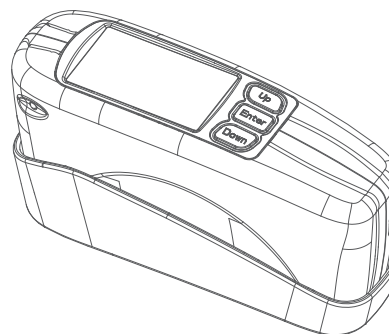China's leading expert of color and gloss analysis

GLOSS METER

INSTRUCTION MANUAL ▶

CS-300/380

Service hotline:+86 571 85888707

Address:No.166,Wenyuan North Road,Jianggan District,Hangzhou City,China

⚠ Please do not disassemble the product without the assistance of customer support center, If you have any questions, please contact the local agency.

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CATALOGUE

Gloss meter Overview

1. The "Gloss meter" described in this manual refers to the mirror gloss meter or specular gloss meter, also known as " vancometer ".
2. The "Calibration tile" described in this manual refers to the glossmeter's accessory, which is a standard component used for device calibration.
3. Do not use this device in a strong electromagnetic environment.

Limited Warranty and Technical Support
1. Limited warranty period is calculated from the purchase date. If you need tany service for the device, please bring it to our local agent and contact us for repair.
2. We can also provide spare parts such as calibration tiles, etc. to dealers or customers.
3. Please do not disassemble the device on your own and repair, as it may adversely affect device accuracy and increase repair complexity. The user shall be responsible for any damage to the device due to unauthorized disassembly or incorrect use.

Gloss Meter Functions

1. One button measurement. Measuring light's angle of incidence complies with ISO 2813 standards.
2. User-friendly design, good human-machine interface.
3. 10,000 test records storage capacity.　Storage memory: 100 pcs targer and 100 pcs sample for each target
4. Data view.
5. Low power and less data storage memory remind.
6. USB and Bluetooth connectivity.
7. Micro printer connecting support.
8. PC data management software, to manage gloss data.

Power Supply: Standard +5V external power supply. No load voltage +5.3V.
Calibration Tile: A standard self-diagnostic tile for the glossmeter, to conduct device calibration.
USB Cable: PC communication cable.
CD: The CD-ROM has PC-based device support software.

Optional Accessories
SD Card: Provides external SD card storage function for the device.
Micro Printer: Supports printing of measurement results.

Comprehensive Gloss Meter Standards

1.ISO2813，ISO7668
2.ASTM D523，ASTM D2457
3.GB/T 9754，GB/T13891，GB/T7706，GB/T8807
All Gloss Meter performance indices comply with national JJG 696-2002 Metrological Verification Regulations for 1st level working device.
Gloss Meters are widely used in areas such as: Paint coatings, decoration materials, building materials, plastic materials, bamboo and wood products, ceramic products, leather products, thin film, paper, printing ink, car mainte-nance, molds and many other areas that require surface gloss measurement for materials and products.

Gloss Meter Technical Parameters

Product Model	CS-380	CS-300
Measurement Angle	20° 60° 85°	60°
Measurement Spot (mm)	20° ： 10*10	60° ： 9*15
	60° ： 9*15	
	85° ： 5*38	
Measurement Range	20° ： 0-2000GU	60° ： 0-1000GU
	60° ： 0-1000GU	
	85° ： 0-160GU	
Scale Interval	0.1GU	
Measurement Mode	Average mode, simple and statistics	
Measurement Repeatability Precision	0-100GU:0.2GU	
	100-2000GU:0.2%GU	
Standard	Complies with JJG 696 Gloss Meter work standards	
Measurement Time	Less than 1s	0.5s
Data Storage	100 standard samples and 10,000 test samples can be stored	
Dimensions (mm)	165*51*77 (length * width * height)	
Weight	About 400g	
Language	English and Chinese	
Battery Power	3000 mAh lithium battery	
Connectivity	USB, Bluetooth (optional)	
Working Temperature	0-40℃	
Relative Humidity	Less than 85%, non-condensing	
Accessories	5V/1A charger, USB cable, manual, CD, calibration standard tile, metrology certificate	

Swtich on and Switch off Operation

Press "test" to switch on/off the instrument, followed by a "beep" sound.

