Spectrophotometer
SP-V1000/SP-UV1000/SP-V1100/SP-UV1100

The spectrophotometer is an indispensable instrument routinely used in colleges, universities and research institutes for quantitative analysis in fields including biotechnology and quality control of new material developed. V-Series provide high resolution, high performance and excellent stability.
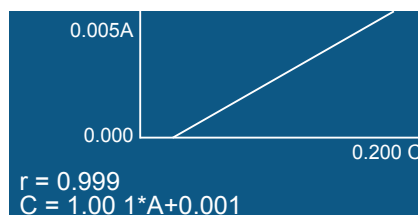
Features

- **User Friendly Operation and Information Rich LCD Display:** The large 128 x 64 dots, backlit LCD screen with adjustable brightness control displays a large array of data also in graphical format
- **On-Board Data Storage:** The System can save the test results, up to 200 group datas and 200 standard curves in the RAM memory
- Data can be restored after a sudden power failure
- **Auto setting wavelength:** Setting wavelength automatically to calibrate the system through arrow keys to avoid operation errors
- **Automatic Switching:** Tungsten& Deuterium lamps switching is automatic. Wavelength range are selectable from 190 to 1100nm
- **PC control through application software:** The spectrophotometer is fully equipped and capable of executing all functions in stand-alone mode. The optional application software **'Wave Professional'** provides computer control through the built-in USB port, apart from other functions such as spectrum scan, time scan(kinetics), multiwavelength scanning & Nucleic Acid / Protein measurement. (SP-V1100/SP-UV1100)
- **Large sample compartment:** To accommodate 5–100mm path length cuvettes with optional holders. A variety of optional accessories are available
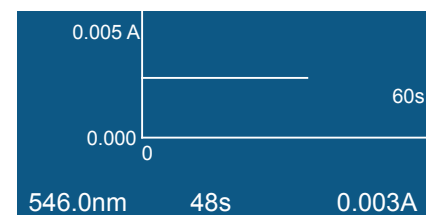
Basic Mode

No.	WL.	Abs.
	546.0nm	0.001A
1	230.0	0.001
2	340.0	0.000
3	450.0	0.002
4	540.0	0.000
5	620.0	0.003

Quantitative

0.005A

0.000

0.200 C

r = 0.999
C = 1.00 1*A+0.001

Kinetics

0.005 A

0.000

60s

0

546.0nm   48s   0.003A

Model	SP-V1000	SP-UV1000	SP-V1100	SP-UV1100
Optical System	Single Beam	Single Beam	Single Beam	Single Beam
Light Source	Tungsten lamp	Tungsten lamp & Deuterium lamp	Tungsten lamp	Tungsten lamp &Deuterium lamp
Spectral Bandwidth	4.0nm	4.0nm	2.0nm	2.0nm
Wavelength Range	325-1000nm	200-1000nm	320-1100nm	190-1100nm
Wavelength Accuracy	±2nm	±2nm	±0.5nm	±0.5nm
Wavelength Repeatability	≤1nm	≤1nm	≤0.3nm	≤0.3nm
Photometric Range	-0.3 - 3.0 A, 0 - 200%T	-0.3 - 3.0 A, 0 - 200 %T	-0.3 - 3.0 A, 0 - 200 %T	-0.3 - 3.0 A, 0 - 200%T
Photometric Accuracy	±0.003 A @ 0.5 A, ±0.006 A @ 1.0 A, ±0.5%T @ 100%T	±0.003 A @ 0.5 A, ±0.006 A @ 1.0 A, ±0.5%T @ 100%T	±0.002 A @ 0.5 A, ±0.004 A @ 1.0 A, ±0.3%T @ 100%T	±0.002 A @ 0.5 A, ±0.004 A @ 1.0 A, ±0.3%T @ 100%T
Photometric Repeatability	≤0.0015 A @ 0.5 A, ≤0.003 A @ 1.0 A, ≤0.25%T @ 100%T	≤0.0015 A @ 0.5 A, ≤0.003 A @ 1.0 A, ≤0.25%T @ 100%T	≤0.001 A @ 0.5 A, ≤0.002 A @ 1.0 A, ≤0.15%T @ 100%T	≤0.001 A @ 0.5 A, ≤0.002 A @ 1.0 A, ≤0.15%T @ 100%T
Stability	≤0.002 A/h @ 500 nm (after preheat 2 hours)	≤0.002 A/h @ 500 nm (after preheat 2 hours)	≤0.002 A/h @ 500 nm (after preheat 2 hours)	≤0.002 A/h @ 500 nm (after preheat 2 hours)
Stray Light	≤0.2%T @ 360nm	≤0.2%T @ 220&360nm	≤0.05%T @ 360nm	≤0.05%T @ 220 & 360nm
Sample Compartment	4-position, 10mm pathlength cuvette	4-position, 10mm pathlength cuvette	4-position, 10mm pathlength cuvette	4-position, 10mm pathlength cuvette
Display	LCD	LCD	LCD	LCD
Output	USB Port & Parallel Port (Printer)	USB Port & Parallel Port (Printer)	USB Port & Parallel Port (Printer)	USB Port & Parallel Port (Printer)
Power	110/220VAC, 50/60Hz, 80W	110/220VAC, 50/60Hz, 120W	110/220VAC, 50/60Hz, 80W	110/220VAC, 50/60Hz, 120W
Dimension(L×W×H)	490×360×210mm	490×360×210mm	490×360×210mm	490×360×210mm
Weight	12kg	14kg	12kg	14kg
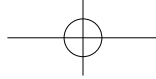
Cat. No. 18900337
Micro Cell holder

