

Mikrosize®

uVicky-1

Micro Vickers Hardness Tester



Web: www.mikrosize.com

Email: mikrosize@188.com

Product Feature&Application

Product Features

- 8"Touch screen ,menu structure, and digital eyepiece with built-in encoder, by clicking encoder button, the diagonal length of indentation D1, D2 and hardness value automatically calculated.
- Optical cross guide rail guidance ensures guidance accuracy.
- High precision worm gear rod with high transmission ratio ensure more precise force transmission and achieve stable continuous lifting.
- Rack and pinion force transmission realizes fast and stable force transmission.
- Equipped with dual optical path, one optical path for eyepiece system, another path for CCD camera, both path can working in same time.
- LED illumination for long service life and no need to replace the bulb. brightness of the light source can be adjusted infinitely.
- Test setting parameters is protected by password.
- It can be calibrated according to the standard hardness block or length scale to make hardness value more accurately.
- Eyepiece structure with digital encoder, and the touch screen directly displays the hardness value and D1 and D2 values.
- Advanced machine with lens 5x/10x/20x/40x can be used for measurement, suitable to test widely hardness range of materials from most soft to very hard.
- With hardness conversion function, from HV can convert to HRA, HRB, HRC, HBW, etc.
- With HV & HK Vickers and Knoop hardness testing capabilities.
- It can be equipped with a built-in camera (optional) to make the image clearer.
- RS-232 interface connected to computer for data output, testing result can be saved in USB (optional) in EXCEL format. built-in mini-printer to print testing data.
- With micro vickers indentor smart cover to protect indentor collision by test sample or other parts.
- OK/NG judgement function.
- 1 micro vickers indentor,4 objective lens totally 5 position hardness testing machine is realized.
- English language operation as standard, other languages can be customized.
- Auto load selection by touch screen instead of manual loading selection which makes force change more smoothly.(optional)



Product Application

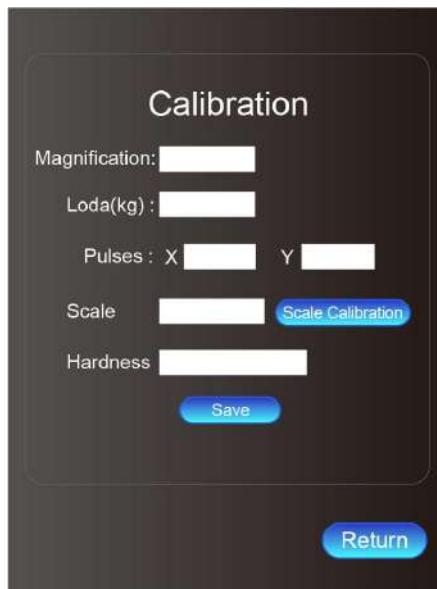
Steel, nonferrous metals, tinsel, cemented carbide, sheet metal, metallographic structure. Carburization, nitriding and decarburization layer, surface hardening layer, galvanized coating, coating. Glass, chip and ceramic material.

Touch Screen Interface

8"Touch screen, menu structure, the diagonal length of indentation D1, D2 and hardness value automatically calculated. test setting parameters is protected by password. Brightness adjustment, calibration operation system, Data saving and printing function. Data Statistical function for Max,Min,Average and Variance values of testing results on data sheet.



