ST SERIES
GRATING SPECTROPHOTOMETER

ST70

The ST series inherits the spectroscopic technology of the TS series, with ultra-high measurement accuracy and stability, and is deeply loved by everyone

Configure 5 measuring apertures

8mm flat | 8mm tip | 4mm tip | 4mm flat | 1x3mm

HANDHELD SPECTROPHOTOMETER

SPECIFICATION PARAMETER

Model	ST70 (Core technologies)	ST60 (Core technologies)	ST50 (Core technologies)
Optical Geometry	Reflectance: D/8(Diffuse illumination, 8° acceptance) SCI&SCE; Include UV/Exclude UV		Reflectance: D/8(Diffuse illumination, 8° acceptance) SCI&SCE; Exclude UV
Standards Compliant	CIE No.15,GB/T 3978,GB 2893,GB/T 18833,ISO7724-1,ASTM E1164,DIN5033 Teil7		
Integrating Sphere Size	Φ40mm		
Light Source	Combined full spectrum LED light source, UV light source		Combined full spectrum LED light source
Spectroscopic Method	Flat Grating		
Silicon photodiode array	double row 32 groups	double row 26 groups	double row 20 groups
Spectral Range	360~780nm	360~700nm	400~700nm
Wavelength Pitch	10nm		
Photometric Range	0~200%		
Measurement Aperture	Five apertures: MAV: Φ8mm/Φ10mm; SAV: Φ4mm/Φ5mm; LAV: 1x3mm	Four apertures: MAV: Φ8mm/Φ10mm; SAV: Φ4mm/Φ5mm	Two apertures (optional 8mm or 4mm)
Specular Component	SCI&SCE		
Color Spaces	CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,HunterLab,βxy,DIN Lab99 Munsell(C/2)		CIE LAB,XYZ,Yxy,LCh,CIE LUV,s-RGB,βxy,Munsell(C/2)
Color difference formulas	ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1),ΔE*cmc(1:1), ΔE*00, DINΔE99,ΔE(Hunter)		ΔE*ab,ΔE*uv,ΔE*94,ΔE*cmc(2:1), ΔE*cmc(1:1),ΔE*00
Other Colorimetric Index	Spectral reflectance, WI (ASTM E313, CIE/ISO, AATCC, Hunter, TaubeBergerStensby),YI (ASTM D1925, ASTM 313), Metamerism Index Mt,Color fastness, color fastness, strength (dye strength, tinting strength), opacity 8 degrees glossiness, 555 hue classification, blackness (My, dM), color density CMYK (A, T, E, M), Tint, color density, Munsell (some functions are realized by the PC software)		
Observer Angle	2°/10°		
Illuminant	D65,A,C,D50,D55,D75,F1,F2(CWF),F3,F4,F5,F6,F7(DLF),F8,F9,F10(TPL5),F11(TL84),F12(TL83/ U30),B,U35,NBF, ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1,LED-V2,LED-C2,LED-C3,LED- C5, customizable light source (41 kinds of light sources in total, some of which are realized by the PC software/APP)		
Displayed Data	Spectrogram/Data, Sample Colorimetric Value, Color Difference Value/Graph, Pass/Fail Results, Color Simulation, Color Bias		
Measurement Time	About 1.5s		
Repeatability	Chromaticity value: MAV/SCI, within ΔE*ab 0.02	Chromaticity value: MAV/SCI, within ΔE*ab 0.025	Chromaticity value: MAV/SCI, within ΔE*ab 0.03
	(After warm-up correction, measure the average value of the white board 30 times at an interval of 5s)		
	Spectral reflectance: MAV/SCI, standard deviation within 0.08% (400~700nm: within 0.18%)		Spectral reflectance: MAV/SCI, standard deviation within 0.1% (400~700nm: within 0.2%)
Inter-instrument agreement	MAV/SCI ,Within ΔE*ab 0.15(Average for 12 BCRA Series II color tiles)		MAV/SCI ,Within ΔE*ab 0.2
Display accuracy	0.01		
Measurement Mode	Single measurement, Average measurement (2~99 times)		
Locating Method	Camera Locating,stabilizer cross position		
Dimension & Weight	129(L)X76(W)X217(H)mm ,Approx 600g		
Battery	Lithium battery, 3.7V, 5000mAh, 8800 times within 8 hours		
Life Lamp	More than 1.5 million measurements in 10 years		
Screen	3.5-inch TFT color LCD, Capacitive Touch Screen		
Interface	USB,Bluetooth		
Data storage	Standard: 1000 Pcs; Sample: 30,000 Pcs.(one data can include SCI/SCE at the same time), APP/PC mass storage		Standard: 1000 Pcs; Sample: 20,000 Pcs.(one data can include SCI/SCE at the same time), APP/PC mass storage
Software support	Android, IOS, Windows, WeChat applet, Hongmeng		
Languages	Simplified Chinese,English,Traditional Chinese		
Standard Accessories	Power Adapter, User Guide, PC Software(Download from office website), USB cable, White and Black Calibration Cavity, Protective Cover, Wrist strap,Five apertures for ST70, four apertures for ST60, and one apertures for ST50		