High Accuracy Spectrodensitometer DT-YD5050 Plus

DT-5050 Grating Spectrophotometer Densitometer with 45/0 (45 ring-shaped illumination, 0degree viewing angle), comply to standard ISO 5-4,CIE No.15. It is suitable for using in ink printing, in Film Processing, Textile Printing and Dyeing, Plastic Electronics and Other Industries for Color Measurement and Quality Control;especially suitable for the measurement and quality control of optical density and dot enlargement in ink printing. Under the 45/0 geometric optical illumination and the testing conditions of M O, M 1，M 2，M 3 stipulated by ISO 13655 standard, the instrument can accurately measure the reflectancedata of samples. Under multiple color spaces, it can accurately measure various printing density indexes, color difference formulas and color indexes, and can meet the user's regular testing of various parameters.

Applications

1. Printing
2. Packaging
3. Textiles
4. Plastics
5. Automotive

Features

1. 45/0 geometrical optics structure, comply with CIE, the testing conditions of M O, M 1，M2 , M 3 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 touchscreen, concave grating, 256-pixel dual-array CMOS image sensor, etc.；
4. Perfect combination of the beautiful appearance and the ergonomic structure design;
5. Optional apertures: Φ2/4/8mm, adapt to more samples;
6. Large-capacity storage space, over 20,000 test data
7. Combined LED light sources with long life and low power consumption, including UV light;
8. USB/Blue2.1 dual communication mode is widely useful;
9. Especially suitable for process control and quality control of printing plants;
10. PC software has powerful function expansion.

Technical Specifications

Model	DT-YD-5050
Measurement Geometry	45/0(45 ring-shaped illumination, 0 degree viewing angle); ISO 5-4,CIE No. 15
Features	high accuracy spectrophotometer densitometer, apply in ink printing, in Film Processing, Textile Printing and Dyeing, Plastic Electronics and Other Industries for Color Measurement and Quality Control;especially suitable for the measurement and quality control of optical density anddot enlargement in ink printing;able to customize single aperture Φ
Aperture	2mm,Φ4mm,Φ8mm.
Light Source	Combined LED Light, UV Light
Spectral separation device	Concave Grating
Detector	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	400~700nm
Wavelength Pitch	10nm
Half Bandwidth	10nm
Measurement Conditions	Compliance with ISO 13655 measurement conditions;M0 (CIE Light Soure A) M1 (CIE Light Soure D50) M2 (Excluding UV light source) M3 (M2+Polarized light filter)
Density Standards	ISO Status A, E, I, T
Density index	Density value, density difference, dot area, dot enlargement, overprint,printing characteristics, printing contrast, tone error and gray scale, density scanning
Measurement aperture	Customized one aperture：Φ2mm,Φ4mm,Φ8mm optional
Color Spaces	CIE LAB,XYZ,Yxy,LCh,CIE LUV,HunterLAB
Color Difference Formula	ΔE*ab,ΔE*94,ΔE*00,ΔE*uv,ΔE*cmc(2:1),ΔE*cmc(1:1),ΔE(Hunter)
Other Colorimetric Index	WI(ASTM E313,CIE/ISO,AATCC,Hunter),YI(ASTM D1925,ASTM 313), MI (Metamerism Index),Opacity,

Observer Angle	2°/10°
Illuminants	A,C,D50,D55,D65,D75,F2(CWF),F7(DLP),F11(TL84),F12(TL83/U30),F1,F3,F4,F5,F6,F8,F9,F10(TPL5)
Measurement Time	About 1.5s
Repeatability	Density: Within 0.01 D
	Chromaticity value:within ΔE*ab 0.03 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Except M3
Inter-instrument Error	Within ΔE*ab 0.18 (Average for 12 BCRA Series II color tiles) Except M3
Measurement mode	Single Measurement, Average Measurement(2-99)
Size(L*W*H)	184*77*105mm
Weight	About 600g
Power source	Li-ion battery. 5000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	3.5-inch TFT color LCD, Capacitive Touch Screen
Interface	USB, Bluetooth 4.0
Data memory	20000 pcs
Language	English
Working Environment	Temperature: 0~40℃; Humidity: 0~85% (No Condensation);altitude: less than 2000 m
Storage Environment	Temperature: -20~50℃; Humidity: 0~85% (No Condensation)
Standard Accessory	Power Adapter, USB Cable, Built-in li-ion battery, User Manual, software(download from the website),White and Black Calibration Board, Protective Cover,Polarization filter box,Locating Plate
Optional Accessory	Micro Printer