Calibration

Switch on the device, it automatically navigates to the calibration interface, press "test", the device will starts automatic calibration. After calibration successfully, screen displays "cal. pass", then enter into measurement interface as show in figure 2
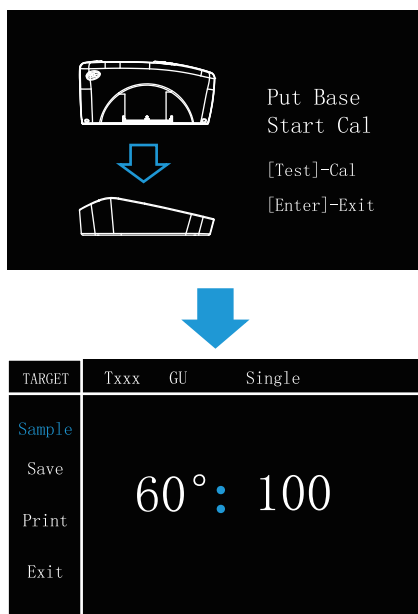
```
Put Base
Start Cal

[Test]-Cal
[Enter]-Exit
```

Figure 1

```
TARGET    Txxx    GU      Single
Sample
Save
Print         60°: 100
Exit
```

Figure 2

```
TARGET    Txxx    GU      Single
Sample
Save          20°: 87.6
Print         60°: 91.9
Exit          85°: 100
```

Figure 3

Note: If calibration is required during measurement, navigate to the "Main Menu" interface and select the "Calibration" icon. Follow the same procedure as listed above.

Main Menu

In the "Main Menu", as shown in Figure 4, use "Up" or "Down" to select the appropriate operation; the options are "measure", "Calibration", "Data View", "Settings", "USB" and "Bluetooth". Press "Enter" to confirm. Press "Test" to return to the last step.
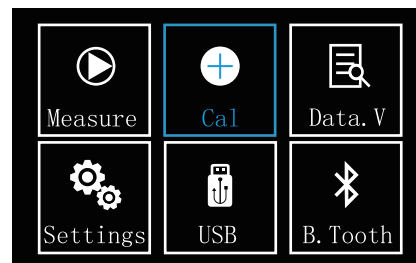
```
Measure     Cal      Data.V

Settings    USB      B.Tooth
```

Figure 4

Measurement

In the Main Menu, press "Up" or "Down" to select the "measure" icon, and press "Enter" to navigate to the measure interface. The system displays the "Test" screen by default, as shown in Figure 5.

In this page, the user can test the target and sample, view test result and gloss difference between target and sample,analysis result and check if the sample gloss is qualified or not. Save and print the test results.

Target Test

In the Main Menu, use "Up" or "Down" to select the "measure" icon, and press "Enter" . The system displays the "Target" screen by default, as shown in Figure 5 and Figure 6. Press "Test" to test the target; After measurement,we can see the test result on screen. Use "Up" or "Down" to "Save" or "Print" the test results.

```
TARGET    Txxx    GU      Single

Sample
Save
            60°: 100
Print

Exit
```

Figure 5

```
TARGET    Txxx    GU      Single

Sample
Save
            20°: 87.6
            60°: 91.9
Print
            85°: 100
Exit
```
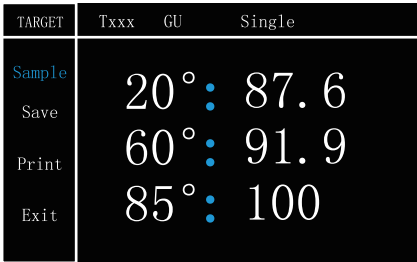
Figure 6

Save: After the test is completed, use "Up" or "Down", and select "Save" to save the test results. Press "Enter" to confirm. A popup is displayed as shown in Figure 7.

```
      Edit the
     Target name
     Input name:

     T048

     YES        NO
```
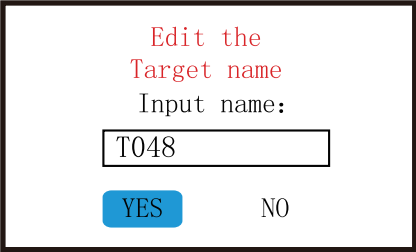
Figure 7

Use "Up" or "Down" to select the Target name, and press "Enter" to confirm. Use "Up" or "Down" to modify the corresponding numerical value and character (numerical range is 1–9, letters are a–z), and press "Enter" to confirm. After you complete editing, press "Test" to exit editing, and then confirm the modification.

Print: Use "Up" or "Down", and select "Print". Press "Enter" to confirm.

