Mikrosize®

iFlash-2020/3020

Desktop Flash Measuring Instrument

Contact us

Mikrosize Precision Instrument Co.,Ltd
A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.
Web:www.mikrosize.com
Email: mikrosize@mikrosize.com

Features and Applications

It boasts high reliability and excellent dynamic performance. Based on an optical sensor, it can be equipped with a laser sensor or a white light confocal sensor, making it a cost-effective professional-grade 2.5D automatic flash measuring instrument.
The machine demonstrates the significance of rapid measurement in terms of overall configuration and measurement concept, and is designed for fast measurement point collection and high-speed visual photography. It is widely used in industries such as connectors, radiators, mobile phone components, and precision machining.

Product Features

- Stable structure and high precision: The main machine base, column, and other components are made of high-precision aluminum parts. Combined with a full servo closed-loop system + P-class guide rails, it balances high-speed movement and 0.5μm-level subdivision precision to ensure equipment stability.
- Clear imaging and high adaptability: Equipped with a 20-megapixel color CCD + NAVITAR auto-zoom lens, combined with 5-zone ring light / fully automatic lifting light, it flexibly meets the high-definition imaging needs of different products.
- Efficient operation and easy to use: Equipped with a one-click stitching system and quick programming function, it can automatically switch measurement programs, greatly reducing the operation threshold and improving the efficiency of batch inspection.
- Excellent function expandability: Optional laser/ confocal sensor to upgrade from basic visual inspection to composite measurement, covering multi-dimensional inspection scenarios of more precision parts.
- Strong independent software adaptability: Equipped with self-developed optical measurement software, which is deeply matched with the equipment hardware, with strong functional pertinence and more accurate and efficient data processing and analysis.
- Wide industry adaptation range: It can be efficiently applied in fields such as connectors, aerospace connectors, and mobile phone parts, meeting the needs of high-precision batch measurement of small-size precision parts and multiple samples.

Features and Applications

Product Application

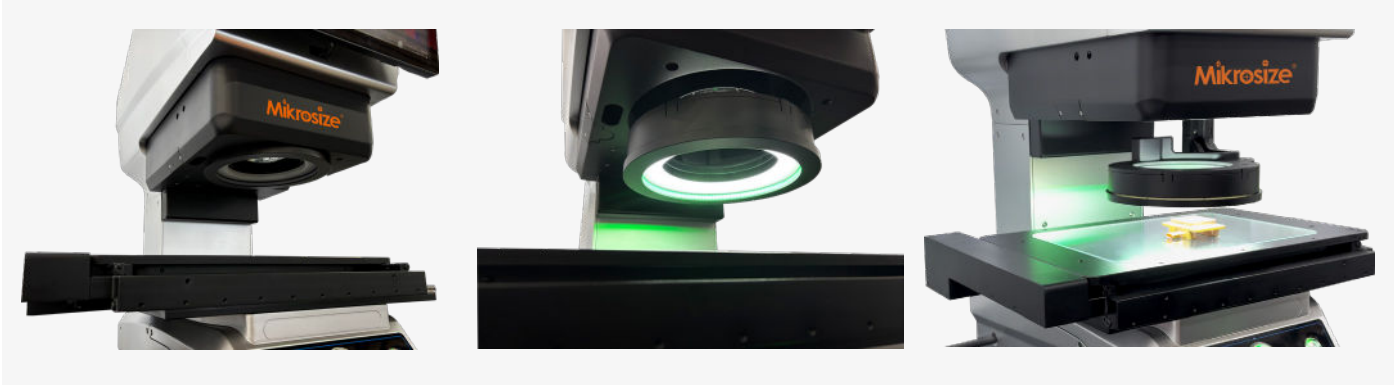
- Connector field: Adapt to the size and spacing detection of various precision connectors, and quickly complete high-precision batch measurement of multiple batches of small parts.
- Aerospace connector industry: For the complex structure and precision parameters of aerospace connectors, realize clear imaging of subtle features and accurate data collection.
- Mobile phone components: Cover the appearance and size detection of small parts such as mobile phone casings and buttons, adapting to the efficient batch quality inspection needs of thin and light parts.
- Precision machining: Meet the geometric tolerance and dimensional accuracy detection of mechanical parts such as gears and shafts, adapting to the measurement scenarios of multi-specification workpieces.

