

Benchtop Spectrophotometer CWD 6010



Benchtop Spectrophotometer CWD 6010

The CWD 6010 spectrophotometer belongs to the new generation of instruments for measuring and controlling color. It is equipped with LED technology and pre-installed Quality Control software. It is able to perform reflectance and transmittance measurements on liquid, solid, opaque, translucent and transparent samples.

The compact and ergonomic instrument is equipped with a sample holder for transmittance, a 7-inch TFT color touch screen display and an integrated camera for color vision. Optical geometry $d/8^\circ$, in reflectance with specular mode included and excluded, and $d/0^\circ$ in transmittance.

The CWD 6010 spectrophotometer allows high precision and great reliability and is the ideal partner for the laboratory and for production.



MAIN FEATURES

High-quality reflectance and transmittance measurements to perform quality control and color formulation

Automatic identification of the measuring aperture switchable between the 3 available apertures

Integrated temperature sensor to monitor and compensate the temperature ensuring more precise measurement

Wide wavelength range from 360nm-780nm with the possibility of cut off at 400 / 420 nm

Monitoring with a dedicated sensor of the light sources to ensure greater stability of the illumination

Equipped with accessories, sample holder and dedicated output for micro-printer

Benchtop Spectrophotometer CWD 6010

TECHNICAL CHARACTERISTICS OF THE INSTRUMENT

Optical Geometry	Reflect: d / 8 ° (diffused illumination, 8 ° viewing angle); SCI & SCE / SPIN & SPEX; Include/excluded UV. Transmittance: d / 0 ° (diffused illumination, 0° viewing angle); SCI & SCE / SPIN & SPEX; Include/excluded UV.
Light Source	Combined LED Light 360 nm to 780 nm, 400nm cut-off light source
Specular Component	Reflect: SCI&SCE - Transmittance: SCI&SCE
Color space	CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,s-RGB,HunterLab,βxy,DIN Lab99
Color Difference Formula	$\Delta E^*ab, \Delta E^*uv, \Delta E^*94, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E^*00, \text{DIN}\Delta E99, \Delta E(\text{Hunter})$
Observer Angle	2°/10°
Colorimetric Index	WI (ASTM E313, CIE/ISO, AATCC, Hunter), YI (ASTM D1925, ASTM 313), TI (ASTM E313, CIE/ISO), MI (Metamerism Index), Staining Fastness, Color Fastness, Color Strength, Opacity, 8° Glossiness, Gardner Index, Pt-Co Index, 555 Index,
Illuminant	D65,A,C,D50,D55,D75, F1,F2,F3,F4,F5,F6,F7,F8 ,F9,F10,F11,F12,CWF,DLF,TL83,TL84,TPL5,U30
Displayed Data	Spectrogram/Values, Samples Chromaticity Values, Color Difference Values/Graph, PASS/FAIL Result, Color Offset
Spectrophotometric Mode	Concave Grating
Wavelength Range	360 nm - 780 nm
Wavelength Interval	10 nm
Semiband Width	10 nm
Measured Reflectance Range	0 - 200%
Integrating Sphere Size	Ø154 mm
Sensor	256 Image Element Double Array CMOS Image Sensor
Measuring Time	3s (Measure SCI & SCE about 5s)
Measuring Aperture	Reflective: Ø30mm / Ø25.4mm, Ø10mm / Ø8mm Ø6mm / Ø4mm - Transmissive: Ø30mm / Ø25.4mm
Repeatability	Spectral reflectance: Ø25.4 mm / SCI, standard deviation within 0.05% (400 nm a 700 nm) Chromaticity value: Ø25.4mm / SCI, Standard deviation within ΔE^*ab 0.02 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Spectral Transmittance: Ø25.4mm / SCI, Standard deviation within 0.05% (400 nm to 700 nm: within 0.04%) Chromaticity value: Ø25.4mm/SCI, Standard deviation within ΔE^*ab 0.03 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
Inter-instrument Error	Ø25.4mm / SCI, Within $\Delta E^*ab = 0.15$ (Average for 12 BCRA Series II color tiles)
Data Port	USB & Print serial port
Data Storage	Standard 2 000 Pcs, Sample 20 000 Pcs
Language	Simplified Chinese, Traditional Chinese, English,
Power	AC 24V, 3A Power adapter power supply
Illuminant Life Span	5 years, more than 3 million times measurements
Display	7-inch TFT color LCD, Capacitive Touch Screen
Operating Environment	0~40°C, 0~85%RH (no condensing)
Storage Environment	-20~50°C, 0~85%RH (no condensing)
Dimension	L*W*H=370x300x200mm
Weight	9,6 kg
Standard Accessory	Power Adapter, USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4 caliber, 8 caliber, 4 caliber
Optional Accessory	Micro-printer, Transmissive Test Component, Instrument inversion components,culture dish