Sample Test

After completing the above target sample test, use "Up" or "Down" to move the " ▬ " cursor to the "Sample". Press "Enter" to confirm, and navigate to the "Sample" screen as shown in Figure 8. The current sample test data is displayed. Press "Test" to test the sample. We can see the test result on screen after test. Similar to the target sample, the test sample's name is displayed as"S×××".
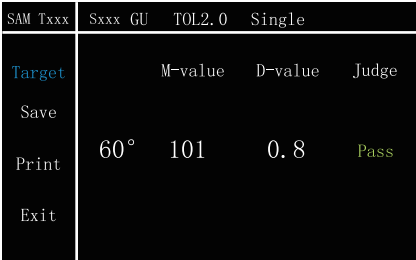
```
SAM Txxx   Sxxx GU    TOL2.0    Single

Target              M-value    D-value    Judge
Save
          60°    101        0.8        Pass
Print

Exit
```

Figure 8

SAM Txxx	Sxxx GU	TOL2.0	Single	
		M-value	D-value	Judge
Target				
Save	20°	87.5	-0.1	Pass
	60°	92.0	0.1	Pass
Print				
Exit	85°	100	-0.0	Pass

Figure 9

You can also conduct gloss measurement in the "View" screen. Use "Up" or "Down" to select the existing target sample, and press "Enter" to navigate to the selection menu. Select "Import Target", as shown in Figure 10 and 11. The system navigates to Sample measurement page, as shown in Figure 12 and 13. Press "Test" to conduct measurement. The gloss measurement is complete after you see the sample gloss value on screen.

Data.V

T-Name	S-Number		Details
T000	1		
T001	0	Import Target	
T002	0	View Sample	00 GU
T003	0	Delete	
T004	0	Edit Name	

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Figure 10

Data.V

T-Name	S-Number		Details
T000	1		
T001	0	Import Target	00 GU
T002	0	View Sample	00 GU
T003	0	Delete	00 GU
T004	0	Edit Name	

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Figure 11

SAM Txxx	Sxxx GU	TOL2.0	Single	
		M-value	D-value	Judge
Target				
Save				
	60°	101	0.8	Pass
Print				
Exit				

Figure 12

SAM Txxx	Sxxx GU	TOL2.0	Single	
		M-value	D-value	Judge
Target				
Save	20°	87.5	-0.1	Pass
Print	60°	92.0	0.1	Pass
Exit	85°	100	-0.0	Pass

Figure 13

Note: In the Sample measurement page, use "up" or "down" we can select Save, Print and Exit. Save is for saving sample test result. Print is for printing on micro printer which is a optional accessory. Exit is for going back to main memu.
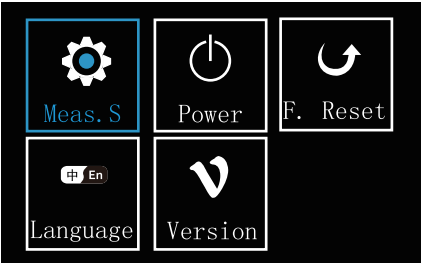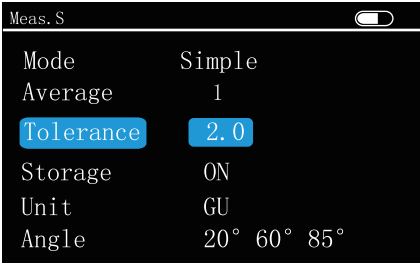

Figure14

Figure 15

Figure 16

Data View

In the Main Menu, use "Up" or "Down" to select the "Data View" icon, and press "Enter" to confirm, and navigate to the "Data View" screen, as shown in Figure 17 and 18. The user can view saved target and sample information in this screen.
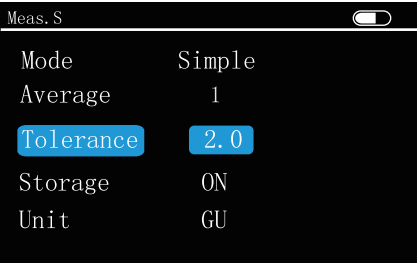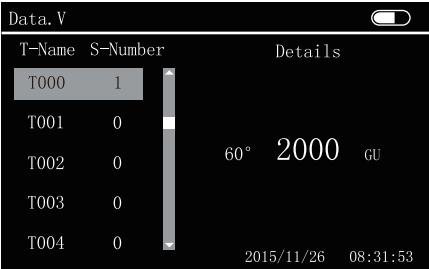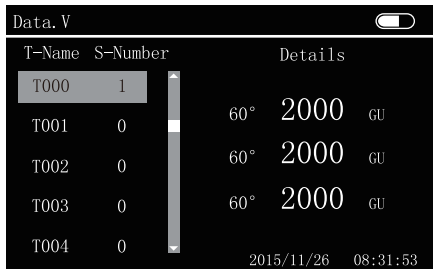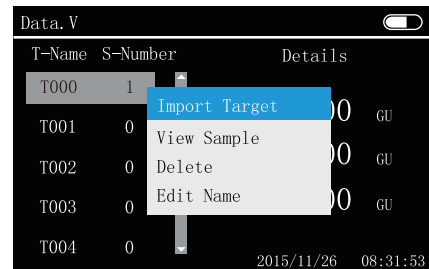