Instrument Appearance

1.Display Screen **2.Light Source** **3.Electric Platform** **4.Measurement Button**
5.Power Button **6.NG Indicator Light** **7.Emergency Button**

Product Details

Light Source System



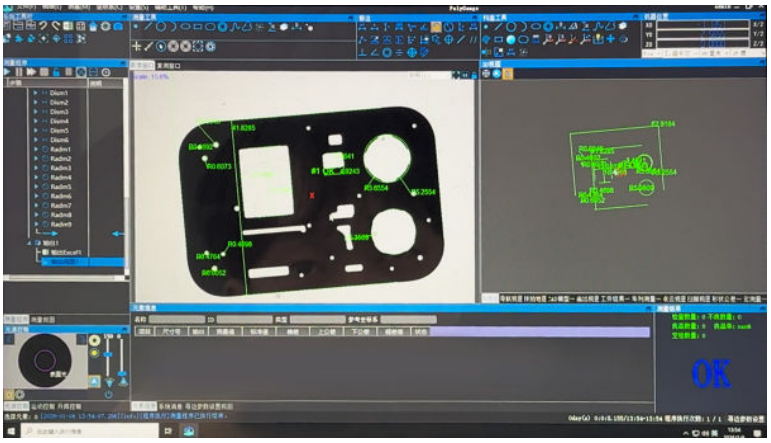
- Flexible illumination and high adaptability: Equipped with 5-zone and 8-zone ring lights, the light effect can be adjusted on demand; it can also be upgraded to a fully automatic lifting ring light to adapt to the lighting needs of different products and ensure detection accuracy.
- Excellent light source compatibility: Supports matching with laser / confocal sensors, adapting to the light environment of conventional visual inspection and the special light source needs of composite measurement scenarios.

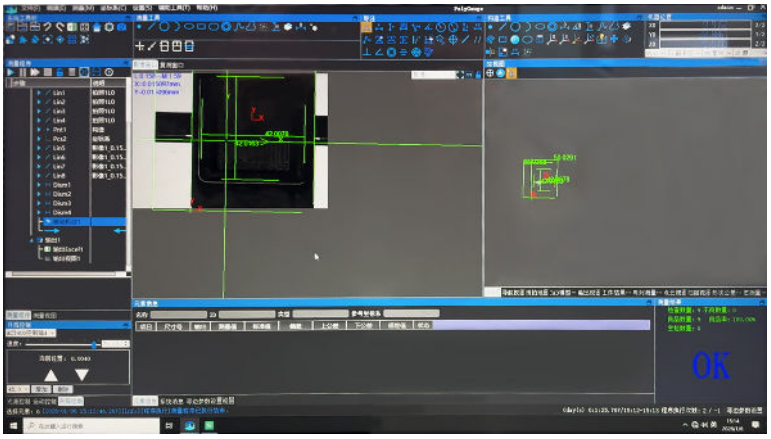
Hardware System

- The whole machine is made of high-density and high-precision aluminum alloy material, with a compact structure and extremely high stability.
- High-precision motion platform with high friction resistance and corrosion resistance, making the machine more stable during measurement and movement.
- THK cross guide rails and ground ball screws ensure more stable platform movement; four-axis Panasonic servo motor movement enables more accurate positioning.

