



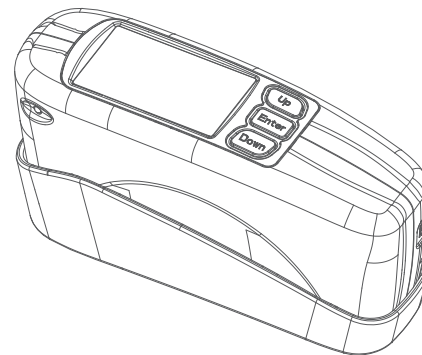
领先的中国色彩与光泽分析专家
China's leading expert of color and gloss analysis



微孔光泽度仪

产品使用说明 ▶

CS-300S



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CATALOGUE

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光泽度仪概述

- 1.本说明书所述“光泽度仪”指的是镜像光泽度仪或镜面光泽度仪，也称“光泽度计”。
- 2.本说明书所述“工作板”指与光泽度仪配套，用于仪器校准的工作标准器件。
- 3.本仪器使用应避开强电磁干扰。

限制性保修与技术支持：

限制性保修的时间是自购买本产品开始计算。如果您的仪器需要服务，请将仪器带到当地的销售部联系我们来进行维修。在任何时间我们都可以向经销商或顾客提供备用部件如校准验板等。

为了避免仪器精度受到影响以及较为困难的维修，请不要将仪器私自拆开。如果由于拆卸机器或不正确的使用而导致仪器损坏，请用户自行负责。

光泽度仪功能描述

- 1.一键完成测量，测量光入射角符合ISO2813规定的测量入射光角度。
- 2.人性化设计、良好的人机交互界面。
- 3.可存储10000条测试记录，其存储的结构为：100种样品，每种样品可保存100组相对该样品的数据。
- 4.数据浏览功能。
- 5.本机具有低电能提示功能，存储数据空间满提示功能。
- 6.USB通信功能，蓝牙通信功能。
- 7.可连接微型打印机。
- 8.PC数据管理软件，实现光泽度数据的管理。

附件描述

电源：标准+5V外接电源。空载电压+5.3V。

标准板：该板为光泽度仪自诊断标准板，该板另一功能为仪器提供自校准用。

USB线：与上位机提供通信用连接线。

光盘：光盘里的软件，为本仪器配套的上位机软件。

可选件描述

蓝牙：仪器提供蓝牙功能。

微型打印机：本仪器支持测量结果的打印功能。

光泽度仪符合标准

1.ISO2813，ISO7668

2.ASTM D523，ASTM D2457

3.GB/T 9754，GB/T13891，GB/T7706，GB/T8807

光泽度仪各项性能指标均达到国家JJG 696 - 2002计量检定规程中一级工作机的要求。

光泽度仪广泛应用于：油漆涂料、装潢材料、建筑材料、塑胶材料、竹木制品、陶瓷制品、皮革制品、薄膜纸张、印刷油墨、汽车养护、成型模具等众多领域的材料和制品表面的光泽测量。

技术参数

产品型号	CS-300S
测量角度	60°
测量光斑（mm）	60°:2*3
测量量程	60°:0-600GU
分度值	0-100:0.1GU 大于100:1GU
测量模式	简单模式和统计模式
测量重复精度	0-100GU:0.2GU
	100-600GU:0.2%GU
测量准确性	满足JJG 696 - 2002一级工作光泽度仪要求
测量时间	小于1s
数据存储	可存储100条标样，10000条试样
尺寸（mm）	165*51*77（长*宽*高）
重量	约400g
语言	简体中文、英语
电池电量	3000mAh锂电池
接口	USB、蓝牙(可选)
工作温度	0-40
湿度	小于85%，不结露
配件	5V/1A充电器、USB数据线、说明书、软件光盘、校正标准板
用途	油漆油墨、涂料、电镀、塑胶电子、五金等领域

