

# Benchtop Spectrophotometer CWD 6080 Xenon Lamp



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The CWD 6080 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 6080 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**

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

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

**Equipped with a dual array CMOS image sensor with 256 elements and stable and long-life Xenon illumination**

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

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### TECHNICAL CHARACTERISTICS OF THE INSTRUMENT

<b>Optical Geometry</b>	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
<b>Light Source</b>	360nm-780nm Xenon Lamp, 400nm cut-off Xenon Lamp, 420nm cut-off Xenon Lamp, 460nm cut-off Xenon Lamp
<b>Specular Component</b>	Reflect: SCI&SCE - Transmittance: SCI&SCE
<b>Color space</b>	CIE LAB,XYZ,Yxy,LCh,CIE LUV,Musell,s-RGB,HunterLab,βxy,DIN Lab99
<b>Color Difference Formula</b>	$\Delta E^*_{ab}$ , $\Delta E^*_{uv}$ , $\Delta E^*_{94}$ , $\Delta E^*_{cmc}(2:1)$ , $\Delta E^*_{cmc}(1:1)$ , $\Delta E^*_{00}$ , DIN $\Delta E_{99}$ , $\Delta E$ (Hunter)
<b>Observer Angle</b>	2°/10°
<b>Colorimetric Index</b>	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), Saybolt, Color code (ASTM D1500)
<b>Illuminant</b>	D65,A,C,D50,D55,D75, F1,F2,F3,F4,F5,F6,F7,F8 ,F9,F10,F11,F12,CWF,DLF,TL83,TL84,TPL5,U30
<b>Displayed Data</b>	Spectrogram/Values, Chromaticity Values, Color Difference Values/Graph, Pass/Fail Result, Color Offset
<b>Spectrophotometric Mode</b>	Concave Grating
<b>Wavelength Range</b>	360 nm - 780 nm
<b>Wavelength Interval</b>	10 nm
<b>Semiband Width</b>	5 nm
<b>Measured Reflectance Range</b>	0 - 200%
<b>Integrating Sphere Size</b>	Ø154 mm
<b>Sensor</b>	256 Image Element Double Array CMOS Image Sensor
<b>Measuring Time</b>	3s (Measure SCI & SCE about 6s)
<b>Measuring Aperture</b>	Riflettanza: Ø30mm / Ø25.4mm, Ø18mm / Ø15mm, Ø10mm / Ø8mm, Ø6mm / Ø4mm Transmittanza: Ø30mm / Ø25mm
<b>Repeatability</b>	Spectral reflectance: Ø25.4 mm / SCI, standard deviation within 0,06% (400 nm a 700 nm) Chromaticity value: Ø25.4mm / SCI, Standard deviation within $\Delta E^*_{ab}$ 0.012 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Spectral Transmittance: Ø25.4mm / SCI, Standard deviation within 0.06% (400 nm to 700 nm) Chromaticity value: Ø25.4mm/SCI, Standard deviation within $\Delta E^*_{ab}$ 0.015 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration)
<b>Inter-instrument Error</b>	Ø25.4mm / SCI Within $\Delta E^*_{ab}$ 0.12 (Average for 12 BCRA Series II color tiles)
<b>Data Port</b>	USB & Bluetooth & Print serial port
<b>Data Storage</b>	Standard 5 000 Pcs, Sample 40 000 Pcs
<b>Language</b>	Simplified Chinese, Traditional Chinese, English
<b>Power</b>	AC 24V, 3A Power adapter power supply
<b>Illuminant Life Span</b>	5 years, more than 3 million times measurements
<b>Display</b>	7-inch TFT color LCD, Capacitive Touch Screen
<b>Operating Environment</b>	0~40°C, 0~85%RH (no condensing)
<b>Storage Environment</b>	-20~50°C, 0~85%RH (no condensing)
<b>Dimension</b>	L*W*H=440x248x283mm
<b>Weight</b>	9,6 kg
<b>Standard Accessory</b>	Power Adapter, USB cable, Standard Calibration Board, Black Calibration Cavity, Transmission black baffle, Sample holder, 25.4mm caliber, 15mm caliber, 8mm caliber, 4mm caliber, Transmissive Test Component, Micro Aperture(4mm) transmission test clamp component
<b>Optional Accessory</b>	Micro-printer, Instrument inversion components, culture dish