Operation Interface

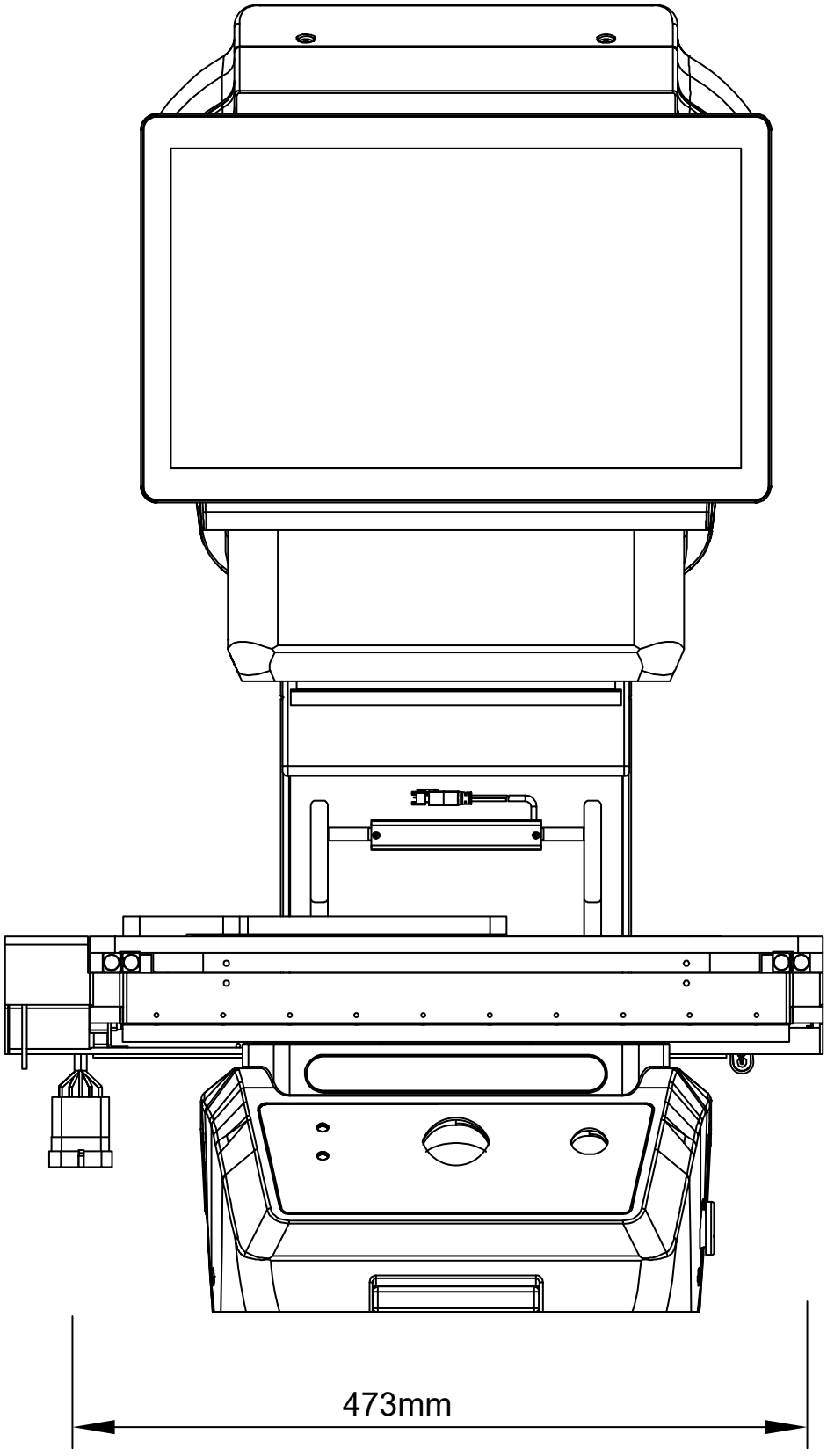
Software Functions



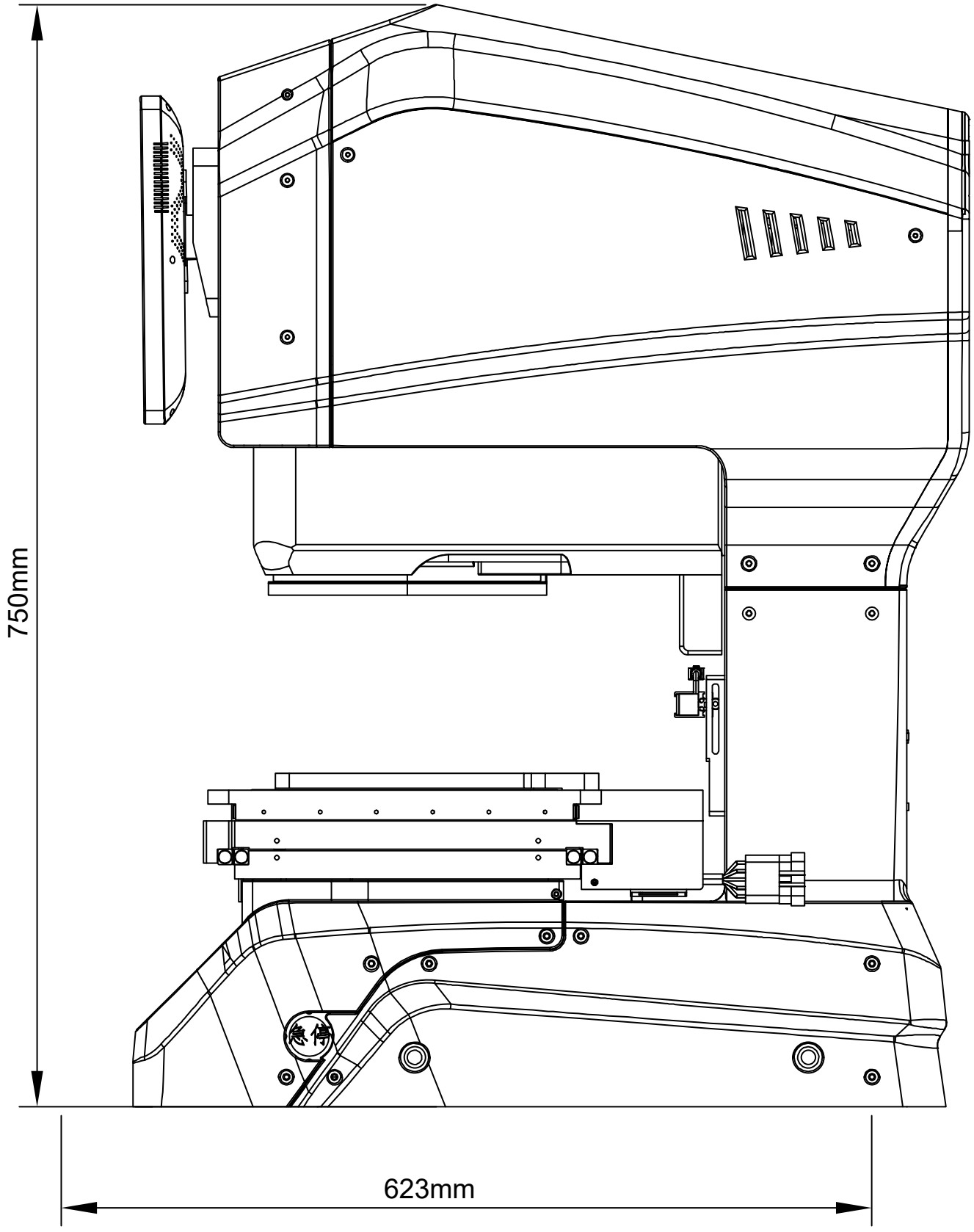


- Adapts to the dual measurement modes of the equipment (wide field of view / high precision), supports one-click stitching and quick programming, can automatically identify workpiece dimensions, geometric tolerances and other features, complete the measurement process in batches, and greatly reduce manual operation costs.
- Real-time statistical measurement data, automatically complete tolerance judgment and error analysis, generate standardized precision reports; support data export in Excel and other formats to facilitate the retention and traceability of production line quality data.
- Matches the equipment lighting system, provides tools such as image contrast adjustment and detail enhancement, optimizes the imaging effect for complex workpieces, ensures clear identification of tiny features, and improves the accuracy of measurement results.
- Supports composite measurement of laser / confocal sensors, and can synchronously integrate visual and other sensor data; compatible with parameter configuration of multiple models of equipment, flexibly adapting to the functional needs of different detection scenarios.

Instrument Dimension



Instrument Dimension



Mikrosize®

Technical Specification

Model			iFlash-2020	iFlash-2020P	iFlash-3020	iFlash-3020P
Image Sensor			20-megapixel CMOS			
Display Screen			14-inch LCD monitor			
Lens			Double-sided telecentric lens			
