

# SPECTROPHOTOMETER TABLE TOP

## CS-820N

[www.itokin2000.com](http://www.itokin2000.com)



**CS-820N is newest model of bench-top spectrophotometer.** It is all-in-one model and can measure both reflectance and transmittance. It can measure both opaque and transparent materials such as paint, textile, plastic, master batches, printing materials, etc.



### Part 1. Introduction

CS-820N is the new model of bench-top spectrophotometer. It is all-in-one model and can measure both reflectance and transmittance. It can measure both opaque and transparent materials such as paint, textile, plastic, master batches, printing materials, glasses, liquid and powder materials, etc.

### Part 2. Instrument Advantages

Instrument adopts xenon lamp. It can measure both reflectance and transmittance.

Auto temperature and humidity compensation function.

4 kinds of UV modes for choices.

4 test apertures as standard accessories, auto aperture size recognition.

10 million samples storage memory.

Instrument is with camera to view the measurement area.

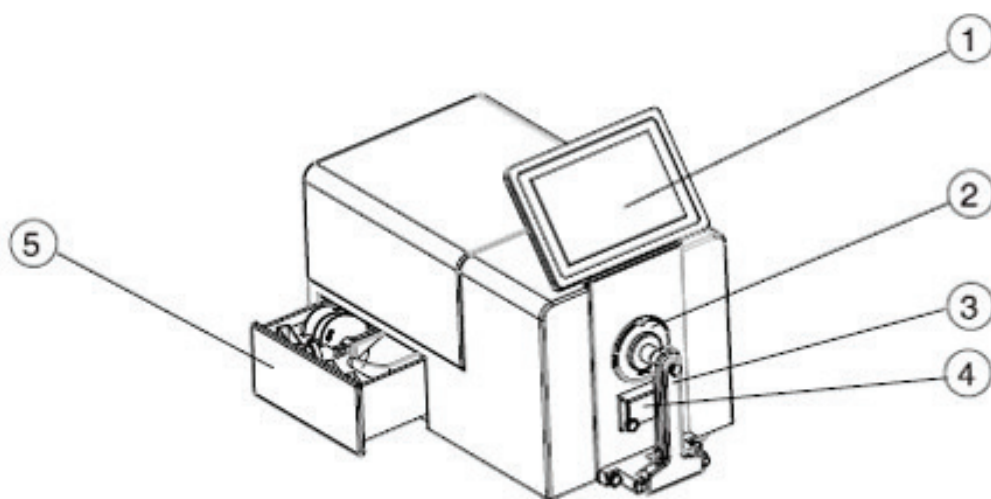
Vertical and horizontal measurement for testing different kinds of samples.

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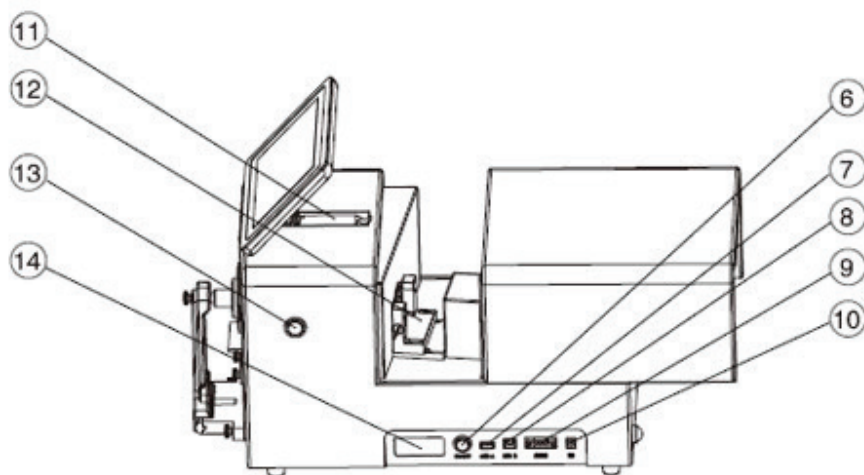
## CS-820N