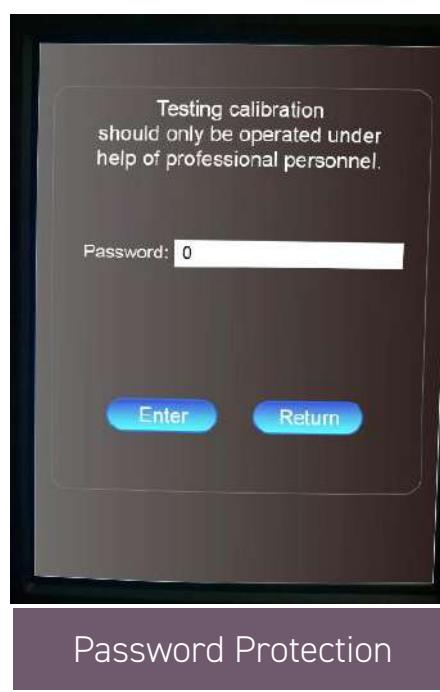
Main Interface



Hardness Calibration



Data Interface



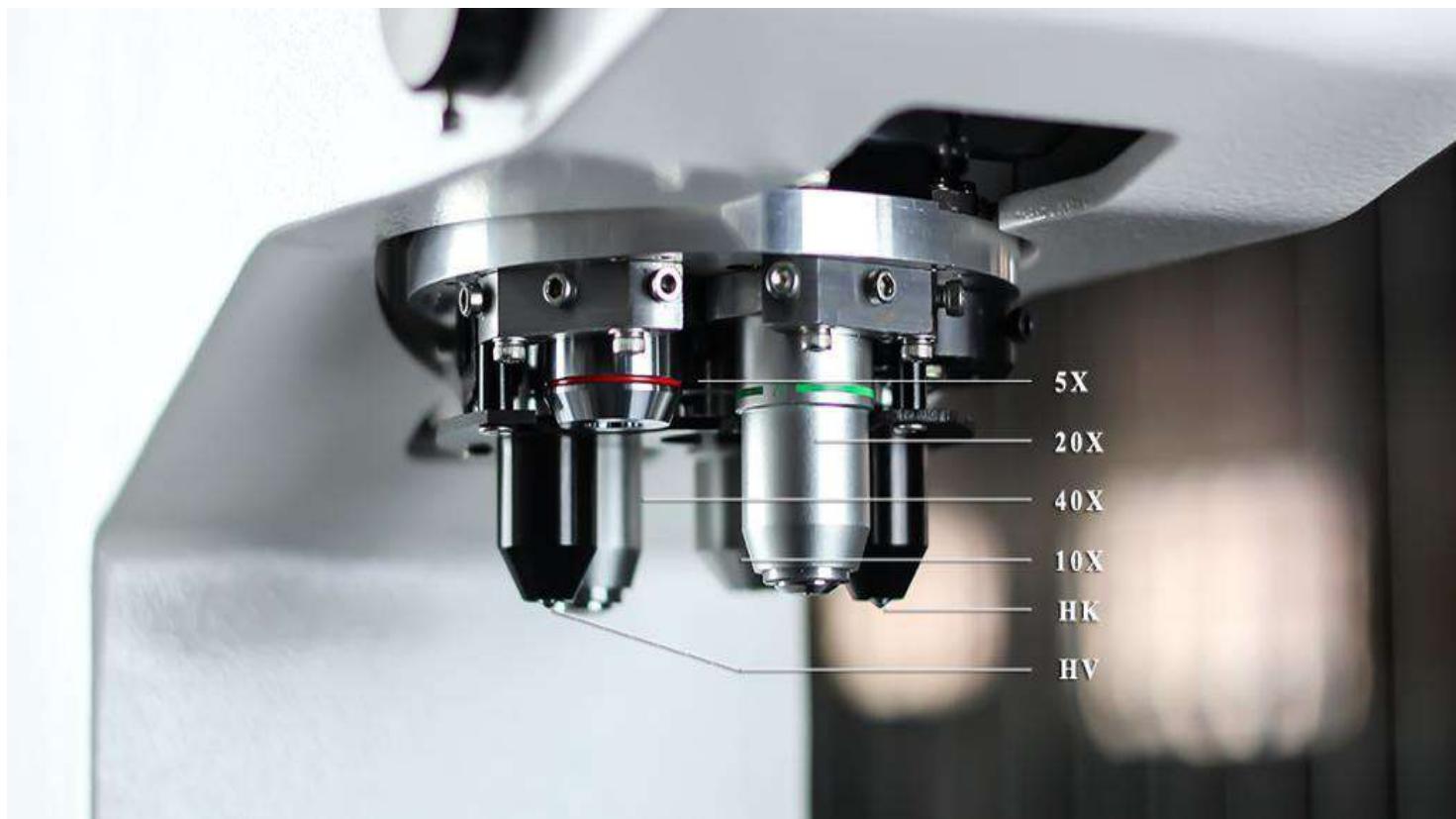
Password Protection



Password Protection

User Friendly

uVicky-1A-4 auto turret micro vickers hardness tester is with 5x/10x/20x/40x objective lens for measuring, plus micro vickers indentor , totally 5 positions , knoop indentor can be added to realize it as 6 positions micro vickers/knoop hardness tester, advanced design hardness testing machine.