Figure 17

Figure 18

Use "Up" or "Down" to select the target to be viewed, and press "Enter". A drop‐down menu is displayed as shown in Figure 19. Use "Up" or "Down" to select the appropriate option. The options are: "Import Target", "View Sample", "Delete", and "Edit Name".

Figure 19

Figure 20

Import : The test sample can be tested against the target in this screen. Press "Test" to conduct sample test. Test result can be saved and printed by choosing "Save" or "Print".
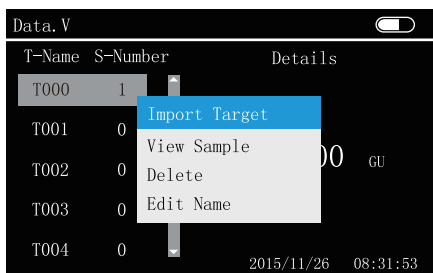

Figure 21

```
SAM Txxx   Sxxx GU   TOL2.0   Single        ⬛

Target              M-value   D-value    Judge
Save          20°    87.5     -0.1      Pass
Print         60°    92.0      0.1      Pass
Exit          85°    100      -0.0      Pass
```

Figure 22

View Sample: View the sample gloss value. Use "Up" or "Down" to select the sample, and press "Enter" to confirm, as shown in Figure 23 and 24. A drop-down menu appears. You can choose the option to "Delet", "Delete All and "Edit Name".
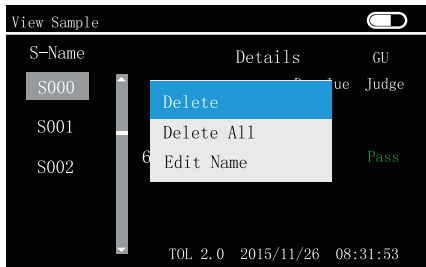
```
View Sample                              ⬛
  S-Name           Details          GU
  S000                              ue   Judge
         ┌─────────────────┐
  S001   │ Delete          │
         │ Delete All      │
  S002   │ Edit Name       │      Pass
         └─────────────────┘
         TOL 2.0  2015/11/26  08:31:53
```

Figure 23

```
View Sample              16:41   ⬛
  S-Name           Details          GU
  S000                              value Judge
         ┌─────────────────┐
         │ Delete          │        1    Pass
  S001   │ Delete All      │        1    Pass
  S002   │ Edit Name       │
         └─────────────────┘
          85°   100      -0.0      Pass

         TOL 2.0  2015/11/26  08:31:53
```
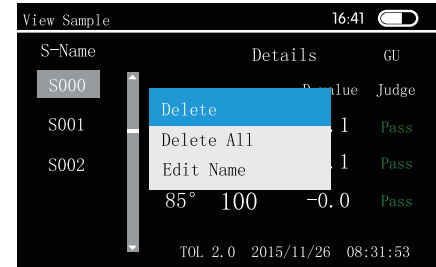
Figure 24

Delete:Delete the chosen sample

Delete: Delete all samples under the target

Edit Name: Please refer to (Measure--Target Test-Save-Edit Name) for more details.

Settings

From the "Main Menu" select the "Settings" icon, and press "Enter" to confirm, and navigate to the "Settings" screen, as shown in Figure 25. Use "Up" or "Down" to select the appropriate options: "Measure Setting", "Power", "Factory Reset","Language","Version",and then press "Enter" to confirm
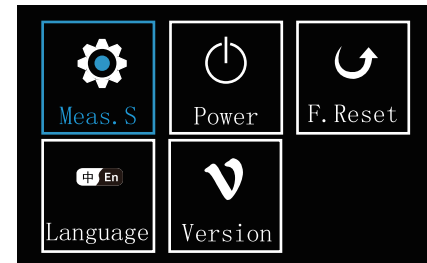
```
┌────────┬────────┬────────┐
│  ⚙     │  ⏻     │   ↻    │
│ Meas.S │ Power  │ F.Reset│
├────────┼────────┼────────┤
│ 中En   │   v    │        │
│Language│Version │        │
└────────┴────────┴────────┘
```

Figure 25

The following are specific settings of all "Settings" functions.

