap Start Measuring After Product Placement

Step 1:
Place the samples at will



Step 2:
Press the button,
start measureing

IMAGE 3 SERIES Light And Convenient



Desktop Structure

Small and exquisite shape, desktop structure, easy to carry, can adapt to various environments.

One-Button Star Measuring After Product Placement

Through the positioning function, automatically recognized the product position and direction, achieve randomly place product on the platform and press one button to complete measurement. Also, can be equipped with customer io signal to realize automatic measurement.

Personalization Report Output

Summary include test reports and statistical reports, without tedious processes such as data transmission and computer input. Multiple formats available.
It can also be automatically uploaded to the customer data management system.

POMEAS®

Size No.	Distance -1	Distance -2	Distance -3	Distance -4	Diameter -1	Diameter -2	Diameter -3	Diameter -4
Maximum	21.9131	2.9573	8.0470	14.0229	3.0412	3.0349	2.0231	2.0180
Minimun	21.9112	2.9545	8.0442	14.0207	3.0384	3.0322	2.0201	2.0157
Average	21.9124	2.9559	8.0454	14.0213	3.0399	3.0335	2.0219	2.0167
Design Value	21.9154	2.9617	8.0425	14.0182	3.0390	3.0284	2.0199	2.0147
Upper Tolerance	0.1300	0.1300	0.1300	0.1300	0.1300	0.1300	0.1300	0.1300
Lower Tolerance	(0.1300)	(0.1300)	(0.1300)	(0.1300)	(0.1300)	(0.1300)	(0.1300)	(0.1300)
Range	0.0019	0.0028	0.0028	0.0022	0.0028	0.0027	0.0030	0.0023
CA	0.0234	0.0443	0.0225	0.0240	0.0066	0.0388	0.0152	0.0152
CP	0.4871	0.4980	0.5950	0.4807	0.5018	0.4646	0.5343	0.4554
CPK	0.4757	0.4759	0.5817	0.4692	0.4985	0.4465	0.5262	0.4485

N0.	Data	Result	Measured Result							
1	2021.02.14.15:16	OK	21.9131	2.9564	8.0447	14.0217	3.0403	3.0332	2.0220	2.0157
2	2021.02.14.15:16	OK	21.9122	2.9573	8.0451	14.0208	3.0384	3.0333	2.0216	2.0161
3	2021.02.14.15:16	OK	21.9124	2.9554	8.0454	14.0229	3.0405	3.0348	2.0222	2.0160
4	2021.02.14.15:16	OK	21.9130	2.9567	8.0442	14.0210	3.0396	3.0341	2.0201	2.0162
5	2021.02.14.15:16	OK	21.9127	2.9556	8.0459	14.0220	3.0404	3.0322	2.0231	2.0180
6	2021.02.14.15:16	OK	21.9131	2.9555	8.0449	14.0208	3.0400	3.0325	2.0220	2.0176
7	2021.02.14.15:16	OK	21.9121	2.9547	8.0460	14.0219	3.0406	3.0323	2.0222	2.0172
8	2021.02.14.15:16	OK	21.9123	2.9565	8.0457	14.0207	3.0386	3.0333	2.0207	2.0157
9	2021.02.14.15:16	OK	21.9115	2.9545	8.0453	14.0207	3.0412	3.0339	2.0231	2.0174
10	2021.02.14.15:16	OK	21.9112	2.9568	8.0470	14.0207	3.0390	3.0349	2.0217	2.0169

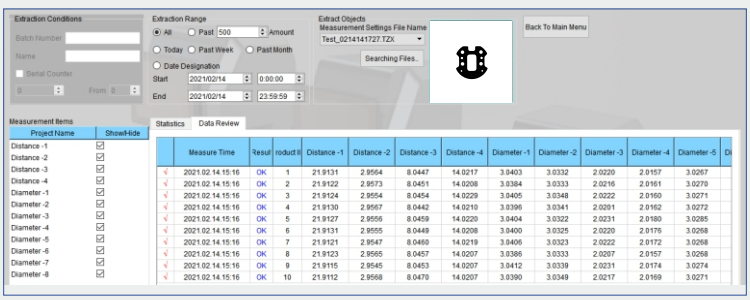


IMAGE 3 SERIES High-Precision Lens Module

Powerful Hardware Combination

High-Precision Dimention Measurement Of Surface Light

Double telecentric lens with two 20 million pixel cameras and automatic lifting multi-angle surface light and customized surface coaxial light, with independent powerful AI edge computing algorithm, it can easily realize precise edge finding, and filter the invalid area of boundary noise, Achieve high-precision measurement of surface dimensions, and the measurement repeatability of surface light can reach the same level as bottom light.