开、关机操作

长按仪器侧面的“Test”键可实现仪器开关机操作，并伴有“嘀”声。

校准页面

打开仪器，自动进入校准页面，按“Test”键，仪器进行自动校准。听到“嘀”声，并出现“校准成功”字样，表示校准成功。校准通过，进入“标样测试”页面，如图1所示。

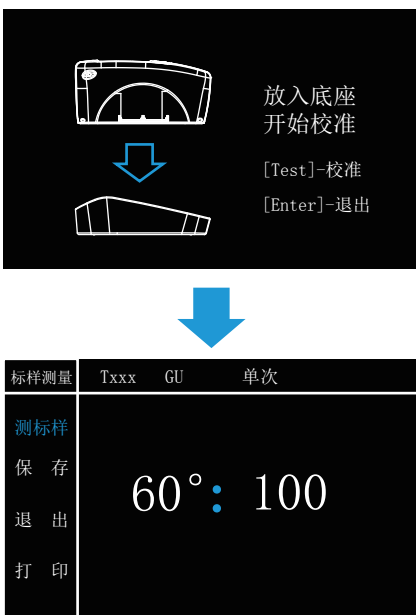


图 1

主菜单页面

“主菜单”页面如图 2 所示，通过“Up”和“Down”键进行操作切换，可以进行“测量”、“校准”、“查看”、“设置”、“USB”、“蓝牙”选择，按“Enter”键进行确认。按“Test”键返回上一步。



图 2

测量页面

在主页面，通过Up、Down选择键,选择“测量”图标，“Enter”键进入“测量”页面。

在该页面下，用户可以测量样品的光泽度信息。还可以测量样品与标样之间的光泽度差值，以及查看对样品合格与否的判断，并可通过Up、Down选择键选择对测试结果进行“保存”、“打印”处理。

注：在测量过程中需要校准,可进入“主页面”选中“校准”图标，操作同上。

标样测试

在主菜单中，通过“Up”和“Down”选择“测量”图标，按“Enter”键进入测量页面。系统默认为“标样测试”页面，如图 3所示。按“Test”测试标样，听到“嘀”声后，测试完毕，查看测试结果。通过“Up”和“Down”键选择对测试结果进行“保存”、“打印”处理。



图 3

保存：测试完成后，通过“Up”和“Down”键选择对测试结果进行“保存”，按“Enter”键确定，出现如图 4所示弹窗。

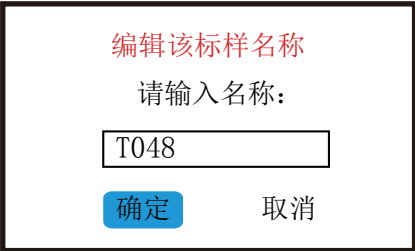


图 4

通过“Up”和“Down”键选中样品名称，按“Enter”键确定，通过“Up”和“Down”键，修改相应的数值和字符(数值范围为0-9，字母为A-Z)，再按“Enter”键确定。编辑完成之后按“Test”键退出编辑，再确定是否确定修改。

打印：“Up”和“Down”键选择“打印”，按“Enter”键确定。

试样测试

在上面的标样测试完成后，通过“Up”和“Down”键将选项移到“测试样”，按“Enter”键确定，进入“试样测试”界面如图 5所示。该界面以当前测试数据为标样，按“Test”键测试样，听到“嘀”声后，测试完毕，显示光泽度测试结果。与标样相同，试样的名称显示为“S × × ×”。

标样Txxx	Sxxx	GU	容差2.0	单次
测标样	测量值		差值	判断
保存	60°	101	0.8	合格
打印				
退出				

图 5

在“数据查看”界面，同样可以进行光泽度测量。通过“Up”和“Down”键选择已有标样，按“Enter”键进入选择菜单，选择“调入该标样”，如图6。进入该标样下的“试样测量界面”，如图7。按“Test”键进行测量，“嘀”声后完成光泽度测量，查看测试结果。按“Test”键进行新的光泽度测量。

