

Colorimeter User Manual

CONTENT

Notes 1
1.Storage 1
2.Use 1
Overview 2
I. Structure 3
1.1 Appearance 3
1.2 Power 6
1.2.1 Battery 6
1.2.2 Power Adapter 8
II. Operation 9
2.1 Turn on 9

2.2 Color Difference Measurement 9
2.2.1 Type Sample Measurement..... 10
2.2.2 Sample Measurement..... 11
2.3. Check out Information..... 12
2.3.1 Type Sample Record..... 12
2.3.2 Sample Record..... 14
2.4. System Setting 15
2.4.1 Auto Save..... 16
2.4.2 Manual Save..... 17
2.4.3 Language Selection..... 18
III. Product Specification..... 19

Notes

1. Storage

- Upon long time no use, put the instrument into a packing box;
- Store the instrument in a cool and dry environment with a temperature at -10°C~50°C and relative humidity under 85%;

2. Use

- When using the instrument, the ambient temperature should be 0°C~40°C, relative humidity at 85%, without condensation;
- Do not use the instrument under the conditions of strong magnetic field, rattling, dust and smoke to avoid unexpected data and performance failure.
- Prevent foreign objects as liquid, powder or solid etc. from entering into the instrument to avoid unexpected measurement data.

Overview

The Colorimeter is a professional colorimeter designed and produced subject to the relevant standards of International Commission on Illumination (CIE) and national stands. Being with brand new imported key components, the instrument is well designed and features in precision, stability, easy handling, easy to learn and cost-effective.

The instrument applies to the color quality control, color difference control, color difference analysis, sampling testing and online testing for industries as textile, printing and dyeing, garments, shoes, leather, chemical, plastic, pigment, paint, ink, printing, metal, photography and toys etc., as well as to the auxiliary color matching during the processes as injection, inking, painting and spraying coating etc.

I. Structure

1.1 Appearance

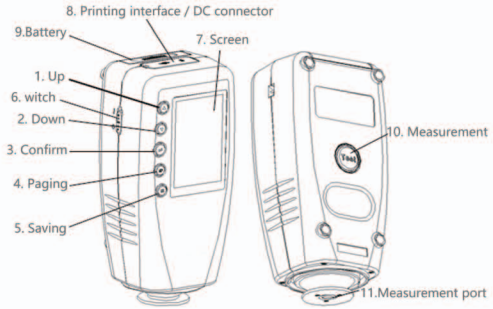


Figure 1. Instrument Appearance

Up - move the position of the cursor in the screen; adjust the value of the activated items.

Down - move the position of the cursor in the screen; adjust the value of the activated items.

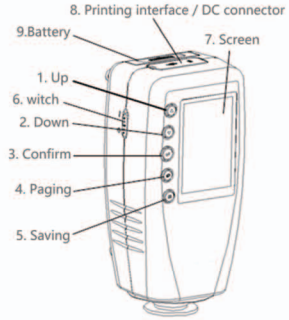
Paging - Switching between tabs.

Saving - Save settings.

Confirm - Confirm or activate selected items in the screen (a blue background of the item will be changed to a green background after activation); fast switching between "standard surement" and "sample measurement".

Show screen——show measurement result etc.
Measurement——Measuring.
Measurement port——Optical channel for measuring.

Switch——In (I) or Out (O) of the instrument.
Printing interface——connect to the printer to print the measuring data.
Battery cover——cover for the special lithium battery.
compartment DC connector——dedicated power adapter connector.



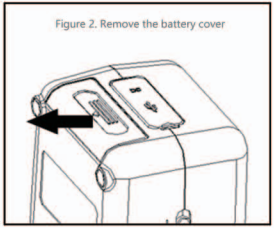
1.2 Power

- The Colorimeter is powered by dedicated power adapter or special lithium batteries, the use of other facilities for power supply may damage the Colorimeter.
- Ensure that the Switch is on Out (O) before connecting to the power adapter or mounting the battery.

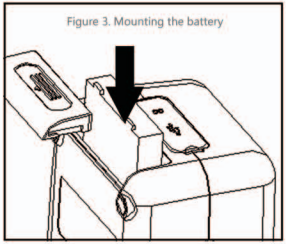
1.2.1 Battery

1. First check and confirm if the Switch is on Out (O), then following the arrow direction as shown on Figure 2, take out the battery cover by pressing down.

