

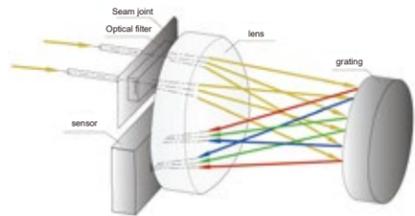


High Accuracy Bench-top Spectrophotometer



DS-36D/37D/39D

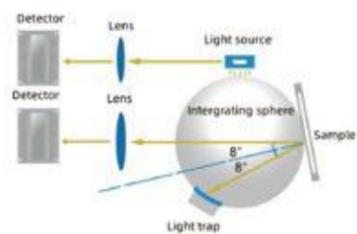
Differential spectrum engine improves overall measurement performance



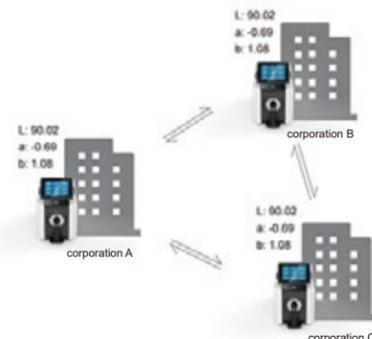
Innovative 1nm resolution grating spectroscopy technology



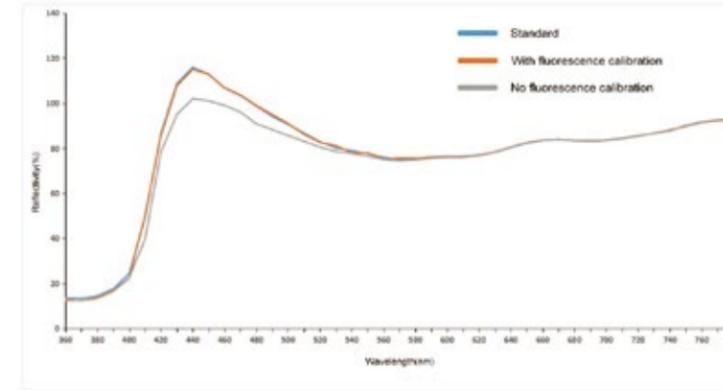
Double optical path design improves repeatability accuracy $dE^*ab \leq 0.005$



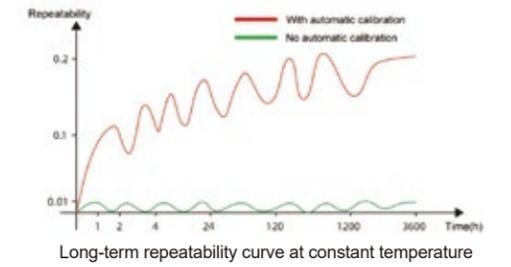
Excellent inter-instrument agreement: $dE^*ab \leq 0.08$



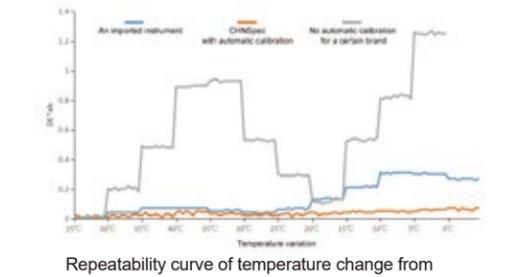
Self-developed fluorescence calibration technique



High precision automatic calibration



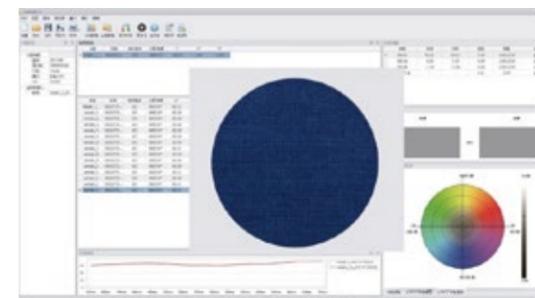
Measure different shape samples by using different size apertures easily