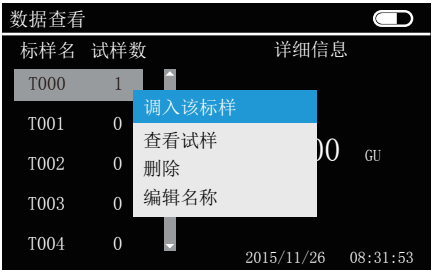


图 6

标样T001	Sxxx	GU	容差2.0	单次
		测量值	差值	判断
保 存				
打 印	60°	101	-99.9	不合格
退 出				

图 7

注：光泽度测试之前请先设置容差。（参看 设置——测量设置——容差）
在“试样测量”页面中，通过“Up”和“Down”键，还可以对测试结果进行“打印”、“保存”、“退出”选择，按“Enter”键确定。试样的保存操作同标样保存。

数据查看

在主菜单界面通过“Up”和“Down”选择“查看”图标，按“Enter”键确定，进入“数据查看”页面如图8所示。在该界面下，用户可以查看已保存标样、试样信息。



图 8

通过“Up”“Down”键选择需要查看的标样，按“Enter”键弹出菜单栏，如图 9，通过“Up”“Down”键，选择调入该标样、查看试样、删除、编辑名称等操作。

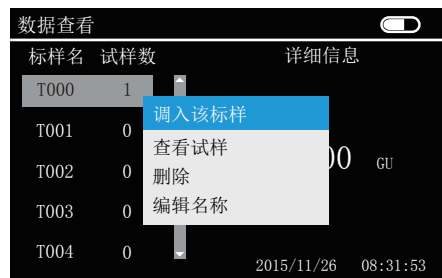


图 9

调入该标样：可以在此界面进行该标样下的试样测试，按“Test”键可进行多个样品测试，并可对测试数据进行“保存”、“打印”操作。

标样T001	Sxxx	GU	容差2.0	单次
保 存 打 印 退 出	测量值 差值 判断			
	60°	101	-99.9	不合格

图 10

查看试样：查看所选标样下的所有试样的测试记录。通过“Up”和“Down”键选中试样，按“Enter”键确定，如图 11所示。即可在弹出菜单框中对所选测试记录进行删除、删除所有、编辑名称操作。

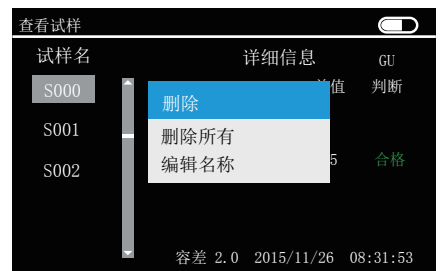


图 11

删除：将删除该试样的所有测试记录。
删除所有：将删除该标样下的所有试样测试记录。
编辑名称：操作请参考（测试——标样测试——保存——编辑名称）。

设置

在主菜单界面选择“设置”图标，按“Enter”键确定，进入“设置”页面，如图 12所示。通过“Up”和“Down”键进行操作：“测量设置”、“校准管理”、“电源管理”、“恢复出厂”、“语言选择”、“版本信息”等选择，再按“Enter”键确认。

