



DEDICATED TO CAR SURFACE INSPECTION

MULTI-ANGLE SPECTROPHOTOMETER

The company is also the authorized agent of Philips and Sylvania. All products are widely used in plastic electronics, paint and ink, textile and dyeing, printing paper, food, medicine, cosmetics, scientific research, schools, laboratories, optical image testing, and other fields. The company has gathered a large number of highly talented professionals in the industry, applied for many innovative patents, and has the core technology and intellectual property rights of 3nh, Tilo and Sine image products.



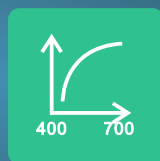
Concave grating



Multiple light sources



Bluetooth transmission



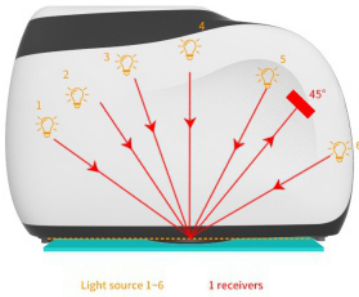
Full spectrum



Support PC software



Product features



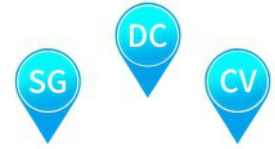
1, Multi-angle measurement

Adopt 6 illumination sources, 1 receivers to measure 6 measurement angles at the same time



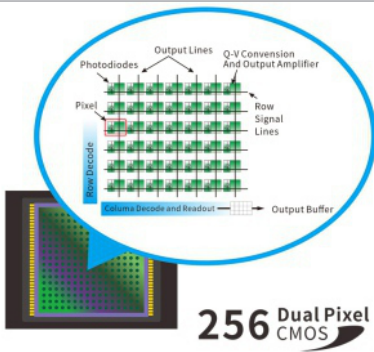
2, More intuitive display

Touch screen can display all Angle measurement results, more intuitive view of the comprehensive data



3, Effect measurement discrimination function

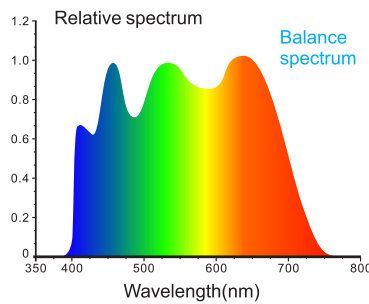
Quickly distinguish the sample Sparkle Grade(SG), Diffuse coarseness(DC) and Color Variation(CV), simple and effective quality inspection



256 Dual Pixel CMOS

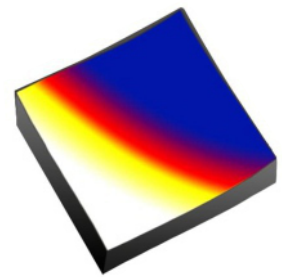
4, 256 Image Element Double Array CMOS Image Sensor

Higher optical resolution ensures the measurement speed, accuracy, stability and consistency of the instrument



5, Blue light enhancement, full spectrum

Full spectrum illumination measurement is more professional to avoid spectrum loss



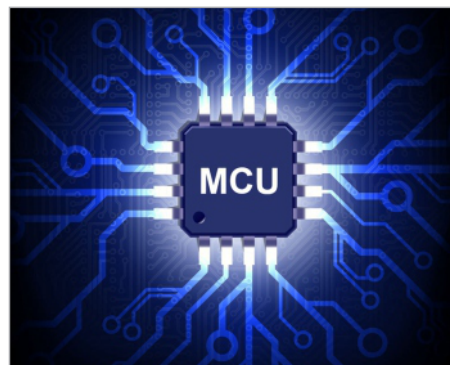
6, Concave grating spectrophotometric technology

Using concave grating spectrophotometric technology, with higher resolution, makes color measurement more accurate.