Configure high-definition preview camera



Support for simultaneously saving sample data and images



Technical Data

Model	DS-36D	DS-37D	DS-39D
Lighting/measuring conditions	Reflection: d/8 (diffuse illumination, 8° direction reception) SCI (Contains specular reflected light) / SCE (not contain specular reflected light) measure at same time. Compliance standards: CIE No.15, GB/T 3978, GB 2893, GB/T 18833, ISO7724/1, DIN5033 Teil7, JIS Z8722 Condition C, ASTM E1164, ASTM-D1003-07 Transmission: d/0 (diffuse illumination, vertical reception)		
Sensor	Differential spectrum engine		
Spectroscopic method	Concave grating		
Integrating sphere diameter	152mm		
Wavelength range	360nm-780nm		
Wavelength interval	10nm		
Reflectance measurement range	0-200%, resolution 0.01%		
Lighting source	Pulsed xenon lamps and LED		
Ultraviolet measurement	Includes UV, 400nm cutoff, 420nm cutoff, 460nm cutoff		
Measuring time	Single mode <2s		
Lighting/measuring calibers	Reflection: XLAV Φ25.4mm/Φ30mm; LAVΦ15mm/Φ18mm; MAVΦ8mm/Φ11mm; SAVΦ3mm/Φ6mm Users can customize the calibre, and the calibre switch is automatically recognized Transmission: Φ17mm/Φ25mm		
Transmission measurement specification	Sample height and thickness: height is not limited, thickness ≤50mm		
Repeatability*	ΔE*ab≤0.01, Spectral reflection/transmittance ≤0.1%	ΔE*ab≤0.005, Spectral reflection/transmittance ≤0.1%	
Inter-Instrument Agreement**	XLAV ΔE*ab 0.15	XLAV ΔE*ab 0.12	XLAV ΔE*ab 0.08
Long-term repeatability***	XLAV chroma value: standard deviation ΔE*ab 0.01 or less (under constant temperature conditions, the white correction plate is measured every hour within 24 hours)		
Standard observer	2° and 10°		
Viewing light source	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		
Language	Simplified Chinese,English,Traditional Chinese, Russian, Spanish, Portuguese, Japanese, Thai, Korean, German, French, Polish		
Display content	Spectral data, Spectrogram, chromaticity data, chromaticity Data, chromaticity map, Pass/Fail judgment, Simulation color, Color evaluation, fog, liquid chromaticity, Color bias		
Color space	CIE LAB,CIE LUV,LCh,Hunter Lab,Yxy,XYZ,Musell,s-RGB,βxy		
Chroma index	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),Isochromatic index Milm, color fastness, color changing fastness,ISO brightness,R457,A density,T density,E density, M density,APHA/Hazen/Pt-Co(platinum-cobalt index),Gardner(Gardner Index),Saybolt (Seibert Index),Astm color, fog, total transmittance, covering power, force, intensity		

Color difference formula	ΔE*ab,ΔE*CH,ΔE*uv,ΔE*cmc,ΔE*94,ΔE*00,ΔEab(Hunter),555 color tone classification
Storage	8GB
Screen size	7-inch capacitive touch screen
Operating system	Android
Power source	Dc regulated power supply
Operating temperature and humidity	5 ~ 40°C, relative humidity 80%(35°C) below no condensation
Storage temperature and humidity	-20 ~ 45°C, relative humidity 80%(35°C) below no condensation
Accessories	Power adapter, USB cable, transmission fixture, software U disk, black cavity, white board, greenboard,Fluorescence correction plate,30mm aperture, 18mm aperture ,11mm aperture, 6mm aperture, support table,cuvette,
Optional accessories	Heating transmission jig (including control circuit), vertical bracket, pneumatic jacking rod (including control circuit), small sample holding accessories, reflection cupping plate (non-removable), fiber test box, film jig, micro transmission jig, rod box, European standard plug, American standard plug
Port	RS-232,USB,USB-B,Bluetooth
Camera positioning	Ultra HD camera (1400dpi)
Automatic calibration	√ (Can greatly improve the long-term repeatability of the instrument)
Fluorescence calibration	√ (Can automatically adjust the UV intensity, and ensure that the value of the instrument is highly consistent with that of other imported instruments when measuring materials containing fluorescence)
Brightness calibration	√ (Through the brightness calibration algorithm, the real color of ultra-dark samples is restored)
Others	The instrument can be measured sideways, up and down (using accessories); Automatic temperature and humidity compensation function; PC side software save sample image function

※ After instrument calibration, the white correction plate was measured 30 times at 5-second intervals to measure the standard deviation of the result in XLAV caliber

※※ Based on 23°C, the average value of XLAV aperture measurement of 12 swatches of BCRA Series is measured

※※※ XLAV chroma value: standard deviation ΔE*ab within 0.1 (0°C-40°C arbitrary temperature change)



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