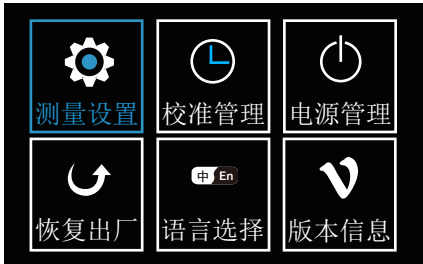


图 12

以下为“设置”内各项功能的具体设置

测量设置

通过“Up”和“Down”键选择“测量设置”图标，按“Enter”键进入“测量设置”界面，如图 13所示。



图 13

通过“Up”和“Down”键选择设置内容，按“Enter”键进行确认。

模式选择：按“Enter”键，切换“统计”和“简单”两种模式

平均次数：按“Enter”键选择，通过“Up”、“Down”键改变数值，再按“Enter”键进行确认。

容差：按“Enter”键选择，通过“Up”、“Down”键改变数值，再按“Enter”键进行确认。



图 14

自动保存：按“Enter”键切换“ON”、“OFF”保存模式。

单位选择：按“Enter”键，切换“GU”和“REF”两种单位。

校准管理

通过“Up”和“Down”键选择“校准管理”图标，按“Enter”键进入“校准管理”界面，如图 15所示。

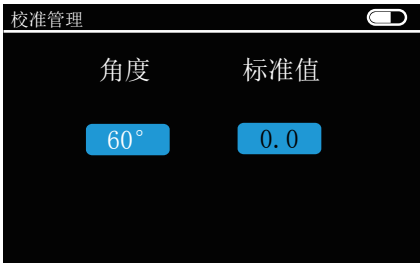


图 15

通过“Up”和“Down”键可调整“校准值”数值大小
数值调整完毕后，按两次仪器侧面的“Test”键会出现“慎重修改”界面，如图16所示。如确认“校准值”数值正确，点击“是”即可完成修改。



图 16

电源管理

通过“Up”和“Down”键选择“电源设置”图标，按“Enter”键进入“电源设置”界面，如图 17所示。



图 17

在“电源设置”界面按“Up”“Down”键移动“ ”所对应的数字，然后按“Enter”键，“ ”所对应的数字变为可调状态，通过“Up”“Down”键修改“ ”所对应的数字，调整背光和关机时间，其中背光时间调整范围为0-60秒，间隔为5秒；关机时间0-60分，间隔为1分。修改完之后，再按“Enter”键确认。
(注：背光时间设置为0时代表不关背光，关机时间设置为0时代表不自动关机)

恢复出厂

通过“Up”和“Down”键选择“恢复出厂”图标，按“Enter”键进入“恢复出厂”界面，如图18所示，移动蓝色方块（按“Up”“Down”键即可），当光标蓝色方块移动到在“是”上，按“Enter”键确定则将存储器里的数据恢复成出厂设置，当光标移动到在“否”上，按“Enter”键，则取消退出。

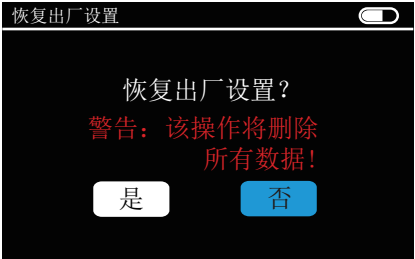


图 18

语言选择

通过“Up”和“Down”键选择“语言设置”图标，按“Enter”键进入“语言设置”界面，如图 19所示。通过“Up”“Down”键进行语言选择，再按“Enter”键确定。本仪器提供中、英文两种语言。

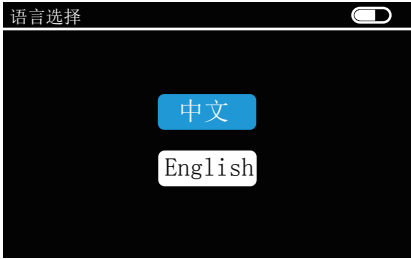


图 19

版本信息

通过“Up”和“Down”键选择“版本信息”图标，按“Enter”键进入“版本信息”界面，可以看到光泽度仪的版本详细信息。



图 20

USB通信

在主界面，通过“Up”“Down”键，将光标移动到“USB”，按“Enter”键确定，进入“USB通信”界面。使用本仪器标配的USB数据线将仪器与PC相连，根据提示安装驱动。正确安装后即可在PC机上位机操作。当USB线未插入USB接口或USB线接口接触不良时，插入USB接口或重新插入即可正常连接，进行上位机操作。

