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**CAR PAINT  
INSPECTION**

Metal color  
Pearlescent color  
Special color



# MULTI-ANGLE SPECTROPHOTOMETER

# MS



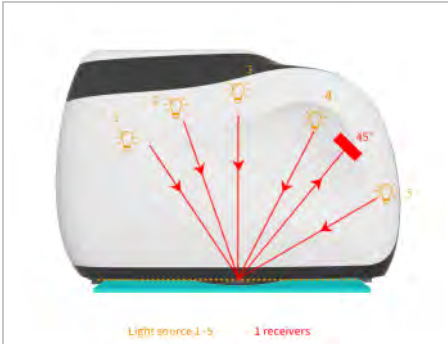
Powerful spectrophotometer

Measure multiple angles at the same time

ISO 9001  
Certified

The MS3005 multi-angle spectrophotometer adopts an industrial-grade MCU and is equipped with 5 measurement angles. With the support of the superior optical measurement system, the MS3005 multi-angle spectrophotometer has excellent performance in multi-angle color difference measurement, even on curved surfaces. , It also has high measurement accuracy and stability.

# Product features



## 1, Multi-angle measurement

Adopt 5 illumination sources, 1 receivers to measure 5 measurement angles at the same time

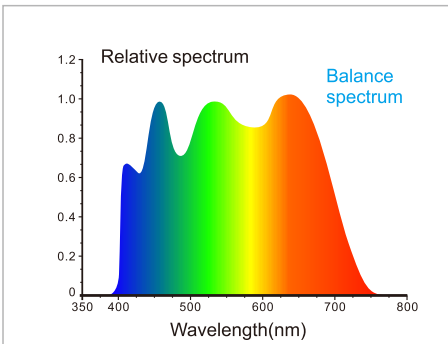


## 2, More intuitive display

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

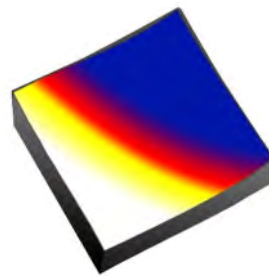
## 3, 256 Image Element Double Array CMOS Image Sensor

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



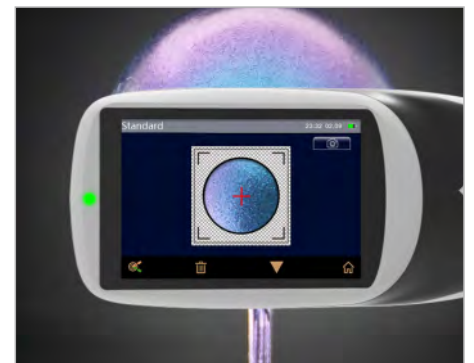
## 7, Higher quality

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



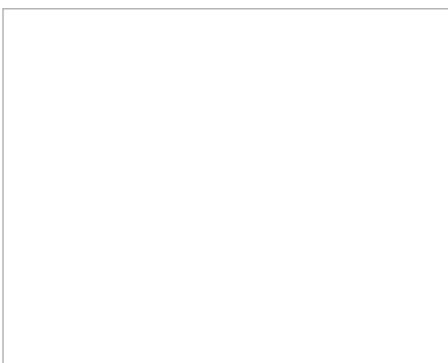
## 8, Ergonomics Novel and fashionable appearance design

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



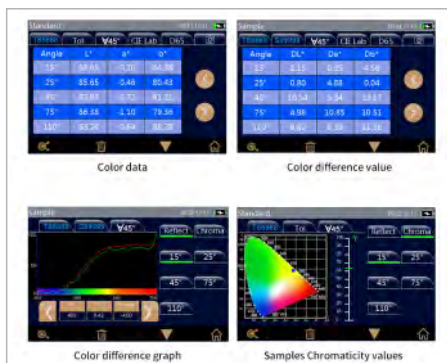
## 9, Color camera preview, can clearly observe the measured area