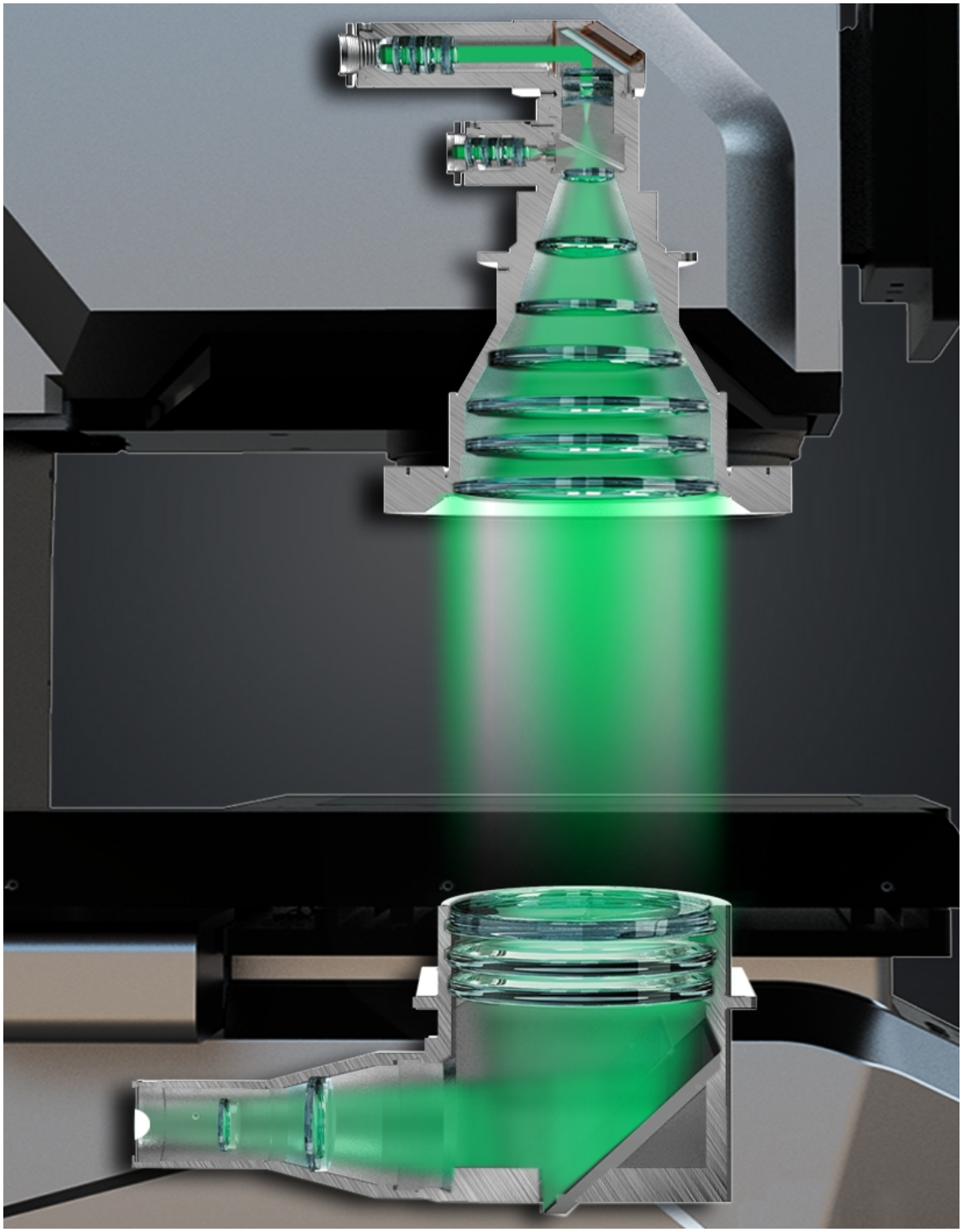
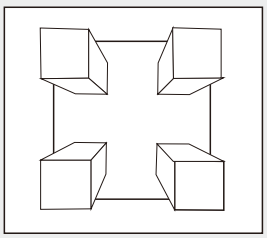


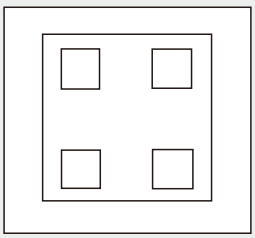
IMAGE 3 SERIES High-Precision Lens Module

Double-Magnification Double-sided Telecentric Lens

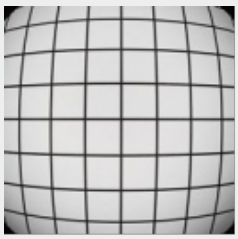
Dual-telecentric lens has a high telecentricity, even segment gap is exist. Low distortion, even at the edge of the lens, the image will not be deformed. No worry about the product location on the platform.



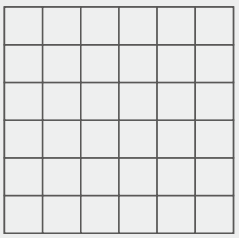
Ordinary Lens



Pomeas Lens



Ordinary Lens

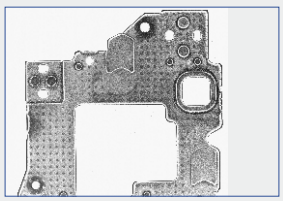


Pomeas Lens

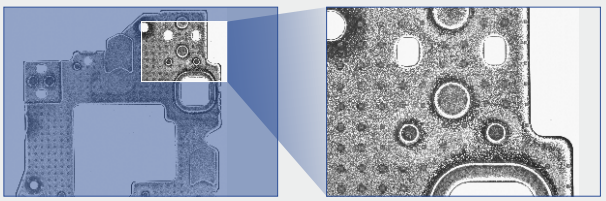
The 20 Million Pixel High-Precision CCD Camera Has Been Significantly Improved The Detection Performance

Using a 1-inch 20-megapixel black-and-white camera, number of pixels increased twice of the traditional model. Tiny edges can also be observed. High-precision camera and wide-field camera switching, to achieve high-precision and wide measurement. shorten the measurement time while improving accuracy.

High-Precision CDD



Images Taken With A Wide-Field Camera



Switch To A High-Precision Camera Only Where Accuracy Is Required

Image Magnified With High-Precision Camera

Adjustable Light Source Get Image With Accurate Edges According To The Best Lighting Conditions

Multiple lighting units are assembled into one (liiftable mutiple-angle surface light).
Light automatic adjustment function within software, which automatically adjusts to the best lighting conditions for different ambient light sources through the built-in brightness sensor.

