CHN Spec

领先的中国色彩与光泽分析专家
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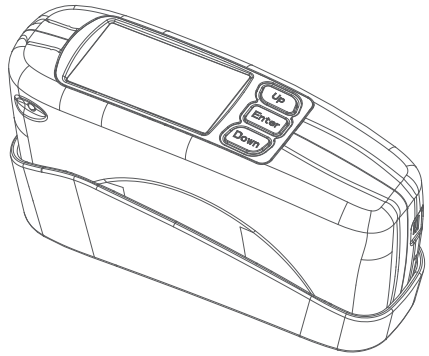
CHN Spec

光泽度仪

产品使用说明

CS-300/380



杭州彩谱科技有限公司
HANGZHOU CHNSPEC TECHNOLOGY CO.,LTD

地址：杭州市经济技术开发区文渊北路166号7楼
全国免费电话：4007-7272-81
传真：0571-85888727

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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-300	CS-380
测量角度	60°	20°、60°、85°
测量光斑（mm）	60°：9*15	20°：10*10
		60°：9*15
		85°：5*38
测量量程	60°：0-1000GU	20°：0-2000GU
		60°：0-1000GU
		85°：0-160GU
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	
	100-2000GU: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/2A充电器、USB数据线、说明书、光盘(上位机软件)、校正标准板、国家计量认证	
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 2、图3所示。

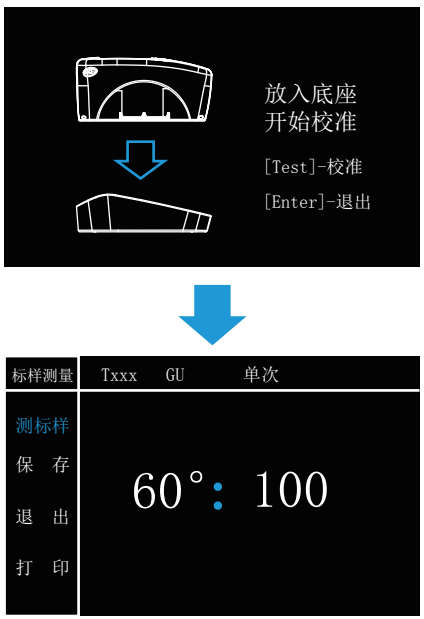

图 2 单角度界面

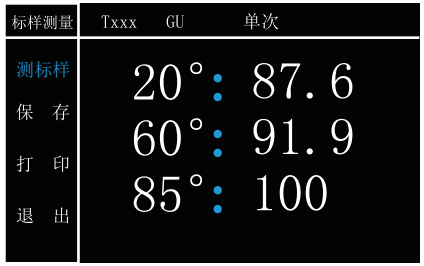

图 3 多角度界面

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。

主菜单页面

“ 主菜单 ”页面如图 4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。

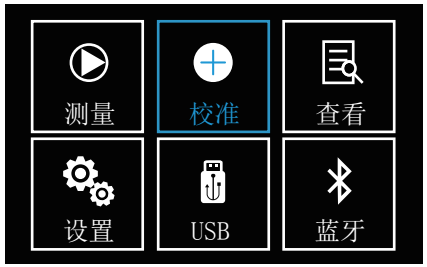

图 4 主菜单界面

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。

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 5、图6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 5 单角度界面

图 6 多角度界面

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 7所示弹窗。

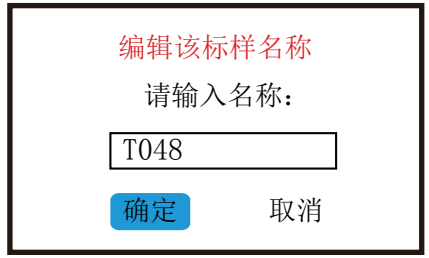

图 7 保存测试结果界面

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 8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××× ”。

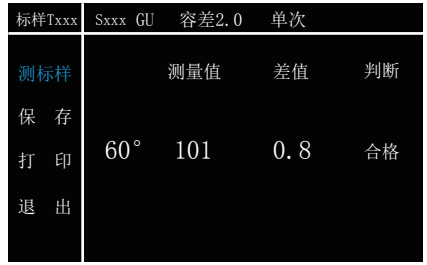

图 8 单角度界面

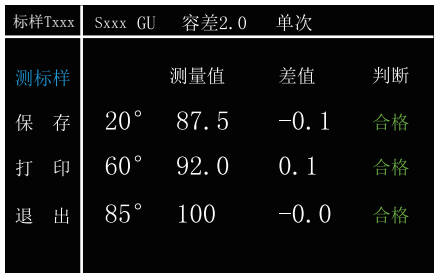

图 9 多角度界面

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 10、图11。进入该标样下的“ 试样测量界面 ”，如图 12、图13 。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。

