

Benchtop Spectrophotometer CWD 6020 Xenon Lamp



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The CWD 6020 spectrophotometer belongs to the new generation of instruments for measuring and controlling color with Pulsed Xenon Lamp technology. It is equipped with a 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 the specular mode included and excluded, and $d/0^\circ$ in transmittance.

The CWD 6020 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 4 available apertures

Equipped with a 256-element dual array CMOS image sensor and stable, long-lasting Xenon illumination

Wide wavelength range from 360nm-780nm with the possibility of cut off at 400 / 420nm and 460 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

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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	360nm-780nm Xenon Lamp, 400nm cut-off Xenon Lamp
Specular Component	Reflect: SCI&SCE - Transmittance: SCI&SCE
Color space	CIE Lab, XYZ, Yxy, LCh, CIE LUV, Hunter LAB, Munsell, s-RGB, HunterLab, DIN, βxy
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), MI (Metamerism Index), Staining Fastness, Color Fastness, Color Strength, Opacity, Gardner Index, APHA/Pt-Co Index, 555 Index, Haze(ASTM D1003)
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, 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	5 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 6s)
Measuring Aperture	Reflective: Ø30mm / Ø25.4mm, Ø10mm / Ø8mm Ø6mm / Ø4mm - Transmissive: Ø30mm / Ø25.4mm
Repeatability	Spectral reflectance: Ø25,4 mm / SCI, standard deviation within 0,07% (400 nm a 700 nm) Chromaticity value: Ø25.4mm / SCI, Standard deviation within ΔE^*ab 0.015 (When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Spectral Transmittance: Ø25.4mm / SCI, Standard deviation within 0.07% (400 nm to 700 nm: within 0.07%) Chromaticity value: Ø25.4mm/SCI, Standard deviation within ΔE^*ab 0.018 (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, 25.4mm caliber, 8mm caliber, 4mm caliber,
Optional Accessory	Micro-printer, Transmissive Test Clamp Component, Instrument inversion components, culture dish