

# Liquid Densitometer

## ELD-300

-----Direct reading data, Shorter measuring time, Density resolution 0.001 g/cm3

### Application

- Chemical Solution,Modern Energy,Oil Fuel,Fine Chemical Engineering,Chemical Reagent,Chemistry Researching Laboratory.

### Standards

- In accordance with Archimedes principle, GB/T 611 、GB/T11540、GB/T12206、 GB/T5518 standards etc.
- Combine Archimedes principle with modern electronics technique of ELD-300; Digital display liquid desimeter; The data can be read directly with high measuring accuracy; The operation is more easy and get away from the influence of external factor and temperature compared with traditional wechsler balance method and pycnometer method; It can be applied to the field of quality management, cost control,formula researching and so on. Also,the solvent,adhesive,paint,pitch,resin,chemical oils,edible oil,food additives,drink,dairy products can be measured.

### Features

- Density value can be showed by one procedure. and repeatedly continuous rapid measuring can be worked.
- Digital Display; High accuracy of measuring; Simple operation; Stable and Durable.
- Density value of samples with the temperature from normal to 100℃ can be measured.
- Take samples conveniently. and 50CC would be okay.
- There is no cumbersome debugging and operation compared with traditional wechsler balance method and pycnometer method.
- It is very easy to clean measuring cup, and can't got the limitation of the size of pycnometer caliber.
- Coordinate with the operation of thermostatic tank to measure the proportion with the required temperature.
- Adopt the unicas dedicated wind and dust cover,which makes the combination convenient and durable.
- Volatile liquid,corrosivity liquid,vicious liquid,strong acid and strong lye liquid can be measured quickly.
- Interface of RS-232C is included.the printer of DE-40 will be available to connect PC with printer.



Wide application scope  
Simple operation



Digital Display



Take samples conveniently.  
It is very easy to clean measuring cup

### Measuring Procedure

Place beaker with sample on testing board.and take off weight of pothook.  
Make standard weight hanged on pothook and submerged in liquid to be tested totally.and then press ENTER button to memory.Density value can be displayed.

### Standard Accessories

Host,measuring frame,AR-20A standard liquid measuring assembly,tweezer, thermometer,100G weight,wind and dust cover,measuring support,power transformer

### Optional Accessories

AR-40 printer,AR-20B anti corrosive liquid measuring assembly.



### Specifications

Model	ELD-300
Density resolution	0.001g/cm3
Density range	0.001—99.999g/cm3
Measuring type	a:mobility liquid,viscous liquid,volatile liquid,corrosivity liquid,high temperature liquid,suspension liquid,emulsion and so on b:alcohol,scaling powder,essence,blood,sodium chloride,glycerol, electrolyte,diesel,refrigerating,hydrofluoric acid,dichloromethane,vitriol
Measuring Principle	Archimedes principle displacement method
Measuring mode	1 group
Measuring time	About 5 seconds
Memory mode	memory in shorter time by one procedure
Result Display	Density value
Specific Gravity Measuring frame	stainless steel specific gravity measuring frame
Function of setting	Temperature setting,solution density setting,measuring weights setting of weight in the normal liquid and water
Calibration mode	auto correction with one button,auto detection.
Measuring testing	distilled testing
Output mode	standard interface of RS-232,output and print testing data conveniently
Standard accessories	Host,measuring frame,AR- 20A standard liquid measuring assembly,tweezer,thermometer,100G weight,measuring support,power transformer AR-20A standard liquid measuring assembly: Two stainless steel pothooks,one glass weights,one glass beaker.
Optional accessories	AR-40 printer,AR-20B anti corrosive liquid measuring assembly
power	AC-220V / 50HZ
Main feature	data display,accuracy,rapid,convenience durable,economy

Spectrodensitometer

SP-CLD501



Features



Perfect combination of the beautiful appearance and the ergonomic structure design;



Combined LED light sources with long life and low power consumption, including UV light;



Optional apertures: Φ2/4/8mm, adapt to more samples;



Accurately measure reflectance spectrum, CMYK density and Lab value of the sample;



High-configuration electronic hardware: 3.5-inch TFT true-color screen, capacitive touch screen, concave grating, 256-pixel dual-array CMOS image sensor, etc.



Two standard observer angles: 2/10, multiple light source modes and color systems;



Especially suitable for process control and quality control of printing plants;



USB mode is widely useful;



Large-capacity storage space can store over 10,000 test data;



PC software has powerful function expansion.