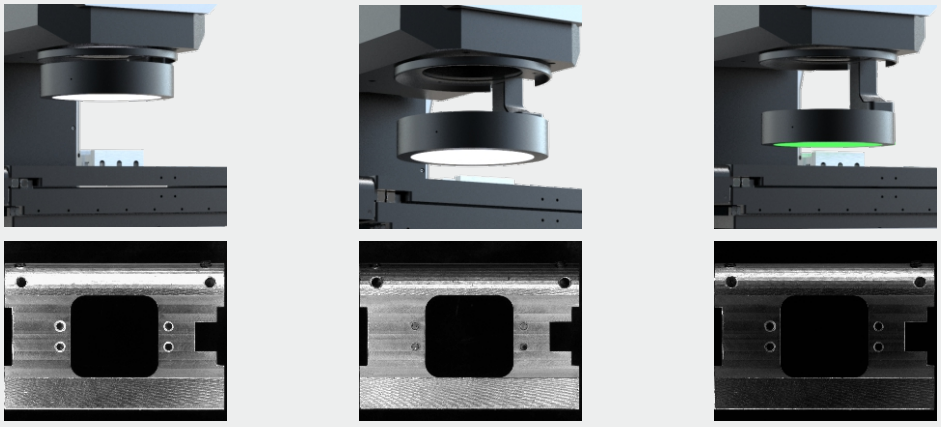
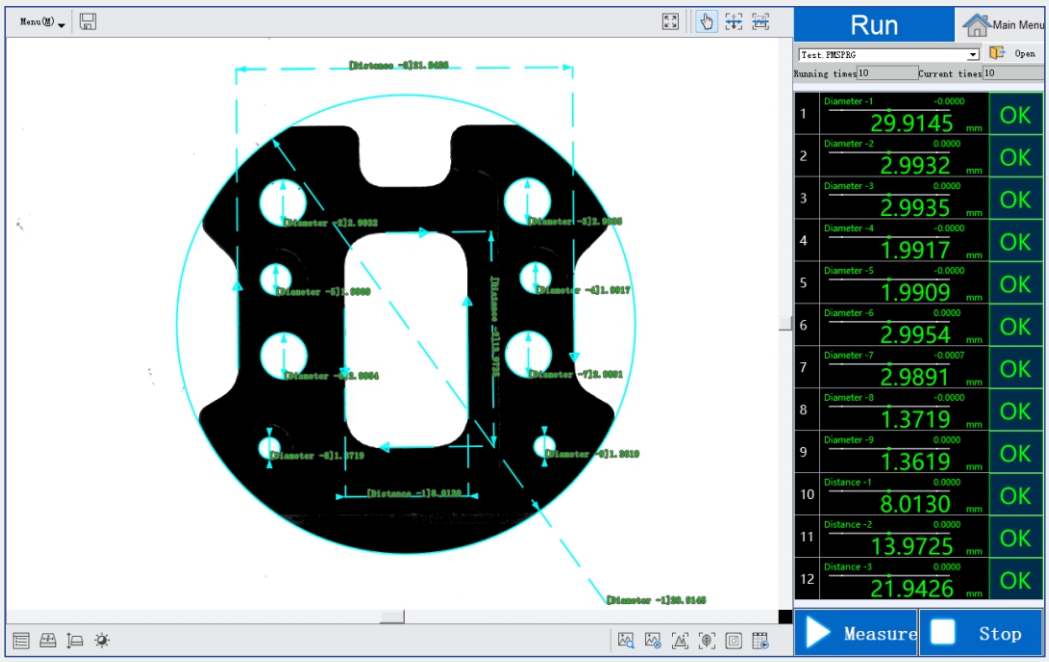


IMAGE 3 SERIES Efficient And Simple

Efficient And Simple

Fast Measurement And Simple Software Operation

Fast system measurement speed, 100 parts dimension measured in 1 second. Simple user interface design and easy to understand. Easy measurement programing and report parameter setting. Any operator can obtain consistent and stable measuring result.



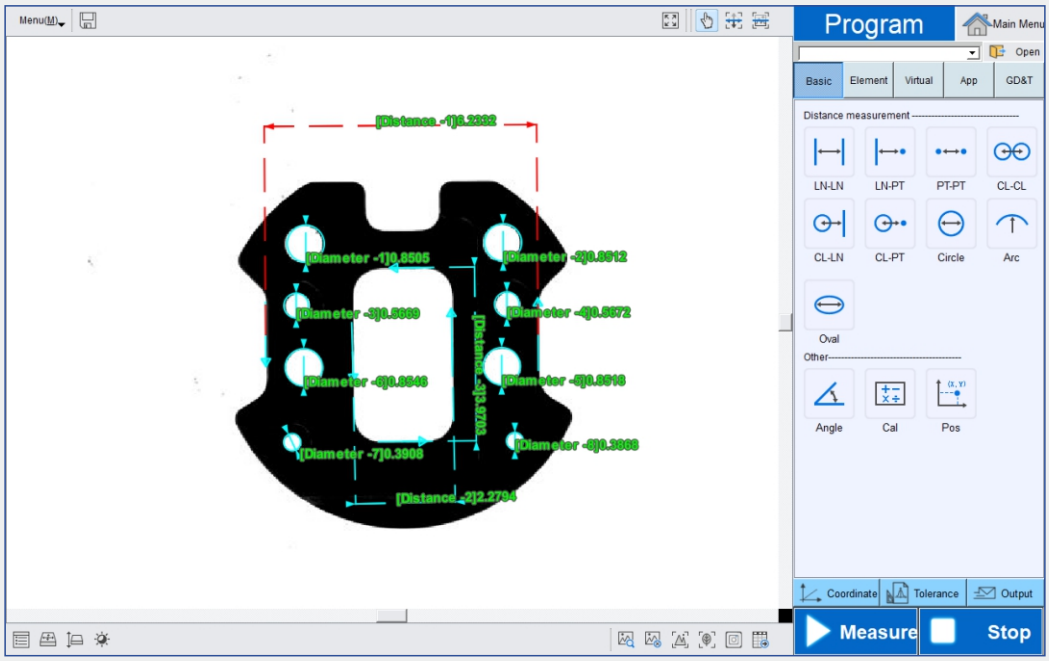
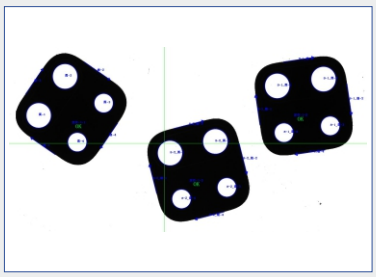
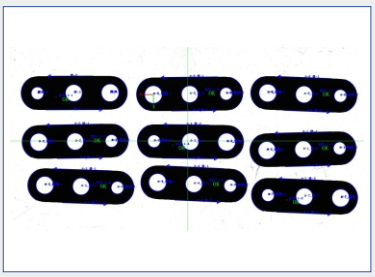