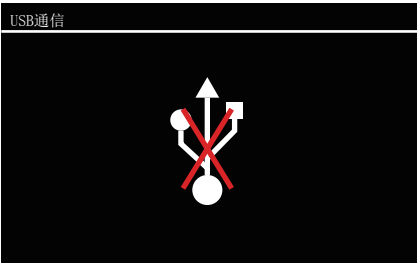


图 21

异常处理

以下为我们为您提供遇到异常情况的参考方案

异常情况	处理方法
仪器无法开机	1.检查仪器是否连接到外部交流电源适配器。 2.检查电池电量是否充足或连接电源适配器。
测量数据出现错误或者偏离正常值	1.此时应该进行多次测量以确保测量的准确性。 2.检查底座标准检验板是否干净，并且把机器与底座压紧重新校准。 3.可能在测量时机器没有与被测物压紧。
USB连接不成功	1.请确认USB接口是否连接正常。 2.计算机是否安装了USB驱动程序。
校准不通过	1、检查测试口和校准底板的薄膜是否已经撕掉。 2、校准板和仪器是够扣紧。

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本公司向用户承诺，我们生产的光泽度仪系列产品，保修期限为购买之日起的三年时间内有效，正常使用情况下非人为造成的故障问题，本公司将负责给予免费维修，超过保修期或人为因素导致的故障，本公司将提供维护，将收取维修材料及相关费用。（详细保修参看彩谱保修细则）

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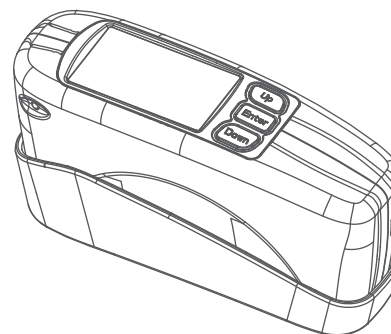
China's leading expert of color
and gloss analysis



Tiny-Single-Glossmeter

INSTRUCTION MANUAL ►

CS-300S



Service hotline:+86 571 85888707

Address:No.166,Wenyuan North Road,Jiangan 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.

www.chnspec.com

CATALOGUE

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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 "Work Tile" described in this manual refers to the glossmeter's ancillary equipment, 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 date of product purchase. If you need to service your device, please bring it to our local sales department 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 structure: 100 samples data with 100 related data sets saved for each sample.
4. Data browsing.
5. Low power and low data storage space prompts.
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.

Standard 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 maintenance, molds and many other areas that require surface gloss measurement for materials and products.

Gloss Meter Technical Parameters

Product Model	CS-300S
Measurement Angle	60°
Measurement Spot (mm)	60° : 2*3
Measurement Range	60° : 0-600GU
Scale Interval	0-100:0.1GU 大于100 : 1GU
Measurement Mode	Average mode, standard sample and test sample measurement
Measurement Repeatability Precision	0-100GU:0.2GU 100-600GU:0.2%GU
Measurement Accuracy	Complies with JJG 696 Gloss Meter work standards
Measurement Time	Less than 1s
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	Simplified Chinese and English
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
Use	Paint ink, coating, electroplating, plastic electronics, hardware and other fields

Start-Up and Shut-Down Operation

Long press "Test" to start up/shut down the device, followed by a "beep" sound.

Calibration

Start up the device; it automatically navigates to the calibration screen. Press "Enter", the device starts automatic calibration. Calibration is successful when you hear the " beep " sound and the screen displays "Calibration Successful". After calibration, the device navigates to the "Standard Sample Test" screen, as shown in Figure 2.

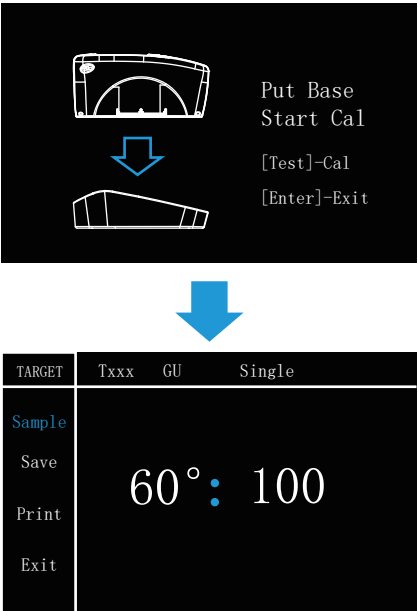


Figure 1

Figure 2

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

Main Menu

In the "Main Menu", as shown in Figure 3, use "Up" or "Down" to select the appropriate operation; the options are "Measurement", "Calibration", "Data View", "Settings", "USB" and "Bluetooth". Press "Enter" to confirm. Press "Test" to return to the last step.