Cat. No. 18900340
8-position auto cell changer
(for SP-V1100&SP-UV1100)

Cat. No. 18900331
4-cell holder for 10mm squ.cuvette

Cat. No. 18900332
4-cell holder for 10mm
to 50mm squ. cuvette

Cat. No. 18900333
4-cell holder for up to
100mm squ.cuvette

Cat. No. 18900338
Test tube holder(ø8-ø22mm)

Cat. No. 18900334
cylindrical cell holder(ø16mm)

Cat. No. 18900339
solid sample holder
(ø1.5-3mmø1 position)

Cat. No. 18900335
10mm water-jacketed 1 cell holder
(for SP-V1100 & SP-UV1100)

Cat. No. 18900336
10mm water-jacketed 4-cell holder
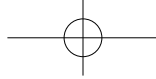(for SP-V1100 & SP-UV1100)

Square cuvettes glass/quartz
1-5mm/10-100mm

Cat. No. 18900341
12V20W halogen lamp

Cat. No. 18900342
Milas deuterium lamp,10V,300mA, 30W
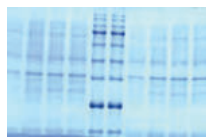(for SP-UV1000&SP-UV1100)

GelSMART

The GelSMART gel imaging system can be used for qualitative analysis of nucleic acid and protein in purification and /or separation application, or colony counting application.

Functions & Applications

GelSMART facilitates fast access to acquire high-quality images of electrophoresis gel or transfer membrane for analysis using smartphone/ tablet. With epi-blue instead of ultraviolet light source, GelSMART is able to safely and efficiently visualize stained DNA signals after gel electrophoresis.

In addition, Coomassie blue stained SDS-PAGE and colony dishes can be observed with the light plate mounted on the GelSMART.

Optionally you can control the complete imaging system via an app on your smartphone or tablet.

## Features

- Compact foot print with a field of 10×10cm
- Simple operation of experiments and quick acquisition of results
- Epi-blue light diminishes UV exposure to lab personnel and DNA damage in the sample
- Adjustable epi-blue light source emits light with high intensity and minimum heat for better light control
- Filter holders can accommodate most popular smartphones/tablets
- Optional light-weight app

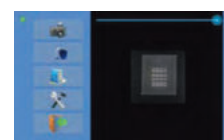| ECO Safe staining | Coomassie blue stained SDS-PAGE | colony dish image |