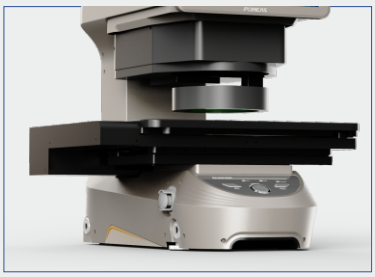
IMAGE 3 SERIES Efficient And Simple

Automatic Identification, Simultaneous Measurement, Integrated Imaging Greatly Shortens The Measurement Time

Automatically identify the position and direction of the product, completed measurement with only one button after placement, product can be placed at will, multiple products to be measured at the same time.The large field of view of 300*200mm provides one-time overall imaging, even if the measurement position is increased, it will not decreased measurement time.Greatly reduce measurement time and improve measurement efficiency.

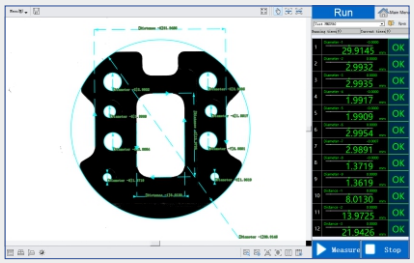


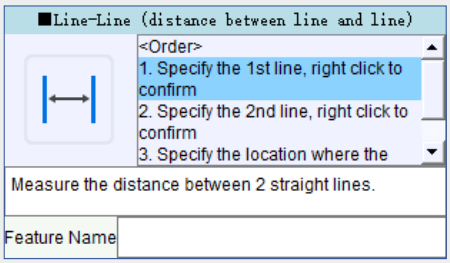


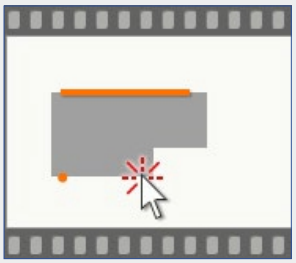


Simple Software Operation Interface, Easy To Use, No Training Required

The software function is simple and easy to understand, main function within process steps guide and explaination. Operator can easily complete the product measurement program setting according to the description of each function.

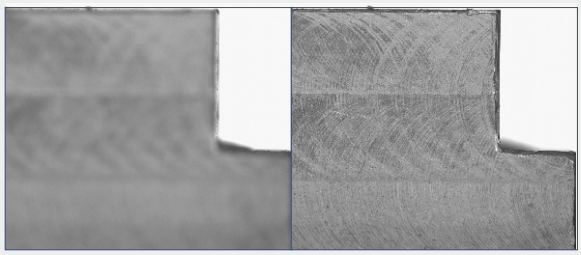




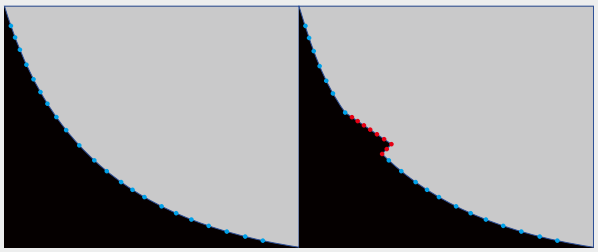


Anyone Can Obtain Consistent And Stable Measuring Results

Through built-in brightness sensor automatically adjusts the light according to the ambient brightness, eliminating artificial dimming errors. The autofocus function and edge invalid points, automatic filtering functions eliminate errors caused by different artificial focus and invalid parts of the product edge. Anyone can obtain consistent and stable measuring results.