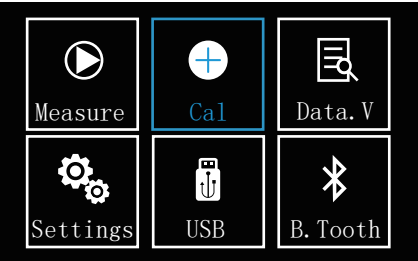


Figure 3

Measurement

In the Main Menu, use "Up" or "Down" to select the "Measurement" icon, and press "Enter" to navigate to the Measurement screen. The system displays the " Standard Sample Test " screen by default, as shown in Figure 2.

In this page, the user can test the standard sample and the test sample, view measured value and difference of the tested standard sample, and view analysis result and check if the sample is qualified or not. Save and print the test results.

Target Sample Testing

In the Main Menu, use "Up" or "Down" to select the "Measurement" icon, and press "Enter" to navigate to the Measurement screen. The system displays the "Target" screen by default, as shown in Figure 4. Press "Test" to test the target sample; when you hear the "beep" sound, the test is completed, and you can view the test results. Use "Up" or "Down" to "Save" or "Print" the test results.

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

Figure 4

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 5.

Edit the
Target name

Input name:

YES

NO

Figure 5

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 Testing

After completing the above target sample test, use "Up" or "Down" to move the " " cursor to the "Test Sample". Press "Enter" to confirm, and navigate to the "Test Sample" screen as shown in Figure 6. The current sample test data is displayed. Press "Test" to test the sample. When you hear the "beep" sound, the test is completed, and the Gloss Meter ' s test result is displayed. Similar to the target sample, the test sample ' s name is displayed as "S x x x".

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

Figure 6

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 7. The system navigates to the "Test Sample Measurement" screen for this test sample, as shown in Figure 8. Press "Test" to conduct measurement. The gloss measurement is completed after you hear the "beep" sound, and test results can be viewed. Press "Test" to conduct new gloss measurement.

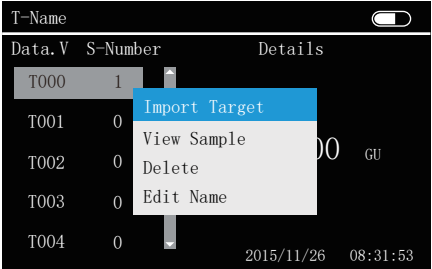


Figure 7

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

Figure 8

Note: Please set tolerance before gloss test. (See Settings - Measurement Settings - Tolerance) as shown in Figure 9 and 10.

In the "Test Sample Measurement" screen, use "Up" or "Down", to "Print", "Save" the test results and "Exit", and press "Enter" to confirm. Saving the test sample is the same as that for target sample.

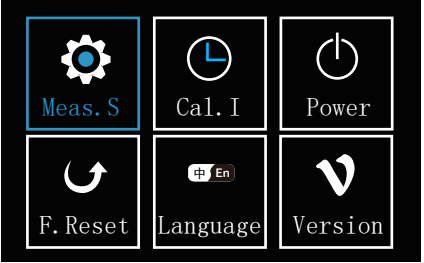


Figure 9



Figure 10

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 11. The user can view saved standard and test samples ' information in this screen.

