Professional measurement of the color

and color difference of powders and masterbatches

50mm Large-Aperture

Spectrophotometer

DS-807



1. Product Features

- 50mm ultra-large measurement aperture, better suited for testing uneven samples
- Light source lifespan of 2 million measurements, no fear of light source damage
- Data storage up to 10,000 records, store as much as you need
- Fully sealed test port, prevents particles and dust from entering the instrument.



2. Technical Parameters

Model	DS-807
Illumination Method	D/8, including specular reflection (SCI)
Integrating Sphere Diameter	100mm
Light Source	Full-spectrum balanced LED
Wavelength Range	400-700nm
Reflectance Measurement Range	0–200%, resolution 0.01%
Wavelength Interval	10nm
Measurement Aperture	50mm
Observation Light Sources	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V2,LED-8
Standard Observers	2° and 10° Standard Observers
Measurement Time	Approx. 1 second
Color Spaces	CIE LAB,CIE LUV,LCh,Hunter Lab,Yxy,XYZ,Musell,s-RGB,βxy
Chromaticity Indexes	WI (ASTM E313-20, ASTM E313-73, CIE, AATCC, Hunter, Taube, Berger Stensby), YI (ASTM D1925, ASTM E313-20, ASTM E313-73), Tint (ASTM E313-20), Metamerism Index (Milm), Color Fastness to Crocking, Color Fastness to Change, ISO Brightness, R457, A Density, T Density, E Density, M Density, Opacity, Tinting Strength, Intensity
Color Difference Formulas	ΔEab, ΔECH, ΔEuv, ΔEcmc, ΔE94, ΔE00, ΔEab (Hunter), 555 Shade Classification
Repeatability	Standard deviation ΔE*ab ≤ 0.03 (Condition: after warm-up calibration, measure the white tile 30 times at 3s intervals, average value)
Inter-instrument Error	ΔE*ab ≤ 0.4 (Based on average measurement of 12 BCRA II color tiles)
Maximum Data Storage	10,000 records
Dimensions	202 × 264 × 152mm
Weight	Approx. 3kg
Power Supply	100~240V 50/60HZ
Measurement Modes	Single measurement, average measurement
Light Source Lifetime	10 years / 2 million measurements
Display	7-inch IPS full-view LCD
System Languages	Simplified Chinese, English
Data Interface	USB
Operating Temperature Range	5–40°C, relative humidity ≤80% (at 35°C), non-condensing
Storage Temperature Range	-20–45°C, relative humidity ≤80% (at 35°C), non-condensing
Standard Accessories	Petri dish, black cavity, white calibration plate, data cable, power cable

3. Optional Accessories

Material Code	Name	Reference Image
3.07.04.2005-0	800 Quartz Cylindrical Cuvette	
3.02.40.0030-0	Plastic Petri Dish	