User Friendly

High precision worm gear rod with high transmission ratio ensure more precise force transmission and achieve stable continuous lifting. With micro vickers indentor smart cover to protect indenter collision by test sample or other parts.



Worm Gear Rod



Handwheel for Worm Gear Rod



Micro Vickers Indentor Smart Cover



Micro Vickers Indentor Smart Cover

User Friendly

Digital eyepiece with built-in encoder, Auto loading selection is optional in stead of manual type, equipped with dual optical path, one optical path for eyepiece system, another path for CCD camera, both path can working in same time.



Digital Eyepiece



Manual Loading Selection (Auto Type Optional)



Dual Optical Path

Data Output

It can be equipped with a built-in camera (optional) to make the image clearer or for capturing micro vickers indention to software. RS-232 interface connected to computer for data output, testing result can be saved in USB (optional) in EXCEL format or built-in mini-printer to print testing data.



Built-in Camera (Optional)



RS-232 Interface



RS-232 Interface & USB



RS-232 Interface & Mini-Printer

Calibration Method

It can be calibrated according to the standard hardness block or length scale to make hardness value more accurately. RS-232 interface connected to computer for data output, testing result can be saved in USB (optional) in EXCEL format. bulut-in mini-printer to print testing data.



Standard Block



Length Scale

Machine in Workshop Real Photo



Ordering Information



uVicky-1M-2E Economic Manual Turret Micro Vickers Hardness Tester
(Only 40X Objective Lens for Measuring)

uVicky-1A-2E Economic Auto Turret Micro Vickers Hardness Tester
(Only 40x Objective Lens for Measuring)



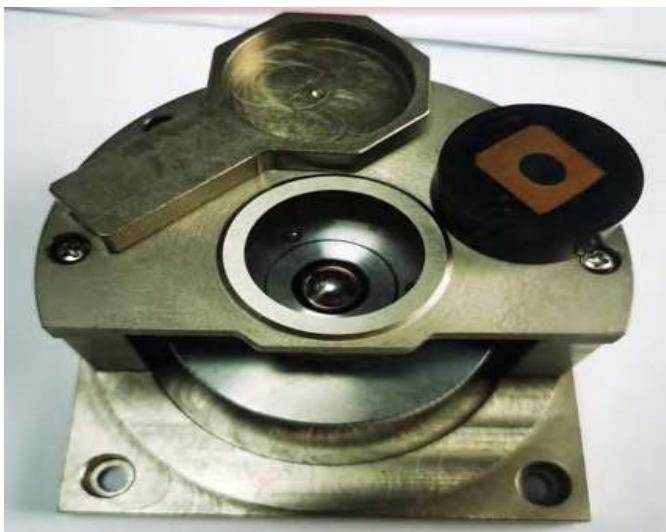
uVicky-1M-2 Manual Turret Micro Vickers Hardness Tester
(10x/40x Objective Lens for Measuring)

uVicky-1A-2 Auto Turret Micro Vickers Hardness Tester
(10x/40x Objective Lens for Measuring)

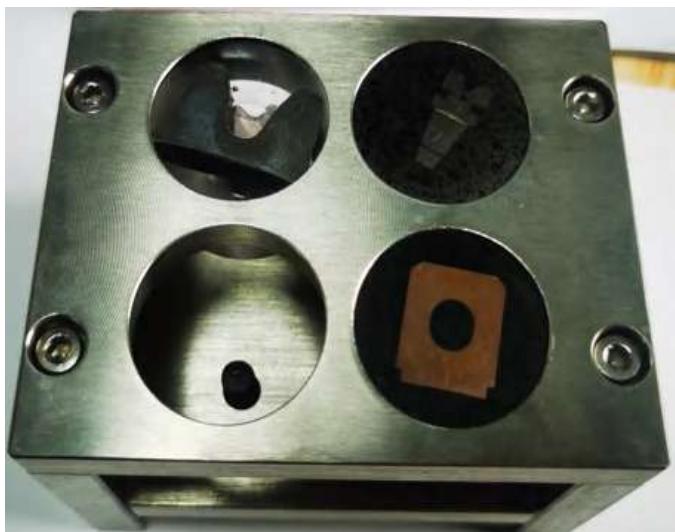
uVicky-1A-3 Auto Turret Auto Turret Micro Vickers Hardness Tester
(10x/20x/40x Objective Lens for Measuring)

uVicky-1A-4 Auto Turret Auto Turret Micro Vickers Hardness Tester
(5x/10x/20x/40x Objective Lens for Measuring)