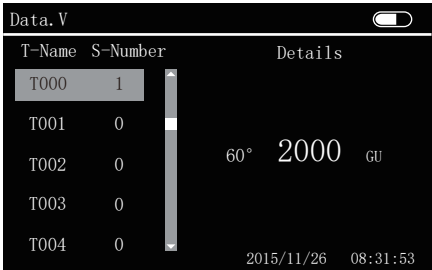


Figure 11

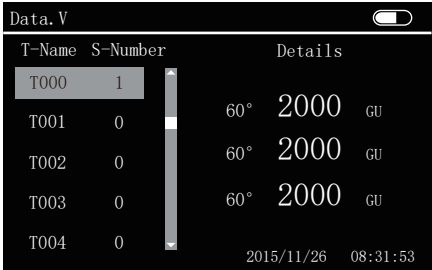


Figure 12

Use "Up" or "Down" to select the appropriate Target sample to be viewed, and press "Enter". A drop - down menu is displayed as shown in Figure 13. Use "Up" or "Down" to select the appropriate option. The options are: “ = Target ” , “ View Sample ” , “ Delete ” , and “ Edit Name ” .

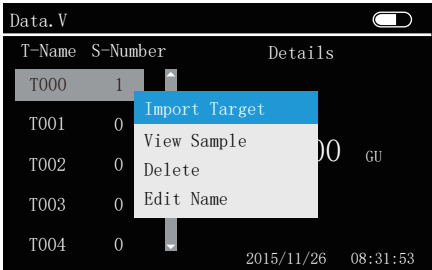


Figure 13

Get Target: The test sample can be tested against the standard sample in this screen. Press "Test" to conduct multiple sample tests, and "Save" or "Print" test data.

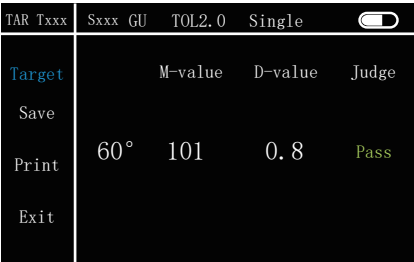


Figure 14

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 Number: 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.
 Automatic Save: Press "Enter" to select "ON" or "OFF".
 Unit Selection: Press "Enter" to select "GU" or "REF".



Figure 19

Calibration Management

Select "Calibration Management" icon by clicking 'Up' and 'Down' , and press 'Enter' key to enter " Calibration Managerment " interface , as shown in figure 18 .

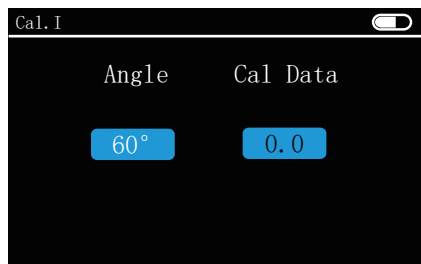


Figure 18

The "Calibration Value" value can be adjusted by the "Up" and "Down" keys. After adjusting the value, press the "Test" button on the side of the instrument twice to display the "modify carefully" interface, as shown in Figure 19. If you confirm that the "Calibration Value" value is correct, click "Yes" to complete the modification.

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 20.

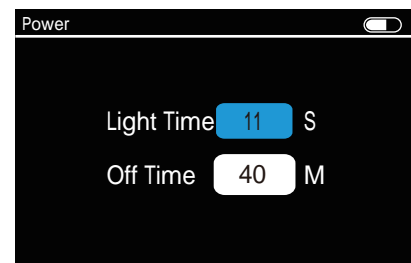


Figure 20

In the "Power Settings" screen press "Up" or "Down" to move 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.

View sample: View test records of all test samples for the selected target sample. Use "Up" or "Down" to select the test sample, and press "Enter" to confirm, as shown in Figure 15. A drop-down menu appears. You can choose the option to " Delete Selected Test Records ", " Delete All and " Edit Name " .

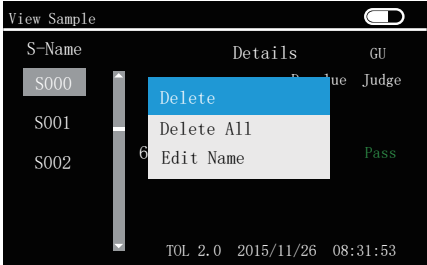


Figure 15

Delete: Deletes all testing records of the test sample.
Delete All: Delete testing records of all test samples for the target sample.
Edit Name: Please refer to (Test – Target Sample 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 16. Use "Up" or "Down" to select the appropriate options: "Measurement Settings", "Calibration Management", "Power Management", "Factory Reset", "Language Selection"and "Version Information", and then press "Enter" to confirm.

