



YD5050—Enhanced Grating Spectrodensitometer

Under the CIE 45/0 geometric optical illumination and the testing conditions of M 0, M 1, M 2, M 3 stipulated by ISO 13655 standard, the instrument can accurately measure the reflectance data of samples. Under multiple color spaces, it can accurately measure and present various printing density indexes, color difference formulas and color indexes, with Built-in scanning function, it can meet the user's regular testing of various parameters, the instrument with top color manager software, connect to PC, more function expansion.



Concave-Grating
Spectral



USB/Bluetooth 4.0



LED light sources



Scanning



Shenzhen ThreeNH Technology Co., Ltd.

PRODUCT FEATURES

1. 45/0 geometrical optics structure, comply with CIE, the testing conditions of M0, M1, M2, M3 stipulated by ISO 13655 standard, it can accurately measure various printing density, overprint rate and other printing parameters.
2. Accurately measure reflectance spectrum, CMYK density and Lab value of the sample;
3. High-configuration electronic hardware: 3.5-inch TFT true-color screen, capacitive touch screen, concave grating, 256-pixel dual-array CMOS image sensor, etc;
4. Especially suitable for process control and quality control of printing plants;
5. Switchable apertures: $\Phi 2/4/8/20\text{mm}$, adapt to more samples;
6. Large-capacity storage space, over 20,000 test data
7. USB/Blue2.1 dual communication mode is widely useful;
8. PC software has powerful function expansion.
9. Perfect combination of the beautiful appearance and the ergonomic structure design;
10. Combined LED light sources with long life and low power consumption, including UV light;



APPLICATION INDUSTRY

YD5050 with multiple switchable apertures: (2mm, 4mm, 8mm, 20mm), It is widely used in ink printing, paper, painting, scientific research and laboratory. especially suitable for precise measurement and quality control of optical density and dot enlargement in ink printing.



Ink & Printing



Paper



Textile



Automobile



plastics



Laboratory



others

TECHNICAL SPECIFICATIONS

Model: YD5050

Illumination: 45/0

Standard: ISO 5-4, CIE No.15

Light Source: Combined LED source, UV light

Spectral mode: Concave-Grating

Sensor: 256-pixel dual-array CMOS image sensor,

Wavelength range: 400~700nm

Wavelength pitch: 10nm

Half bandwidth: 10nm

Measurement conditions: meet the ISO 13655 measurement conditions: M0 (CIE light source A); M1 (CIE light source D50) M2 (excluding UV illumination); M3 (M2 + polarized light filter)

Density standard: ISO Status T, E, A, I

Density index: density value, density difference, dot area, dot increase, overprint, printing characteristics, printing contrast, tone error and grayscale, Density scanning.

Measurement Aperture: Customizable single $\Phi 2\text{mm}$, $\Phi 4\text{mm}$, $\Phi 8\text{mm}$ optional.

Color Space: CIE L AB, XYZ, Yxy, LCh, CIE LUV, Hunter L AB

Color difference formula: ΔE^*ab , ΔE^*uv , ΔE^*94 , $\Delta E^*cmc(2:1)$, $\Delta E^*cmc(1:1)$, ΔE^*00 , ΔE (Hunter)

Other colorimetric indexes: WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), MI, Cover Ratio

Observer Angle: $2^\circ/10^\circ$

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)

Measuring time: Approx. 1.5s

Repeatability: density value: within 0.01D

Chromaticity value: within ΔE^*ab 0.03

Inter-instrument agreement: within ΔE^*ab 0.18 (Average for 12 BCRA series II color tiles)

Measurement method: single measurement, average measurement (2-99 times)

Size: L*W*H 184X77X105mm

Weight: Approx. 600g

Battery life: lithium battery, 5000 times in 8 hours

Lighting source life: 5 years, more than 3 million measurements

Display screen: TFT true color 3.5 inch,

Touch Screen Interface: USB & Blue 4.0 (compatible 2.1)

Storage: 20000

Language: simplified Chinese, English, Traditional Chinese

Operating Environment: $0\sim 40^\circ\text{C}$, $0\sim 85\%\text{RH}$ (no condensing), Altitude $< 2000\text{m}$

Storage Environment: $-20\sim 50^\circ\text{C}$, $0\sim 85\%\text{RH}$ (no condensing)

Standard accessories: power adapter, data line, built-in lithium batteries,

instructions, quality control software (+download from official website), black and white calibration board, protection cover, polarization filter box, Locating plate.

Optional accessories: Micro printer

Shenzhen ThreeNH Technology Co., Ltd.

Address: F/6, Block 5B, Skyworth Inno Valley, Tangtuo 1st Road, Shiyan, Baoan District, Shenzhen, P.R. China

Tel: 86-755-26508999 Fax: 86-755-27190609

Email: 3nh@3nh.com Website: www.3nh.com

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Focus on Color