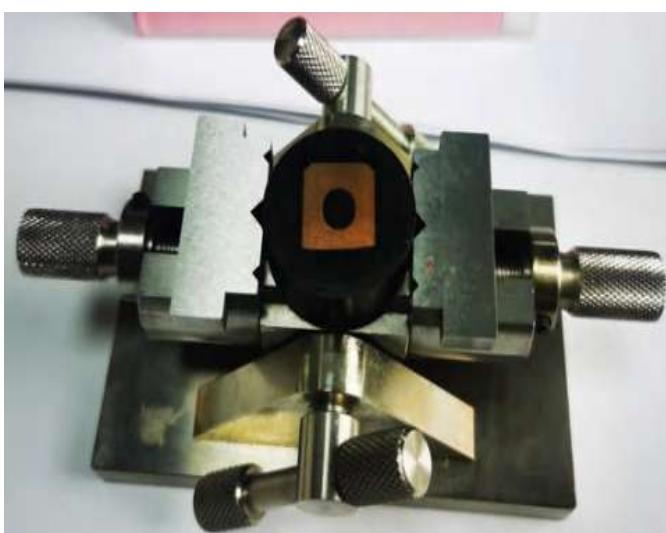
Variable Test Sample Clamping Vice Optional



Single Inlay Sample Clamping



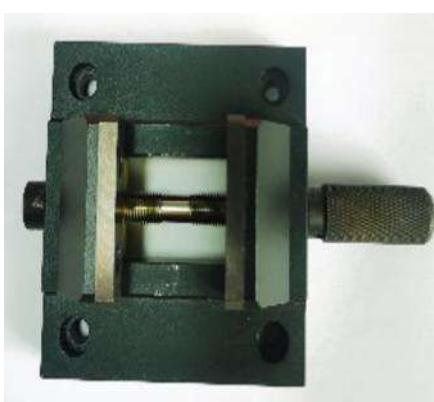
4 Pcs Inlay Samples Clamping



Universal Tilt Clamping



Pencil Clamping (For Pencil Hardness Tester)