Automatically Adjust The Focus And Measurement



Automatically Exclude Invalid Edges

IMAGE 3 SERIES Work Stage

Work Stage | Maximum Measuring Area 300mm*200mm

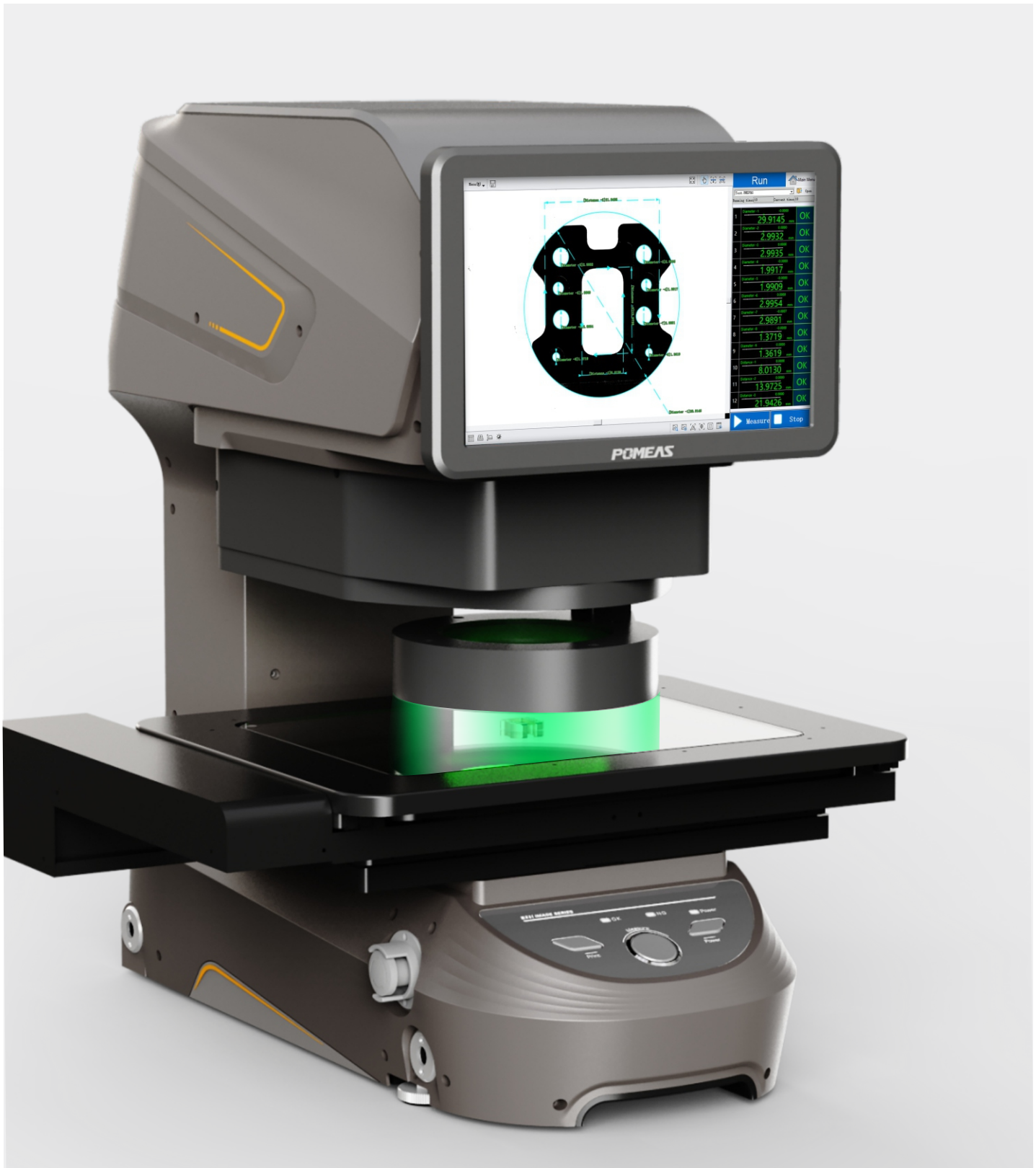
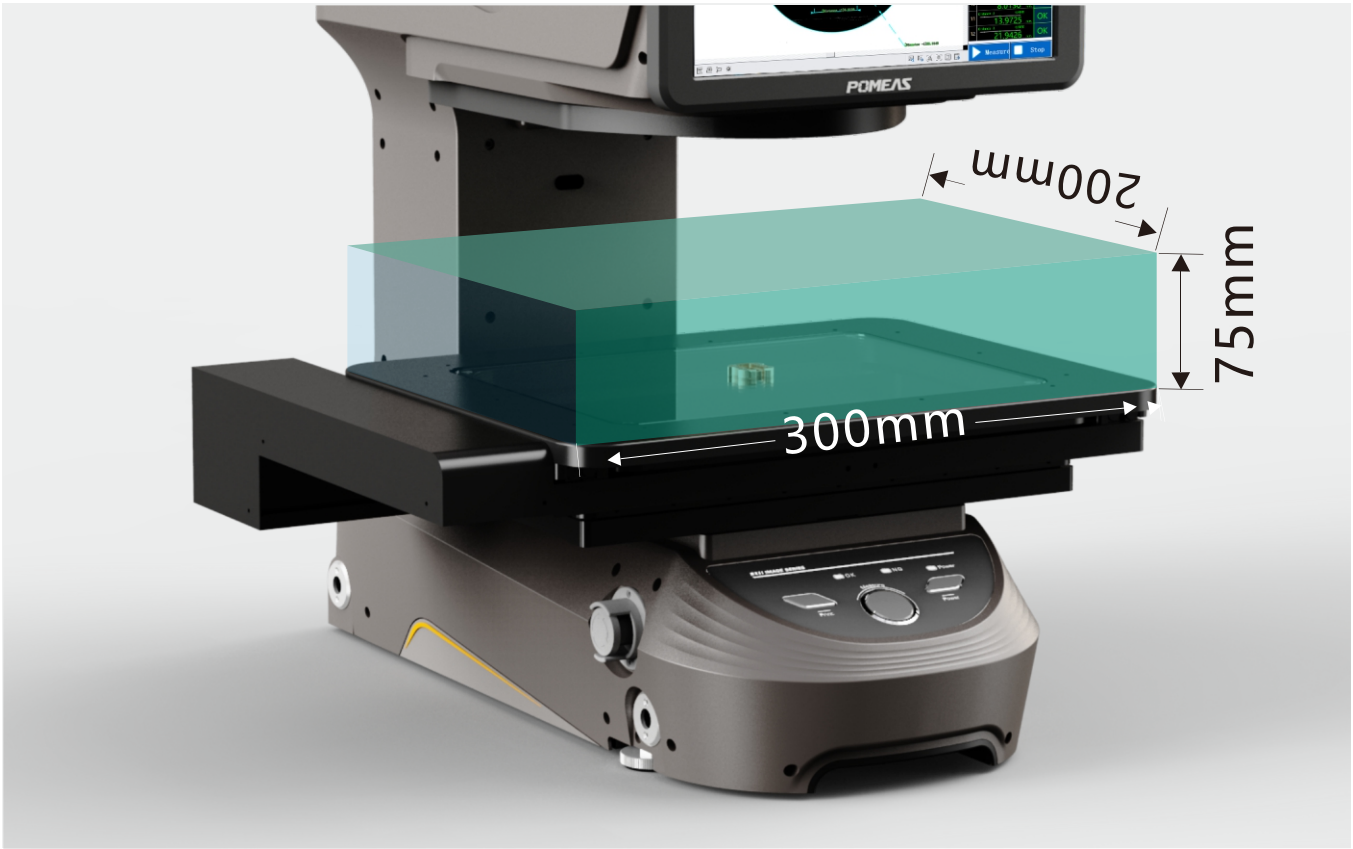