Measurement Settings

Use "Up" or "Down" to select "Measurement Settings" icon, and press "Enter" to navigate to the "Measurement Settings Interface", as shown in Figure 26.
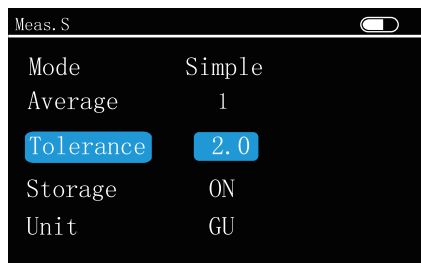
```
Meas.S                        ▭
  Mode          Simple
  Average         1
  Tolerance      2.0
  Storage        ON
  Unit           GU
```
Figure 26

Use "Up" or "Down" to select the appropriate setting and press "Enter" to confirm.
Select Mode: Press "Enter" to select "Statistics" or "Simple" mode.
Average: Press "Enter" to select, and use "Up" or "Down" to change
                the value. Press "Enter" to confirm.
Tolerance: Press "Enter" to select, and use "Up" or "Down" to change the value.
            Press "Enter" to confirm.
Storage: Press "Enter" to select "ON" or "OFF".
Unit: Press "Enter" to select "GU" or "REF".
Measurement angel is an additional parameter to be set in CS－380 Gloss Meter:
Measurement Angle: Press "Enter" and select the appropriate measurement angle. The options are 20°, 60° and 85°, and the selected value is highlighted in blue. Use "Up" or "Down" to move the " [   ] " cursor to 20°, 60° or 85°, and press "Enter" to select the appropriate angle. Press "test" to exit.

Power Settings

Use "Up" or "Down" to select the "Power Settings" icon, and press "Enter" to navigate to the "Power Settings" screen, as shown in Figure 27.
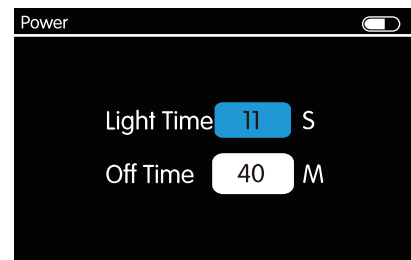
```
Power                         ▭

    Light Time  11  S

    Off Time    40  M
```
Figure 27

In the "Power Settings" screen press "Up" or "Down" to move the " [   ] " cursor to the appropriate value, then press "Enter". The " [   ] " highlighted value can now be adjusted. Use "Up" or "Down" to modify the " [   ] " highlighted number, and adjust the backlight switch－off and shutdown time. The backlight switch off time range is 0－60 seconds, with an interval of 5 seconds; and the shut down time range is 0－60 minutes, with interval of 1 minute. After all changes are completed, press "Enter" to confirm.

Factory Reset

Use "Up" or "Down" to select the "Factory Reset" icon, and press "Enter" to navigate to the "Factory Reset" screen, as shown in Figure 28. Move the " ▬▬ " cursor (Press "Up" or "Down"), when the " ▬▬ " cursor moves to "Yes", press "Enter" to confirm, and conduct factory reset of all data in the memory. When the " ▬▬ " cursor moves to "No", press "Enter" to cancel and exit.
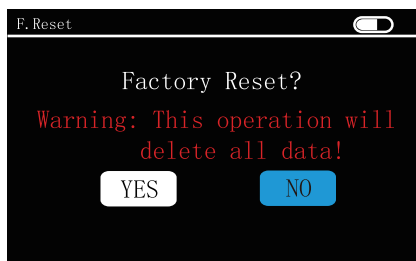
F.Reset

Factory Reset?
Warning: This operation will delete all data!
YES   NO

Figure 28

Language

Use "Up" or "Down" to select "Language" icon, and press "Enter" to navigate to the "Language" screen, as shown in Figure 29. Use "Up" or "Down" to select the appropriate language, and press "Enter" to confirm. This device supports Chinese and English language.
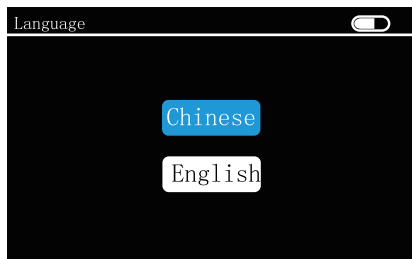
Language