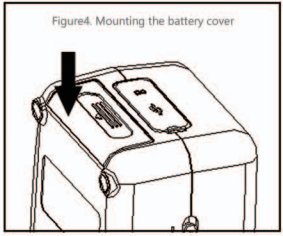
Figure 2. Remove the battery cover



2. Mount the battery into the compartment as shown in Figure 3, pay attention to the front and back of the battery.


Figure 3. Mounting the battery

3. Follow the directions on Figure 4, press up to mount the battery into the compartment.


Figure4. Mounting the battery cover

1.2.2 Power Adapter

1. First check and confirm if the Switch is on Out (O),
2. Plug the input cable of the power adapter as shown on Figure 5 into the DC connector, and then start the colorimeter.

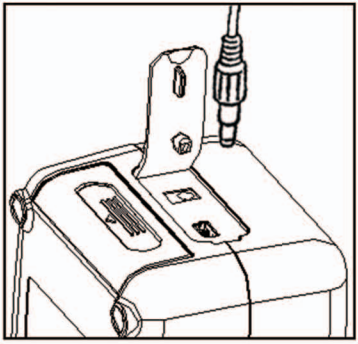


图5 接入电源适配器

II. Operation

2.1 Turn on

● Before turning on the instrument, check if the external power has been connected or the battery has been mounted, ensuring a power supply to the instrument, then start the instrument, the screen will show starting Logo.

● After the completion of boot interface, instrument into the self-test program, ensure the normal working of the instrument.

2.2 Color Difference Measurement

● There are two steps for the color difference measurement which are "Type Sample Measurement" and "Sample Measurement".

1. The Type Sample measurement gets the standard color parameters of a Type Sample;
2. The Sample measurement gets the parameters of the sample needed to be measured, while calculates the color difference data between the Sample and the Type Sample.

2.2.1 Type Sample Measurement

- As shown on Figure 6, the Type Sample measurement can be performed to get the color parameters of a Type Sample. The color parameters measured will be shown on the measurement page.
- In the upper right corner of the page to display the test current conditions, including light sources, lighting and light mode.

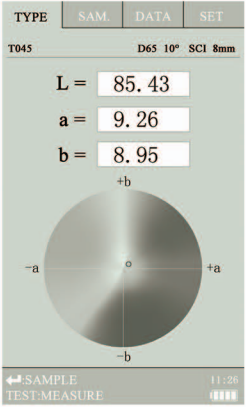


Figure 6. Type Sample Measurement Page

2.2.2 Sample Measurement

- After completing the Type Sample measurement, if it is required to measure the color difference between the Type Sample and the Sample, press "Paging" to switch the screen to "SAM. " page as shown on Figure 7, the color difference parameter measured will be shown on the measurement page.

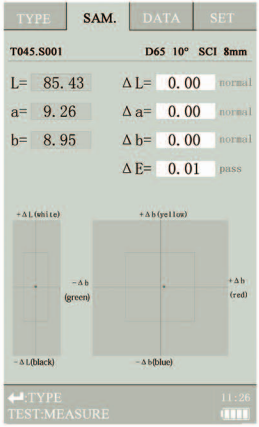


Figure 7. Sample Measurement Page

2.3. Check out Information

2.3.1 Type Sample Record

- Press "Paging" to jump to "Check out Information" page as shown on Figure 8 to check the saved data by "Up" and "Down" keys, if required.

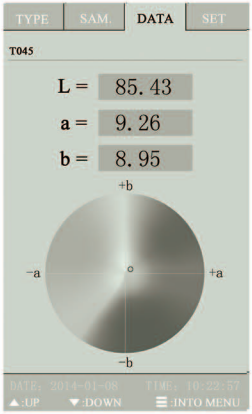


Figure 8. Check out Information Page

- In the current page, press "save" button can be activated in Figure 9 dialog box, choose "sample into" or "standard delete" operation.