IMAGE 3 SERIES Work Stage

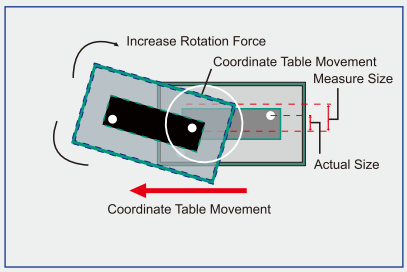
Fast Measurement With A Measuring Field 300mm*200mm Is Twice The Speed Of The Traditional Model

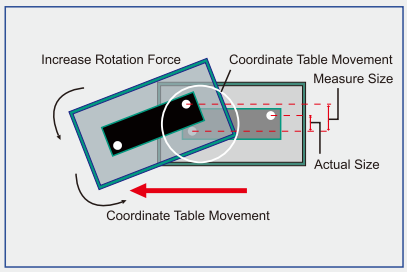
The movement stage support measuring objects with a maximum size of 300mm × 200mm and a height of 75 mm. It adopts a new design that reduces the resistance of the motor and the feed screw, and the moving distance becomes smaller and more stable, which eliminates the need to fixed the measurement objects



High-Precision Actuate System Support

By adjusting the movement of the cross roller guide in micrometers, excellent linearity is achieved and errors caused by the movement of the movement stage are eliminated.





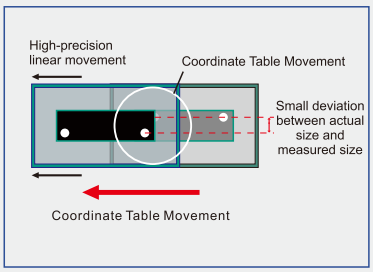


IMAGE 3 SERIES Light Source Introduction

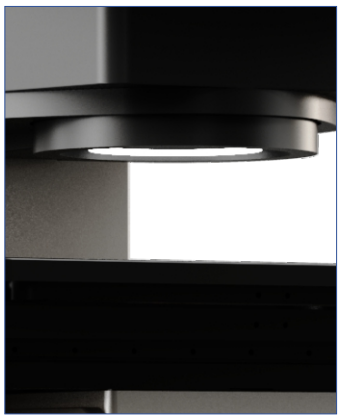
Light Source | Variable Lighting Unit

Accurately extracts edges according to the best lighting conditions.

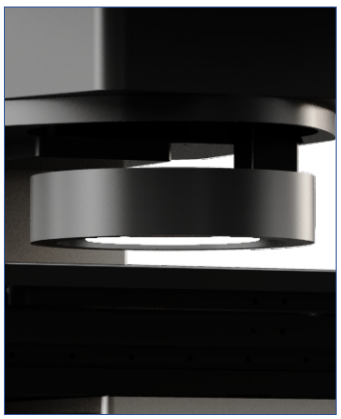
IMAGE 3 SERIES Light Source Introduction

Multiple Lighting Units Are Assembled Into One

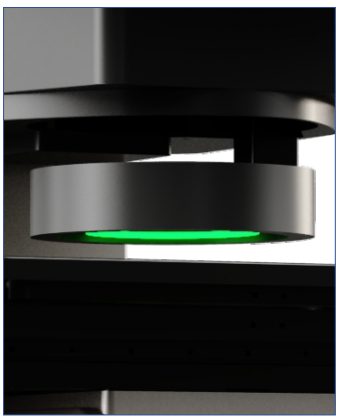
The light source integrates different lighting, according to the different products to be tested, the brightness of the light is automatically adjusted, and the lighting conditions of the best color are switched, without the need to change other light sources to adapt to different products.



White Ring Light



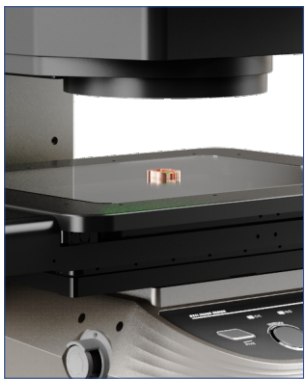
White Ring Light

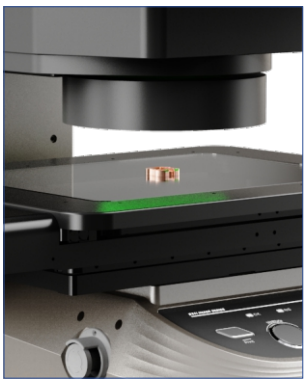


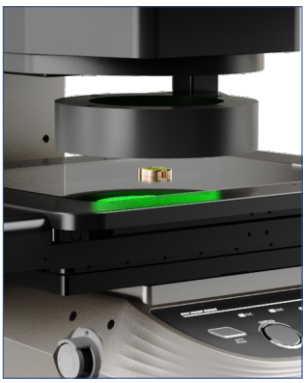
Green Ring Light

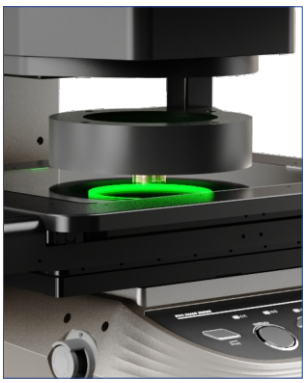
Automatically Adjusts To The Best Lighting Conditions

Combine multiple adjustable lighting units, and adjust the height, brightness and angle of the system's light source to achieve the best visual effect through the built-in brightness sensor for different ambient lighting, and to accurately achieve the edge of the physical object.