Specifications

Model	SP-CLD501
Measurement Geometry	45/0(45 ring-shaped illumination, 0 degree viewing angle); ISO 5-4,CIE No.15
Features	With common spectrophotometer densitometer, it can be applied in ink printing, Film Processing, Textile Printing and Dyeing, Plastic Electronics and Other Industries for Color Measurement and Quality Control;especially suitable for the measurement and quality control of optical density and dot enlargement in ink printing;it is able to customize single aperture Φ2mm,Φ4mm,Φ8mm.
Light Source	Combined LED Light and UV Light
Spectral separation device	Concave Grating
Detector	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	400~700nm
Wavelength Pitch	10nm
Half Bandwidth	10nm
Measurement Conditions	Compliance with ISO 13655 measurement conditions; M0 (CIE Light Source A) M1 (CIE Light Source D50) M2 (Excluding UV light source) M3 (M2+Polarized light filter)
Density Standards	ISO Status A, E, I, T
Density index	Density value, density difference, dot area, dot enlargement, overprint, printing characteristics, printing contrast, tone error and gray level
Measurement aperture	Customized one aperture : Φ2mm,Φ4mm,Φ8mm optional
Color Spaces	CIE LAB,XYZ,Yxy,LCh
Color Difference Formula	ΔE*ab,ΔE*94,ΔE*00
Other Colorimetric Index	/
Observer Angle	2°/10°
Illuminants	A,C,D50,D55,D65,D75,F2,F7,F11,F12
Measurement Time	About 1.5s
Repeatability	Density: Within 0.01 D
Inter-instrument Error	Chromaticity value:within ΔE*ab 0.04 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Except M3
Measurement mode	Within ΔE*ab 0.2 (Average for 12 BCRA Series II color tiles) Except M3 Single Measurement, Average Measurement(2~99)
Size(L*W*H)	184*77*105mm
Weight	About 600g
Package Dimension (W*D*H) (mm)	360*170*320
G.W.(kg)	3
Power source	Li-ion battery. 5000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	3.5-inch TFT color LCD, Capacitive Touch Screen
Interface	USB,
Data memory	10000 pcs
Language	Simplified Chinese, English, Traditional Chinese
Working Environment	Temperature: 0~40 C ; Humidity: 0~85% (No Condensation);altitude: less than 2000 m
Storage Environment	Temperature: -20~50 C ; Humidity: 0~85% (No Condensation)
Standard Accessory	Power Adapter, USB Cable, Built-in li-ion battery, User Manual, software(download from the website),White and Black Calibration Board, Protective Cover,Polarization filter box,Locating Plate
Optional Accessory	Micro Printer

Notes: The specifications are subject to change without notice.

Spectrodensitometer

SP-CLD505



Features



45/0 geometrical optics structure. Complying with CIE, the testing conditions of M 0, M 1, M 2, M 3 stipulated by ISO 13655 standard, it can accurately measure various printing density , overprint rate and other printing parameters.



Accurately measures reflectance spectrum, CMYK density and Lab value of the sample;



High-configuration electronic hardware: 3.5-inch TFT true-color screen, capacitive touch screen, concave grating, 256-pixel dual-array CMOS image sensor, etc.



Perfect combination of the beautiful appearance and the ergonomic structure design;



Optional apertures: Φ2/4/8mm, adapting to more samples;



Large-capacity storage space can store over 20,000 test data



Combined LED light sources with long life and low power consumption, including UV light;



USB/Blue2.1 dual communication mode is widely useful;



Especially suitable for process control and quality control of printing plants;



PC software has powerful function expansion.

Specifications

Model	SP-CLD505
Measurement Geometry	45/0(45 ring-shaped illumination, 0 degree viewing angle); ISO 5-4,CIE No.15
Features	Highly accurate spectrophotometer densitometer, can be applied in ink printing, in Film Processing, Textile Printing and Dyeing, Plastic Electronics and Other Industries for Color Measurement and Quality Control;especially suitable for the measurement and quality control of optical density and dot enlargement in ink printing;able to customize single aperture Φ2mm,Φ4mm,Φ8mm.
Light Source	Combined LED Light and UV Light
Spectral separation device	Concave Grating
Detector	256 Image Element Double Array CMOS Image Sensor
Wavelength Range	400~700nm
Wavelength Pitch	10nm
Half Bandwidth	10nm
Measurement Conditions	Compliance with ISO 13655 measurement conditions; M0 (CIE Light Soure A) M1 (CIE Light Soure D50) M2 (Excluding UV light source) M3 (M2+Polarized light filter)
Density Standards	ISO Status A, E, I, T
Density index	Density value, density difference, dot area, dot enlargement, overprint, printing characteristics, printing contrast, tone error and gray scale, density scanning
Measurement aperture	Customized one aperture : Φ2mm,Φ4mm,Φ8mm optional
Color Spaces	CIE LAB,XYZ,Yxy,LCh,CIE LUV,HunterLAB
Color Difference Formula	$\Delta E^*ab, \Delta E^*94, \Delta E^*00, \Delta E^*uv, \Delta E^*cmc(2:1), \Delta E^*cmc(1:1), \Delta E(Hunter)$
Other Colorimetric Index	WI(ASTM E313,CIE/ISO,AATCC,Hunter), YI(ASTM D1925,ASTM 313), MI (Metamerism Index),Opacity,
Observer Angle	2°/10°
Illuminants	A,C,D50,D55,D65,D75,F2(CWF),F7(DLP),F11(TL84),F12(TL83/U30),F1,F3,F4,F5,F6,F8,F9,F10(TPL5)
Measurement Time	About 1.5s
Repeatability	Density: Within 0.01 D Chromaticity value:within $\Delta E^*ab$ 0.03 ( When a white calibration plate is measured 30 times at 5 second intervals after white calibration) Except M3
Inter-instrument Error	Within $\Delta E^*ab$ 0.18 (Average for 12 BCRA Series II color tiles) Except M3
Measurement mode	Single Measurement, Average Measurement(2-99)
Size(L*W*H)	184*77*105mm
Weight	About 600g
Power source	Li-ion battery. 5000 measurements within 8 hours
Illuminant Life Span	5 years, more than 3 million times measurements
Display	3.5-inch TFT color LCD, Capacitive Touch Screen
Interface	USB, Bluetooth 4.0
Data memory	20000 pcs
Language	Simplified Chinese, English, Traditional Chinese
Working Environment	Temperature: 0~4 C ; Humidity: 0~85% (No Condensation);altitude: less than 2000 m
Storage Environment	Temperature: -20~50 C ; Humidity: 0~85% (No Condensation)
Standard Accessory	Power Adapter, USB Cable, Built-in li-ion battery, User Manual, software(download from the website),White and Black Calibration Board, Protective Cover,Polarization filter box,Locating Plate
Optional Accessory	Micro Printer

Notes: The specifications are subject to change without notice.