Flat Clamp



Filament Clamp

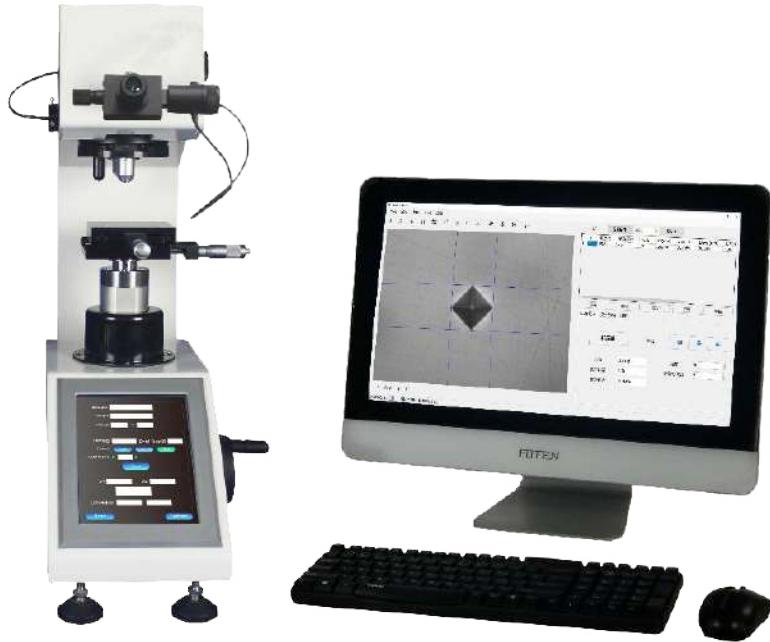


Thin Specimen Clamp



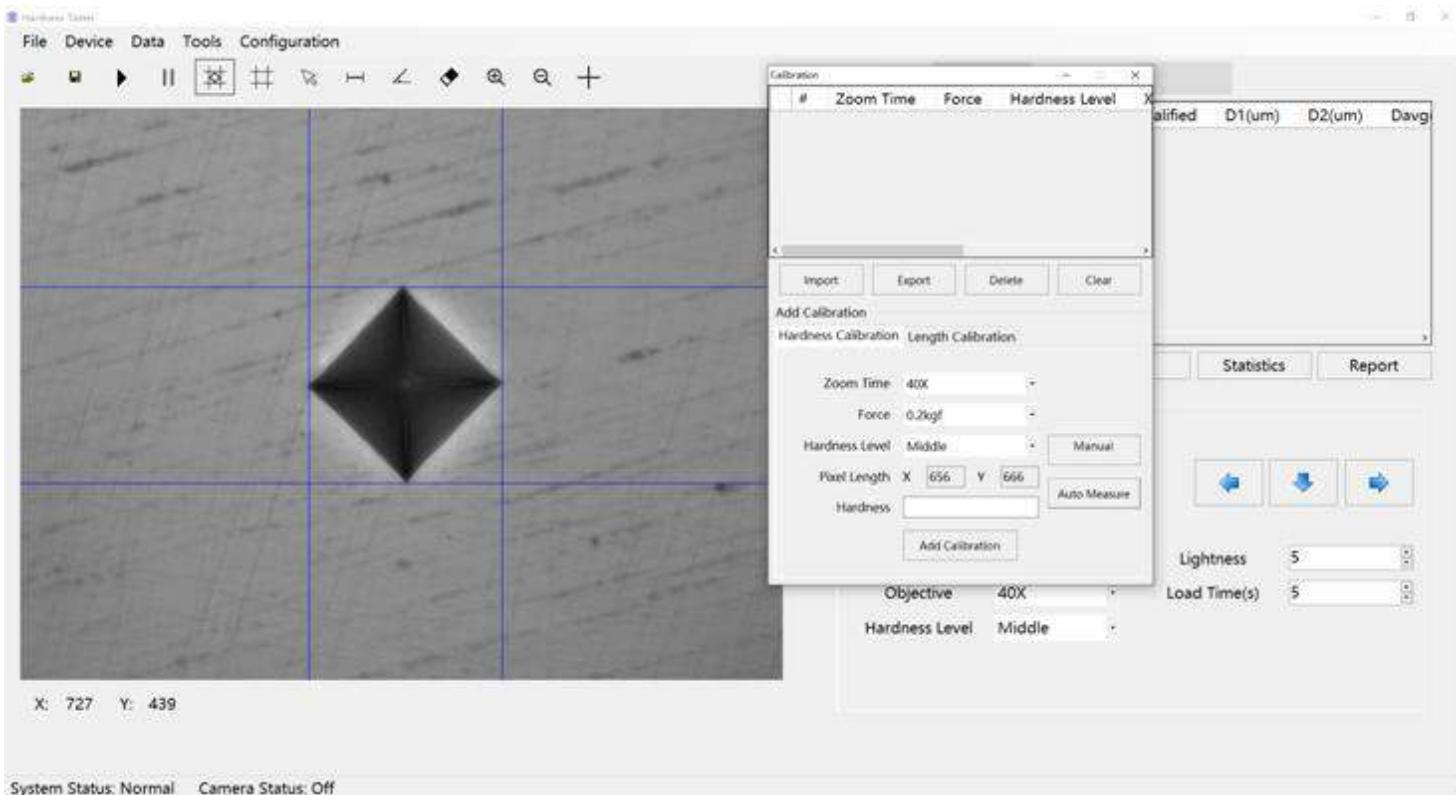
Balance Support (For Long Test Sample)

Micro Vickers Measuring Software(Optional)



- The measuring system can be matched with a variety of Vickers hardness tester, upgrade the hardness tester to the computer measuring system.
- The measuring system is integrated with the hardness tester; Computer controlled hardness tester, such as turret, brightness adjustment (can only be used with our company's automatic turret (micro) Vickers hardness tester).
- Suitable for micro and Vickers hardness tester, its maximum test force can be: 1, 5, 10, 30, 50 kg.
- Image clear, indentation measurement automatic/manual measurement.
- Calibration using micrometer or hardness block calibration, automatic calibration.
- Hardness according to national standard and ASTM conversion to other hardness. Hardness value statistics and hardness beyond the alarm.
- The test report can be customized by users, and all the test data will be saved forever for easy historical query.