Chinese

English

Figure 29

Version

Use "Up" or "Down" to select the "Version" icon, and press "Enter" to navigate to the "Version Information" screen. The Gloss Meter's detailed version information is displayed.
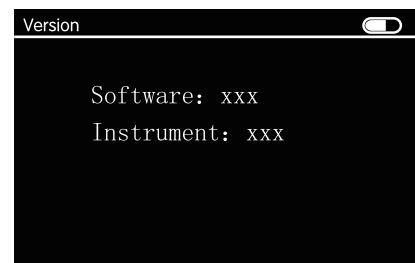
Version

Software: xxx
Instrument: xxx

Figure 30

Calibration Interface

In the "Main Menu" interface, use "Up" or "Down" to move the cursor to the "Calibration" icon. Press "Enter" to confirm, and navigate to the Calibration screen, as shown in Figure 31. Press "Enter" for automatic device calibration. After successful calibration, the system automatically navigates to the "Main Menu" screen,as shown in Figure 32.
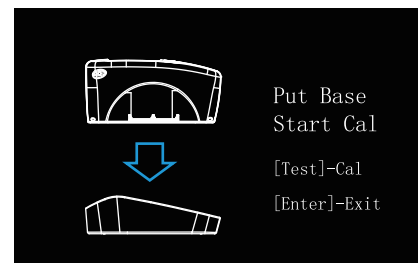
Put Base
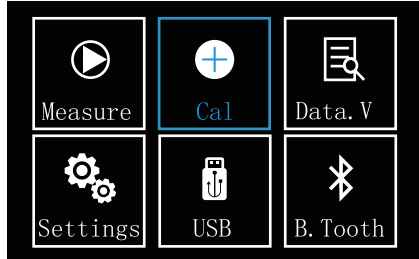Start Cal

[Test]-Cal
[Enter]-Exit

Figure 31

Figure 32

USB

In the Main menu interface, use "Up" or "Down" to move the cursor to "USB". Press "Enter" to confirm and navigate to the "USB interface" screen.

Use the USB cable included in the standard accessories to connect the device to a PC, and install the driver following the on-screen prompts. After proper installation, you can use the PC software for the device. If the USB cable is not inserted into the USB port or USB cable has poor contact, please reinsert into the USB port and ensure it is connected properly to use the PC software for the device.
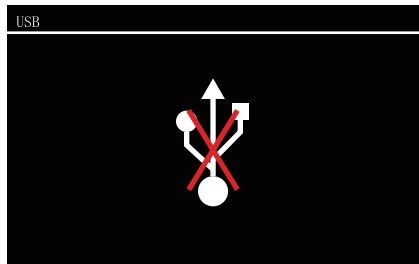

Figure 34

Troubleshooting

The following are reference troubleshooting solutions for any abnormal situation:

Abnormal Situation	Handling Method
Device doesn't start	1. Check whether the device is connected to the external AC power adapter. 2. Check whether there is sufficient battery power; install or change the batteries, or connect to the power adapter.
Measurement data error or deviation from normal values	1. In such a case, conduct multiple measurements to ensure measurement accuracy. 2. Check whether the standard calibration board is clean, and press the device tightly into the base and recalibrate. 3. It is possible that the device is not pressed tightly against the measured object while measuring
USB connection not successful	1. Please confirm whether the cable is connected to the USB port is properly. 2. Please ensure the appropriate USB driver has been installed in your computer.
Calibration Fail	1.Check if the film on the bottom and instrument is taken out or not. 2.Check if calibration tile and instrument is well matched.

Company Statement

● Our company commits to our customers 1 year warranty period for our Gloss Meter series products from the date of the purchase, and our company shall be responsible to provide free maintenance for non-human caused malfunctions under normal usage. For malfunctions that are out of warranty period or caused by human factors, the company shall provide maintenance, and materials and repair shall be chargeable. (For detailed warranty information please refer to CHNSpec Warranty - Detailed rules and regulations)

● Our company shall not be responsible for any losses to or claims by a third party incurred by the use of this product.

● Our company shall not be responsible for damage or loss caused by data loss due to malfunction, maintenance or power outage. In order to prevent loss of important data, please backup all important data.

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