Simple assemble
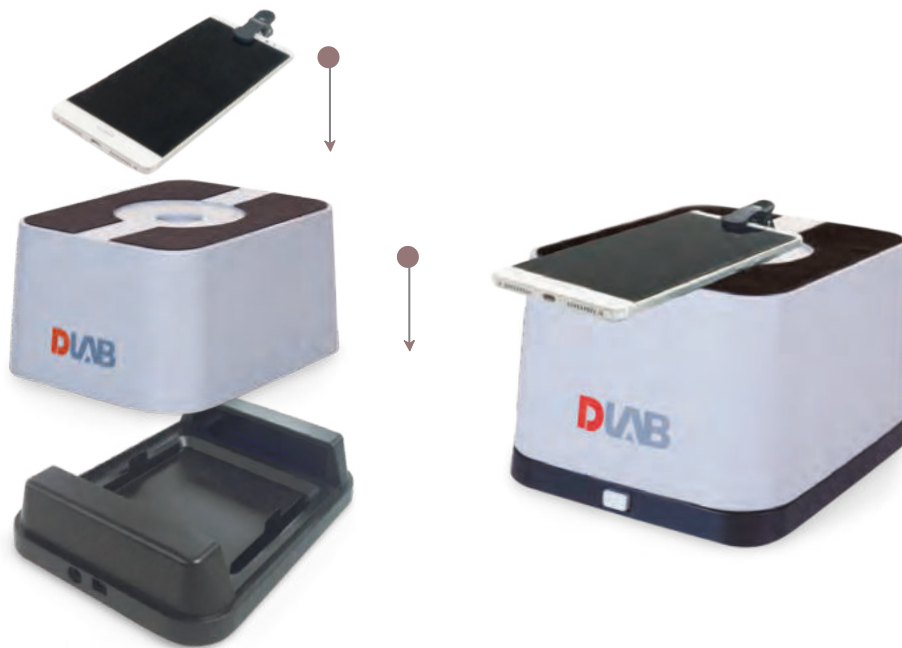
Applications：

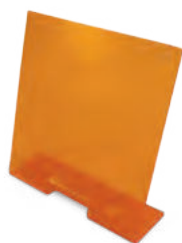Light source cover

+

Light source

Smartphone

App

Observe and cut gels safe and sound with the amber filter shield

Specifications	GelSMART
Light Source	470nm epi blue light
White Light Plate	Yes
Filter Protective Shield	Amber, using when observing or cutting gels
Viewing Area	10 x 10cm
Compatible Dye	DNA：ECO Safe, SYBR Safe, GelGreen Protein：Lightning Red, Silver/ Coomassie blue,SYPRO Ruby
Light Source (L x W x H)	216 x 168 x 54 mm
Light Source Cover (L x W x H)	211 x 161 x 108 mm
Total Size (L x W x H)	216 x 168 x 128 mm
Weight	1.2 Kg
Power Supply	12V / 1.5A AC power adapter
Optional app	for Android 4.4 and above or iOS9.0 and above
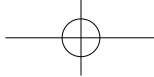
ST800-SA

ST800-EA

DLAB Infrared sterilizers are designed for short time sterilization of laboratory equipments like inoculating loop, inoculated needles, tweezers and other small items with high temperature. These can also be used for the low temperatures with long time sterilization to prevent contamination.

ST800-SA / ST800-EA
Infrared Sterilizer

Features

• DLAB sterilizers are reating fast, convenient and can replace alcohol lamps and bunsen burners
• Sterilization is completed within 5-7 seconds
• Very safe to operate with no visual fire. It is only ashing the organic matter in the depths of ceramic heating body and preventing cross contamination
• LED display actual temperature with temp. control accuracy is 10°C
• These can be used in biology safety cabinets and clean bench space
• Precise temperature control precision and adjustable from 300 - 830°C
• Heating zone angle adjustable(ST800-SA/EA)
• Optional bracket support for inoculate loop or needle instead of holding them by hand

Specifications	ST800-SA	ST800-EA
Display	LED	/
Temperature range [°C]	300~830	830
Central zone max temperature [°C]	825±50	825±50
The heating zone adjustable angle	0-40°	0-40°
Max. outer diameter of sterilized items [mm]	15	15
The total length of heating area [mm]	140	140
Heating tube	Ceramic	Ceramic
Shell	ABS	ABS
Dimensions [LxWxH] (mm)	180x120x186	180x120x186
Weight[kg]	1.5	1.5
Voltage[V]	220V, 50/60Hz	220V, 50/60Hz
Power[W]	190	190
Working temperature [°C]	-10~40	-10~40
Working humidity [% RH]	<80	<80
Storage temperature [°C]	-40~60	-40~60
Storage humidity [% RH]	10~90	10~90