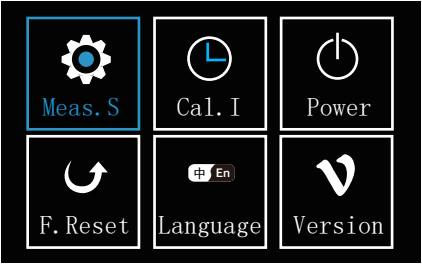


Figure 16

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 17.



Figure 17

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 21. 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.

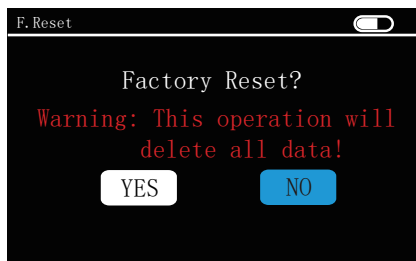


Figure 21

Language Selection

Use "Up" or "Down" to select "Language Settings" icon, and press "Enter" to navigate to the "Language Settings" screen, as shown in Figure 22. Use "Up" or "Down" to select the appropriate language, and press "Enter" to confirm. This device supports Chinese and English language.

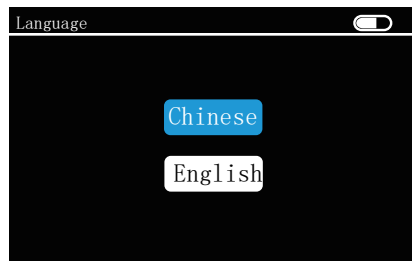


Figure 22

Version Information

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

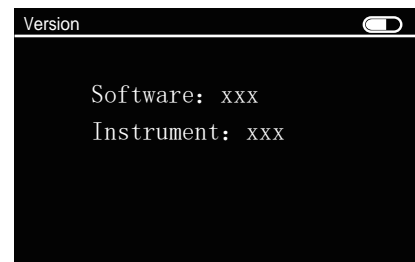


Figure 23

Calibration Screen

In the "Main Menu" screen, 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 24. Press "Enter" for automatic device calibration. After successful calibration, the system automatically navigates to the "Main Menu" screen, as shown in Figure 25.

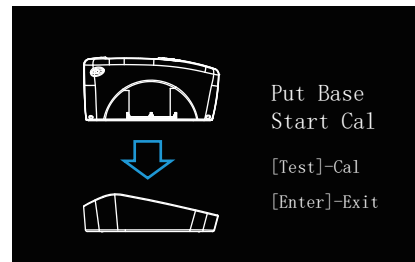


Figure 24

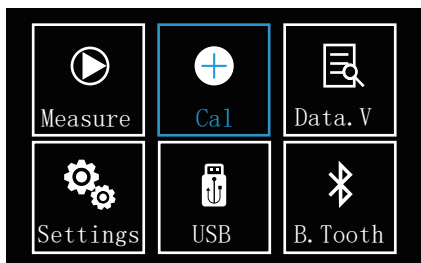


Figure 25

USB

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

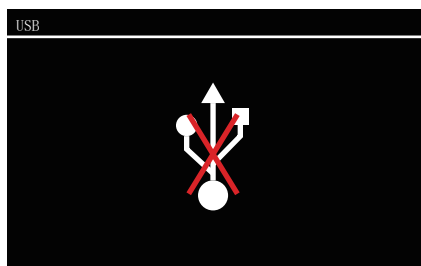


Figure 26

Troubleshooting

The following are reference troubleshooting solutions for any abnormal situation:

Abnormal Situation	Handling Method
Device doesn ' t start	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Check if the film on the bottom 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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