Micro Vickers Measuring Software(Optional)



Standard configuration

Item	Specification	Qty
Camera	5 million pixels	1 pc
Adapter	Connect the machine and camera	1 pc
USB Flash Disc	Includes software and instruction manual	1 pc
Encryption dog	/	1 pc

Technical Specification

Product Name	uVicky-1 Micro Vickers Hardness Tester					
Model	uVicky-1M-2E	uVicky-1A-2E	uVicky-1M-2	uVicky-1A-2	uVicky-1A-3	uVicky-1A-4
Turret	Manual	Auto	Manual	Auto	Auto	Auto
Built-in Mini Printer	No	No	Yes	Yes	Yes	Yes
Data Statistic Function	No	No	Yes	Yes	Yes	Yes
Objective	10X(Observe) 40X(Measure)	10X(Observe) 40X(Measure)	10X(Observe&Measure) 40X(Observe&Measure)	10X(Observe&Measure) 40X(Observe&Measure)	10X(Observe&Measure) 20X(Observe&Measure) 40X(Observe&Measure)	5X(Observe&Measure) 10X(Observe&Measure) 20X(Observe&Measure) 40X(Observe&Measure)
Eyepiece	10X digital eyepiece with built-in encoder					
Total Magnification	100X(Observe) 400X(Measure)	100X(Observe) 400X(Measure)	100X(Observe&Measure) 400X(Observe&Measure)	100X(Observe&Measure) 400X(Observe&Measure)	100X(Observe&Measure) 200X(Observe&Measure) 400X(Observe&Measure)	50X(Observe&Measure) 100X(Observe&Measure) 200X(Observe&Measure) 400X(Observe&Measure)
Test Force	10gf (0.098N), 25gf (0.245N), 50gf (0.49N), 100gf (0.98N), 200gf (1.96N), 300gf (2.94N), 500gf(4.9N), 1000gf (9.8N)					
Hardness Scale	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1					
Conversion Scale	HRA, HRB, HRC, HRD, HRF, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HV, HK, HBW					
Loading Speed	<50μm/sec					
Indenter	Standard Rectangular Pyramid Diamond Indenter (136°±0.5°)					
Objective lens center and indenter center	Coincidence accuracy error< 1um (objective lens center position can be adjusted)					
Measurement Resolution	0.01μm					
Data Display /Output	8 "Touch Screen Display, Can Store 20 Test Results, USB drive, Built-in Printer and RS-232 Interface					
Hardness Test Range	8~2900HV					
Loading Method	Automatic (loading、dwell、unloading)					
Dwell Time	1-99s(each step is 1 second)					
Test Space	Test height: 100mm (Vertical); Test Throat: 130mm(Horizontal)					
X-Y Test Anvil	Dimension: 100*100mm, Movement:25*25mm,Moving Resolution Ratio:0.01mm					
Illumination	LED Cold light source (can be continuous use for 24 hours, no heat generate ensure stable working, servicing life can reach 100,000 hours)					
Machine Size&N/W	540*260*650mm,50kg					
Package Size&G/W	710*420*627mm ,68kg					
Power supply	AC220V+5%, 50-60Hz(110V is available)					
Executive Standards	GB/T4340, ASTM E384 & E92, EN-ISO 6507, JIS B-7734					

Packing List

Item	Quantity
Weight Shaft	1pc
Eyepiece	1 pc
X-Y Test Anvil	1 pc
Gradienter	1 pc
Power Cord	1 pc
Product Certificate, Warranty Card	Each 1 Copy
Printing Paper	1 pc
Screwdriver	2 pc

Item	Quantity
Weight	6 pcs
Micro Hardness block	Each 1 pc
Spare Fuse (2A)	2 pcs
Dust Cover	1 pc
Instruction Manual	1 pc
Touch Pen	1 pc
Level adjustment screw	4 pcs



X-Y Test Anvil



Digital Eyepiece



HV0.2 Hardness Block



HV1 Hardness Block

Optional Accessories



Flattening Device(Used With Universal Tilt Clamping Fixture)



Built-in Camera



Micro Vickers Measuring Software



USB Interface