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



## MS3005 Product parameter

|                                 |  |
|---------------------------------|--|
| <b>Measurement Geometry</b>     | 5 measurement angles (5 illumination sources, 1 receivers)   |
| <b>Measuring angle</b>          | 45°Receiver: 45as15°, 45as25°, 45as45°, 45as75°, 45as110°  |
| <b>Conform to the standards</b> | ASTM D2244, E308, E1164, E2194, E2539, DIN 5033, 5036, 6174, 6175-1, 6175-2; ISO 7724, 11664-4, SAE J1545  |
| <b>Application</b>              | Provide accurate and consistent color measurement for metallic, pearlescent and other complex special effect color products  |
| <b>Lighting source</b>          | Full spectrum LED light source with blue enhancement   |
| <b>Lamp Life</b>                | 5 years, 3 million times measurements  |
| <b>Spectrophotometric Mode</b>  | Concave grating  |
| <b>Sensor</b>                   | 256 Image Element Double Array CMOS Image Sensor   |
| <b>Wavelength Range</b>         | 400nm-700nm  |
| <b>Wavelength Interval</b>      | 10nm   |
| <b>Measurement Range</b>        | 0~600%   |
| <b>Semiband Width</b>           | 10nm   |
| <b>Measuring Aperture</b>       | Φ12mm  |
| <b>Color Space</b>              | CIE LAB, XYZ, Yxy, LCh, βxy, DIN Lab99   |
| <b>Color Difference Formula</b> | $\Delta E^*ab, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00, \text{DIN}\Delta E99, \Delta E \text{ DIN}6175$   |
| <b>Other Colorimetric Index</b> | Flop Index   |
| <b>Observer Angle</b>           | 2°/10°   |
| <b>Illuminant</b>               | D65, A, C, D50, D55, D75, F1, F2(CWF), F3, F4, F5, F6, F7(DLF), F8, F9, F10(TPL5), F11(TL84), F12(TL83/U30)  |
| <b>Displayed</b>                | Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset   |
| <b>Measuring Time</b>           | Approx. 1 second for one angle, Approx. 5 seconds for all angles   |
| <b>Repeatability</b>            | Spectral reflectance: Standard deviation within 0.08% Chromaticity value: $\Delta E^*ab$ 0.03<br>(When a white calibration plate is measured 30 times at 5 second intervals after white calibration) |
| <b>Reproducibility</b>          | $\Delta E^* < 0.10$ , avg on the gray tile of BCRA tile set $\Delta E^* < 0.25$ , avg on the color BCRA tile set   |
| <b>Inter-instrument Error</b>   | $0.2\Delta E^*00$ (avg on reference Series II BCRA tile set)   |
| <b>Effect Parameters</b>        | /  |
| <b>Effect Measurement</b>       | /  |
| <b>Effect Repeatability</b>     | /  |
| <b>Effect Reproducibility</b>   | /  |
| <b>Trigger mode</b>             | Pressure sensing trigger, key trigger, software trigger  |
| <b>Measuring Mode</b>           | Single measurement, average measurement (1-99), continuous measurement (1-99)  |
| <b>Locating Method</b>          | Color camera preview   |
| <b>Dimension</b>                | Length x width x height=195X83X128mm   |
| <b>Weight</b>                   | about 1Kg  |
| <b>Power</b>                    | lithium-ion battery, 3.7V, 3200mAh, Continuous test 6000 times within 8 hours of full charge   |
| <b>Display screen</b>           | 3.5-inch TFT color LCD, Capacitive Touch Screen  |
| <b>Interface</b>                | USB, Bluetooth   |
| <b>Data Storage</b>             | Standard 1000 Pcs, Sample 4000 Pcs   |
| <b>Language</b>                 | Simplified Chinese, English, Traditional Chinese   |
| <b>Operating Environment</b>    | 10°C to 50°C, humidity does not exceed 85%, no condensation  |
| <b>Storage Environment</b>      | -20°C to 50°C, humidity does not exceed 85%, no condensation   |
| <b>Calibration</b>              | Built-in white board parameters, external white board, black light trap  |
| <b>Calibration interval</b>     | 4 hours, 8 hours, 24 hours, Startup calibration  |
| <b>Standard accessories</b>     | Power Adapter, USB Cable, User Guide, PC Software(download from the official website), Calibration Board, black light trap, Protective cap, wristband  |
| <b>Optional accessories</b>     | Micro Printer  |

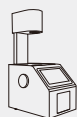
SHENZHEN THREENH TECHNOLOGY CO., LTD.



Spectrophotometers



Colorimeters



Haze Meters



Gloss Meters



Test Charts



Light Booths

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