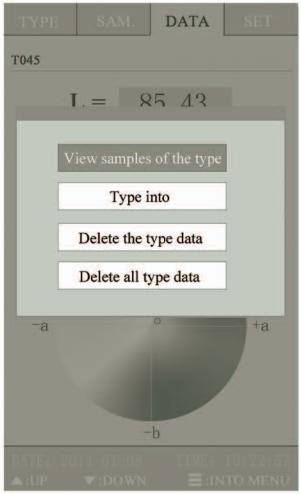


Figure 9 Selecting operation

2.3.2 Sample Record

- After selecting the Type Sample to be checked, select "Sample Record" option to switch the screen to the Sample record page of the Type Sample as shown on Figure 10, then select Sample record by "Up" and "Down" keys to check out the color difference records of each Sample.

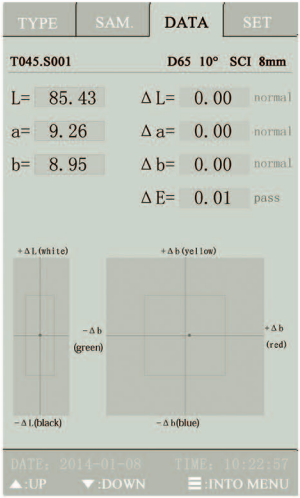


Figure 10. Check out Information Page

2.4. System Setting

- Press "Paging" to switch the screen to "System Setting" page as shown on Figure 11 to set the data saving ways as well as light mode, Light source(D50, D65, F11), tolerance, backlight time, the system date and time during the measurement.

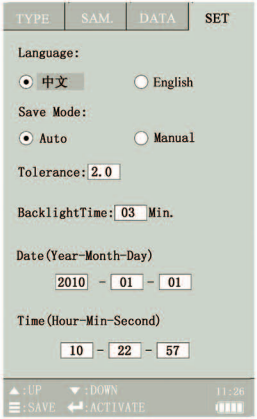


Figure 11. System Setting Page

2.4.1 Auto Save

- As shown on Figure 19, there are two ways for saving which are "Auto Save" and "Manual Save". When setting to Auto Save, system will auto save each time measurement data of the Type Sample or the Sample. If the saving records of the Type Sample or the Sample are full, the measurement data will not be saved and will pop up a window as shown on Figure 12 to prompt if the storage should be cleared.

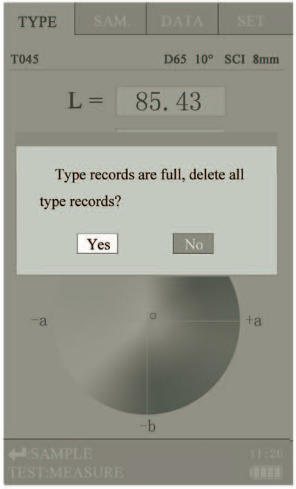


Figure 12. Pop up Window

2.4.2 Manual Save

- When setting to Manual Save, system will not auto save data, it is required, after finishing measuring, to press "Save" for manually saving the data and will pop up a prompt box as shown on Figure 13.



Figure 13. Prompt Box

2.4.3 Language Selection

The colorimeter in the English language version, only in the "System Settings" page can be selected.

III. Product Specification

Model	WR-10QC
Repeated Accuracy	△E<0.03
Measurement Caliber	Φ4mm
Applicable Area	Small,Arc,flat surface
Location method	Positioning block + cross positioning
Color Space	CIEL*a*b*
Color Difference Formula	△E*ab
lilumination condition	CIE：8/d
Light Source	D65
Sensor	Photodiode
Observer	CIE 10° Standard observer
Measurement Range	L：0-100
Table Difference	△E<0.2
Measurement Interval	1.0 Sec
Storage	Type：100 Sample：20000
Lifetime of Bulb	5 years more than 1.6 million measurements
Screen	TFT true color 2.8inch@(16:9)
Language	English/Chinese

Working Temperature	0℃-40℃（32°F-104°F）
Storage Temperature	-20℃-50℃（-4°F-122°F）
Humidity	Relative humidity less than 85%,without condensation
N.W/G.W	330g/1kgs
Size	172*80*60MM
Packing Size	199*68*90MM
Charging Time	8hrs
Battery	Li-ion battery, 5000 times Measurement
Standard Accessories	AC adapter/ 3000mAH Li-ion battery/User Manual
Optional Accessories	Positioning block,Micro Printer

Colorimeter User Manual