### Part 3. Bench-top Spectrophotometer Structure



- ① Touch Screen
- ② Test Aperture
- ③ Fixture
- ④ Support
- ⑤ Drawer for Accessories



- ⑥ Switch on-off
- ⑦ USB-A
- ⑧ USB-B
- ⑨ RS-232
- ⑩ Power Outlet
- ⑪ Screen Anti-shake Bracket
- ⑫ Transmittance Fixture
- ⑬ Test
- ⑭ Nameplate
- ⑮ Top Cover Slide lock
- ⑯ Manual Damper
- ⑰ Bench



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### Spectrophotometer Application



▲ Paint



▲ Liquid



▲ Powder



▲ Plastic



▲ Master Batches



▲ Printing Material



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## CS-820N



## Specification

Illumination/ Viewing System	Reflection: d/8(Diffused illumination, 8 degree viewing)
	Simultaneous measurement of SCI/SCE (ISO7724/1, CIE No.15, ASTM E1164, DIN5033 Teil7, JIS Z8722 Condition C standard)
	Transmittance d/0(Diffused illumination, 0 degree viewing )
Sphere Diameter	152mm
Wavelength	360-780nm
Wavelength Pitch	10nm
Reflectance Range	0-200%
Resolution	0.01%
Light Source	Pulse Xenon Lamp
UV Measurement	Include UV, 400nm cut, 420nm cut, 460nm cut
Measurement Aperture	Reflectance: XLAV $\Phi$ 25.4mm/ $\Phi$ 30mm, LAV $\Phi$ 15mm/18mm, MAV $\Phi$ 8mm/ $\Phi$ 11mm, SAV $\Phi$ 3mm/ $\Phi$ 6mm (Aperture size can be custom made) Auto aperture size recognition
	Transmittance: $\Phi$ 17mm/ $\Phi$ 25mm
Repeatability	XLAV Spectrum Reflectance/Transmittance: standard deviation within 0.1%
	XLAV Chromaticity value: Standard deviation within $\Delta E^*ab$ 0.015 * When a white calibration plate is measured 30 x at 5-second intervals after white calibration
Inter-Instrument Agreement	XLAV $\Delta E^*ab$ 0.015 (BCRA Series II, Average measurement of 12 tiles, at 23°C)
Illuminants	A,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12
	CWF,U30,DLF,NBF,TL83,TL84
Display	Reflectance and Transmittance graph/value, color value, color difference values,pass/fail, color simulation, color assessment, haze, liquid chromaticity values, color tendency
Viewing Angles	2° and 10°
Color Spaces	L*a*b, L*C*h, Hunter Lab, Yxy, XYZ
Other Indices	WI(ASTM E313-00,ASTM E313-73,CIE/ISO, AATCC, Hunter, Taube Berger, Stensby)
	YI(ASTM D1925,ASTM E313-00,ASTM E313-73),Tint(ASTM E313-00,CIE,Ganz),Metamerism index milm, stain fastness, color fastness, ISO brightness, R457, A density, T density, E density, MDensity, APHA/Pt-Co/Hazen, Gardner, Saybolt, ASTM color, Haze, Total Transmittance, Opacity, Color Strength
Color Difference	$\Delta E^*ab$ , $\Delta E^*CH$ , $\Delta E^*uv$ , $\Delta E^*cmc$ , $\Delta E^*94$ , $\Delta E^*00$ , $\Delta E^*ab$ (hunter),555 shade sort
Language	Chinese and English (or Custom made)
Storage Memory	8GB
Screen Size	7 Inches Touch Screen
Operate Temperature	5-40°C(40-104F), relative humidity 80% (at 35°C) no condensation
Storage Temperature	Accessories
Accessories	Black Calibration Cavity, White Calibration Tile, Power Adaptor, Operate Manual, PC software (CD), USB Cable, Reflectance Test Support,30mm,18mm,11mm and 6mm apertures, fixture for transmittance
Optional Accessories	Support for vertical measurement, liquid heater (transmittance)
Interface	USB and RS-232
Instrument Size	430x240x260mm
Weight	10.8kgs

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