



3nh.com

MULTIPLE ANGLES **ONE-KEY MEASUREMENT**

Tailored for car paint color inspection

MS3003

Multi-angle spectrophotometer MS3003 is used to evaluate the effect of the surface of the topcoat. The appearance is affected by different viewing angles and viewing conditions, Can be used for metallic, pearlescent and other complex special effect colors. The product provides accurate and consistent color measurement.

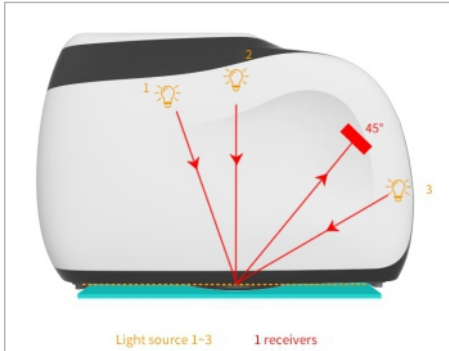


S i m p l e a n d p r a c t i c a l

ISO 9001
Certified

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Product features



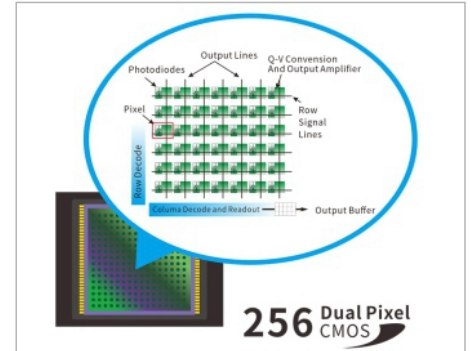
1, Multi-angle measurement

Adopt 3 illumination sources, 1 receivers to measure 3 measurement angles at the same time



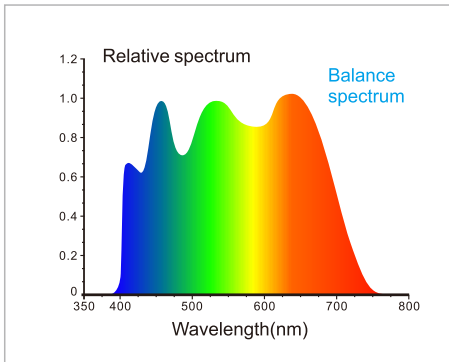
2, More intuitive display

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



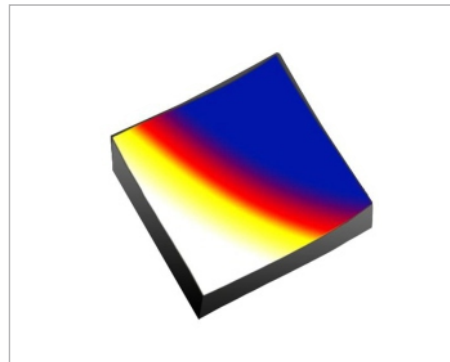
3, 256 Image Element Double Array CMOS Image Sensor

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



4, Blue light enhancement, full spectrum

Full spectrum illumination measurement is more professional to avoid spectrum loss



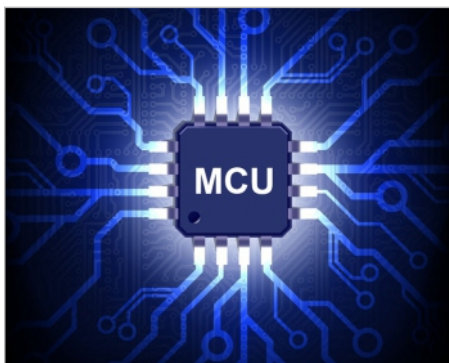
5, Concave grating spectrophotometric technology

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



6, Professional-grade white board

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



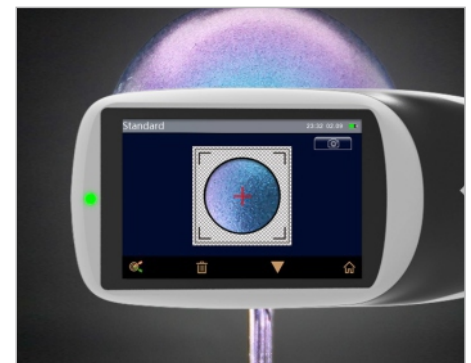
7, Higher quality

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



8, Ergonomics Novel and fashionable appearance design

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



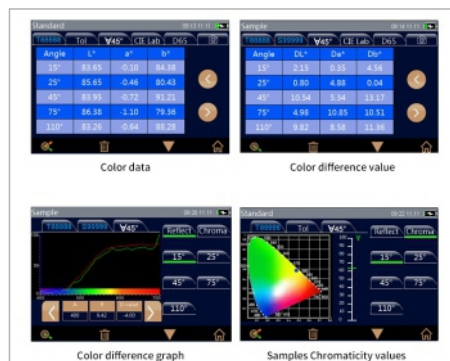
9, Color camera preview, can clearly observe the measured area

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



10, Multiple color measurement space, multiple observation light sources

Provide 6 color spaces, multiple observation light sources



11, Easily analyze data

Multiple functions, the screen can display various data intuitively



12, Support PC software

Can be connected to a computer, use computer control to measure and manage data

APPLICATION INDUSTRY



MS3003 Product parameter

Measurement Geometry	3 measurement angles (3 illumination sources, 1 receivers)
Measuring angle	45°Receiver: 45as25°, 45as45°, 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	Φ12mm
Color Space	CIE LAB, XYZ, Yxy, LCh, βxy, DIN Lab99
Color Difference Formula	$\Delta E^*ab, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00, \text{DIN}\Delta E99, \Delta E \text{ DIN}6175$
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	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Measuring Time	Approx. 1 second for one angle, Approx. 3 seconds for all angles
Repeatability	Spectral reflectance: Standard deviation within 0.08% Chromaticity value: ΔE^*ab 0.04 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
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	/
Effect Measurement	/
Effect Repeatability	/
Effect Reproducibility	/
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, 3200mAh, Continuous test 6000 times within 8 hours of full charge
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
Operating Environment	10°C to 50°C, humidity does not exceed 85%, no condensation
Storage Environment	-20°C to 50°C, humidity does not exceed 85%, no condensation
Calibration	Built-in white board parameters, external white board, black light trap
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 light trap, Protective cap, wristband
Optional accessories	Micro Printer

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