Illumination System	Episcopic System		LED lighting (white light)			
	Projection System		Telecentric projection illumination (green)			
Measurement Field of View	Wide Field of View		200x200（4 corners R50）		300x200（4 corners R50）	
	High Precision		/	120x120	/	230x130
Image Measurement Repeatability	Wide Field of View	Stage Not Moved	±1.5um		±1.5um	
		Stage Moved	±3.5um		±4.5um	
	High Precision	Stage Not Moved	±1um		±1um	
		Stage Moved	±2um		±2.5um	

Technical Specification

Image Measurement Accuracy	No Splicing * 1	Wide Field of Vision	±5um		±5um	
		High Precision	/	±2um	/	±2um
	With splicing * 2	Wide Field of Vision	± （7+0.02L） um		± （7+0.02L） um	
		High Precision	/	±（4+0.02L） um	/	±（4+0.02L） um
Measurement Software			Vision V1.0			
Display Resolution			0.1um			
XY Electric Worktable		X Travel Range	110mm		210mm	
		Y Travel Range	110mm			
Z-axis Electric Stage		Travel Range	75mm			
Height Measurement		Range	60mm x 110mm		160mm x 110mm	
		Max. Depth	75mm			

Mikrosize®

Technical Specification

Height Measure-ment	Probe Diameter	Φ1mm
	Measurement Force	0.13N
	Repeatability Accuracy	±3um
	Measurement Accuracy	±（7.5+0.02L）um
Overall Dimension（L*W*H）		623 x 473 x 750mm
Load Capacity		5KG
Weight		50KG
Power Supply		AC220V/50Hz
Working Environment		Temperature:10℃-35℃，Humidity:30-80%，Vibration:0.002g，below 5Hz

Standard Delivery

Name	Qty	Photo
Main machine	1pc	
22-inch display screen	1pc	
Industrial Host Computer	1pc	/
Encryption dongle	1pc	/
Software User Manual	1pc	/
Calibration block	1pc	/