7, Professional-grade white board

Professional-grade white board, high hardness in the surface, stable optical performance



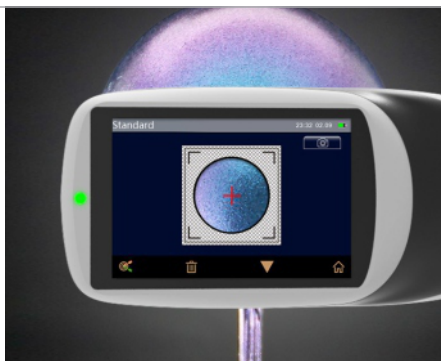
8, Higher quality

Industrial grade real-time processing MCU, supports WIFI, Bluetooth 5.0 transferring more stable and reliable



9, Ergonomics Novel and fashionable appearance design

The appearance of the instrument is designed for easy operation and can meet different holding habits



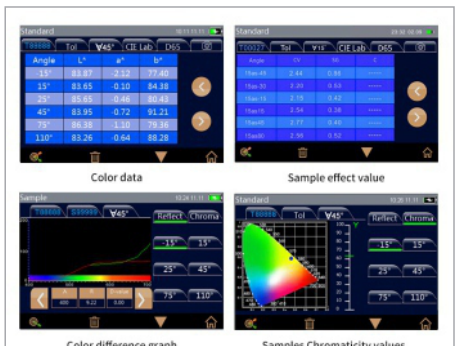
10, Color camera preview, can clearly observe the measured area

Built-in color camera positioning, can accurately judge the object measured position, and improve the measurement efficiency and accuracy



11, Multiple color measurement space, multiple observation light sources

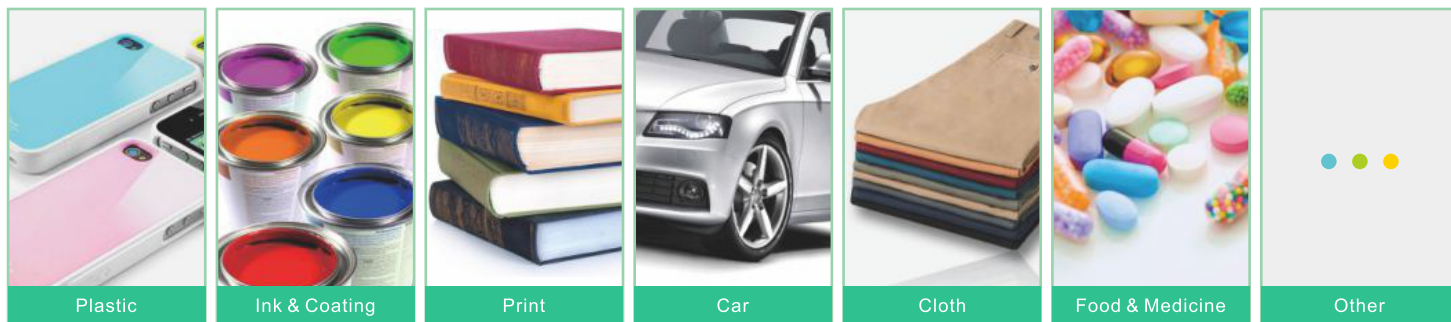
Provide 6 color spaces, multiple observation light sources