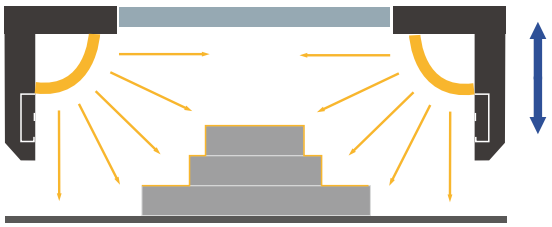






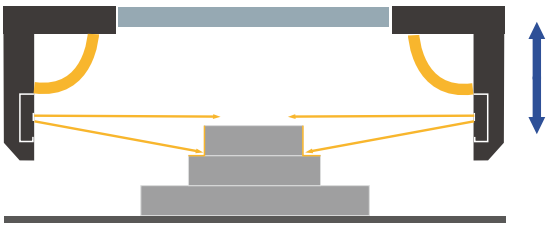
Principle Of Variable Lighting Unit

Multi-angle light source cross-sectional area



Illuminate in a wide range. When placed in a higher position, the overall illumination is uniform. As the position decreases, contrasts between light and dark will appear due to the height difference.

Slit ring illumination cross-sectional area



The thin ribbon beam is irradiated from the horizontal direction, and the lighting unit is placed at a certain height of the edge to be detected, and a sharp contrast can be formed at the target position.

IMAGE 3 SERIES Success Cases

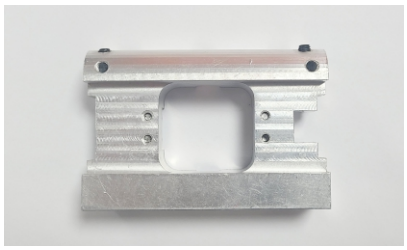
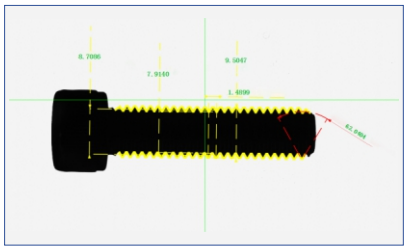
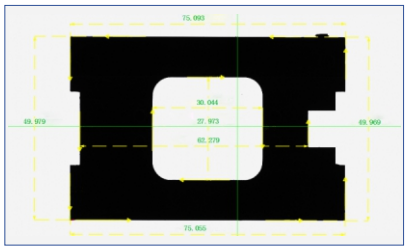
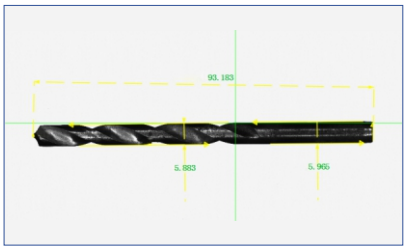
Screws、Bolts	Machined Parts	Tool
		
		

IMAGE 3 SERIES Applications

Suitable For Various Inspection Processes	**Initial Sample Inspection**	**In-Process Sampling Inspection**
Inspection Before Shipment	**Warehousing Inspection**	**Automatic Size Measurement On Production Line**
Automatic Size Measurement Next To The Production Line	**High-precision Measurement In The Laboratory**	

IMAGE 3 SERIES

At present, IMAGE 3 series has three models: standard type and movement stage type.

The measuring range of IMAGE3:

φ100; 200mmX200mmX75mm; 300mmX200mmX75mm.

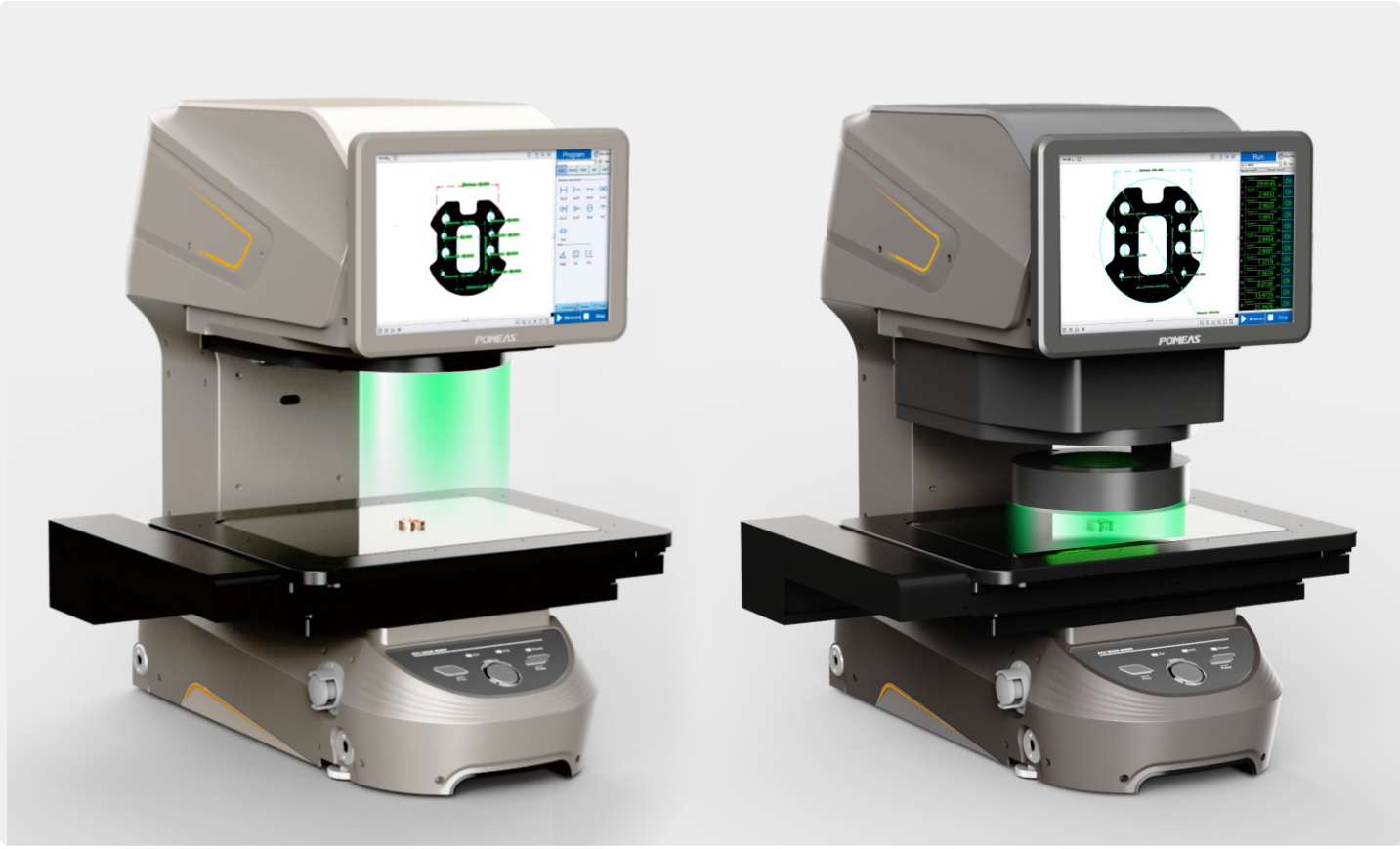


IMAGE 3

- Measuring Range (mm): Φ100mm
- Ring Lighting (Variable Lighting)
- Auto Focus
- POMEAS Double-Magnification Double Telecentric Lens

IMAGE 3 Plus

- Measuring Range (mm): 200X200X75
- Ring Lighting (Variable Lighting)
- Auto Focus
- POMEAS Double-Magnification Double Telecentric Lens

IMAGE 3 Pro

- Measuring Range (mm): 300X200X75
- Ring Lighting (Variable Lighting)
- Auto Focus
- POMEAS Double-Magnification Double Telecentric Lens

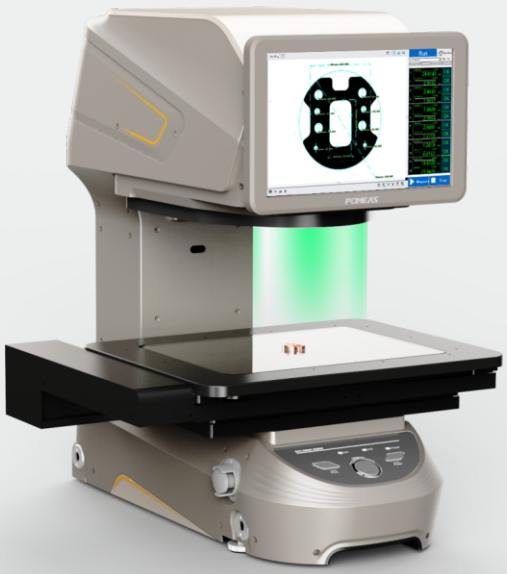


Image Dimension Measurement System

IMAGE 3 SERIES

IMAGE 3 SERIES Datasheet

Device Model			IMAGE 3	IMAGE 3 Plus	IMAGE 3 Pro
Measuring Range	X		Φ100	200mm	300mm
	Y			200mm	200mm
	Z		75mm	75mm	75mm
Lens Field Of View	High Precision Measurement Mode		26mm×18mm		
	Wide FOV Measurement Mode		Φ100		
Repeatitive Accuracy	High Precision Measurement Mode		± 1.5 μ m		
	Wide Fov Measurement Mode		± 3 μ m		
Min. Display Unit			0.0001mm		
Measurement Accuracy	High Precision Measurement Mode	Not Connected	± 1.5 μ m		
		Connected	\	± 2+L/150 μ m	± 2+L/150 μ m
	Wide Fov Measurement Mode	Not Connected	± 3 μ m		
		Connected	\	± 3+L/150 μ m	± 3+L/150 μ m
Instrument Weight			33kg	45kg	50kg
Optical System	Camera		1" 20MP Black And White Camera × 2		
	Lens		Double Magnification Double Telecentric Lens		
	Surface Light		Two-Ring Adjustable Light Source		
	Back Light		Green Parallel Bottom Light		
Depth Of Field	High Precision Measurement Mode		8mm		
	Wide Fov Measurement Mode		0.8mm		
Display			12.1" LCD Display (XGA: 1280*800)		
C1 Controller			CPU: i5 SSD: 500G RAM: 16G		
Power Supply			220V±10%,50Hz		
Working Environment			Temperature: 20±3°C; Temperature: 30-80% (No Condensation); Vibration: ＜0.002g,15HZ		
Work Stage Load			5kgs		
C1 Controller Size (L*W*H)			132*208*288mm		
Dimensions (L*W*H) mm			600×300×650mm	600×410×650mm	600×510×650mm

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