12, Easily analyze data

Multiple functions, the screen can display various data intuitively

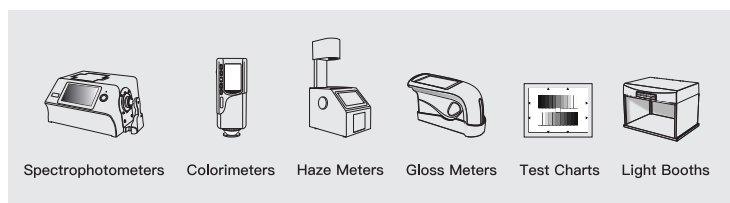
APPLICATION INDUSTRY



MS3006 Product parameter

Measurement Geometry	6 measurement angles (6 illumination sources, 1 receivers)
Measuring angle	45°Receiver: 45as-15°, 45as15°, 45as25°, 45as45°, 45as75°, 45as110°
Conform to the standards	ASTM D2244, E308, E1164, E2194, E2539, DIN 5033, 5036, 6174, 6175-1, 6175-2; ISO 7724, 11664-4, SAE J1545
Application	Provide accurate and consistent color measurement for metallic, pearlescent and other complex special effect color products
Lighting source	Full spectrum LED light source with blue enhancement
Lamp Life	5 years, 3 million times measurements
Spectrophotometric Mode	Concave grating
Sensor	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	400nm-700nm
Wavelength Interval	10nm
Measurement Range	0~600%
Semiband Width	10nm
Measuring Aperture	Illumination size Φ23mm / Measuring spot 9X12mm (Customized: Illumination size Φ10mm / Measuring spot 6X8mm)
Color Space	CIE LAB, XYZ, Yxy, LCh, βxy, DIN Lab99
Color Difference Formula	ΔE^*ab , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$, ΔE^*00 , DIN $\Delta E99$, ΔE DIN6175, color difference formulas of multiple car brands
Other Colorimetric Index	Flop Index
Observer Angle	2°/10°
Illuminant	D65, A, C, D50, D55, D75, F1, F2(CWF), F3, F4, F5, F6, F7(DLF), F8, F9, F10(TPL5), F11(TL84), F12(TL83/U30)
Displayed	Spectral graph/value, sample chromaticity value, color difference value/graph, pass/fail result, color simulation, sample effect value, effect difference value
Measuring Time	Single angle measurement time is about 1s, all angle measurement takes about 12s (not including the effective color measuring time)
Repeatability	Reflectance: standard deviation within 0.08%, chromaticity value: 0.02 ΔE^*ab (after the instrument is warmed up and corrected, the average value of 30 measurements on the whiteboard at an interval of 5s)
Reproducibility	$\Delta E^* < 0.10$, avg on the gray tile of BCRA tile set $\Delta E^* < 0.25$, avg on the color BCRA tile set
Inter-instrument Error	0.2 ΔE^*00 (avg on reference Series II BCRA tile set)
Effect Parameters	Sparkle Grade(SG), Diffuse coarseness(DC) and Color Variation(CV)
Effect Measurement	6 angles Sparkle Grade(SG), Color Variation(CV): 15as-45°, 15as-30°, 15as-15°, 15as15°, 15as45°, 15as80° 15d Diffuse coarseness(DC)
Effect Repeatability	Sparkle Grade(SG) Short-term repeatability: 0.12% (10 times standard deviations) (When a color plate is measured 10 times at 10 second intervals after white calibration)
	Diffuse coarseness(DC) Short-term repeatability: 0.09% (10 times standard deviations) (When a color plate is measured 10 times at 10 second intervals after white calibration)
Effect Reproducibility	Sparkle Grade(SG) Reproducibility: 1.9% (10 times standard deviations) (avg on reference Series II BCRA tile set)
	Diffuse coarseness(DC) Reproducibility: 1.4% (10 times standard deviations) (avg on reference Series II BCRA tile set)
Trigger mode	Pressure sensing trigger, key trigger, software trigger
Measuring Mode	Single measurement, average measurement (1-99), continuous measurement (1-99)
Locating Method	Color camera preview
Dimension	Length x width x height = 195X83X128mm
Weight	about 1Kg
Power	lithium-ion battery, 3.7V, 5000mAh
Display screen	3.5-inch TFT color LCD, Capacitive Touch Screen
Interface	USB, Bluetooth
Data Storage	Standard 1000 Pcs, Sample 4000 Pcs
Language	Simplified Chinese, English, Traditional Chinese
Calibration	Built-in white board parameters, external white board, black tube
Calibration interval	4 hours, 8 hours, 24 hours, Startup calibration
Standard accessories	Power Adapter, USB Cable, User Guide, PC Software (download from the official website), Calibration Board, Black tube
	Protective cap, wristband
Optional accessories	Micro Printer

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