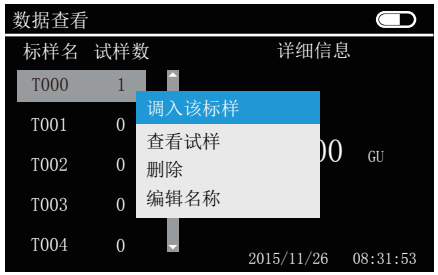

图 10 单角度界面

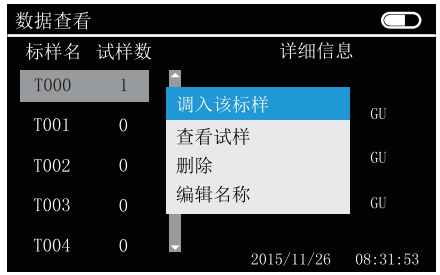

图 11 多角度界面

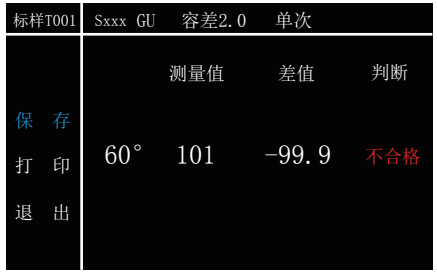

图 12 单角度界面

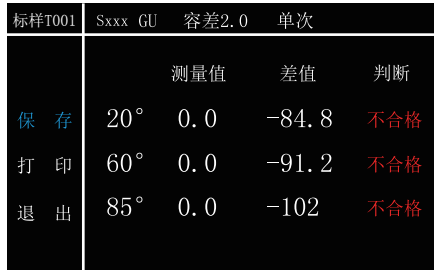

图 13 多角度界面

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 14所示。在该界面下，用户可以查看已保存标样、试样信息。

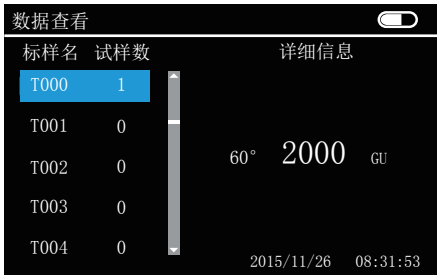

图 14 单角度界面

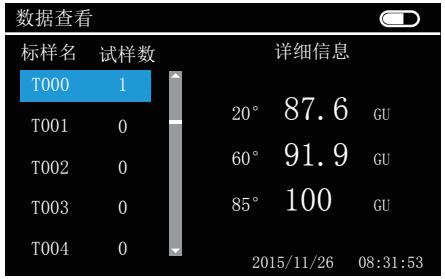

图 15 多角度界面

通过“ Up ”“ Down ”键选择需要查看的标样，按“ Enter ”键弹出菜单栏，如图 16，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。

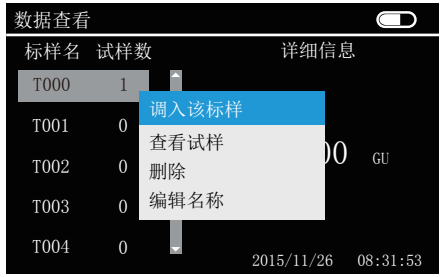

图 16 单角度界面

图 17 多角度界面

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。

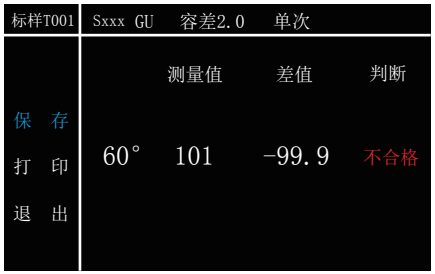

图 18 单角度界面

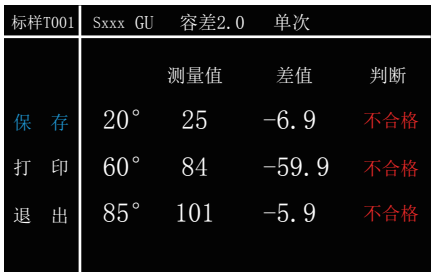

图 19 多角度界面

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 20、图21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。

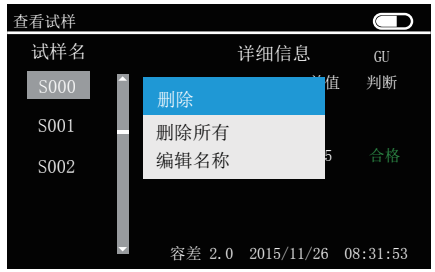

图 20 单角度界面

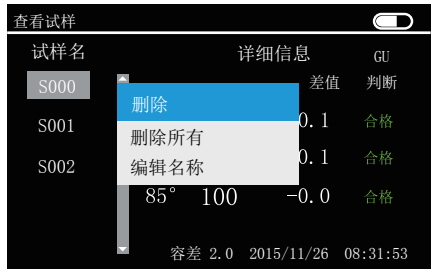

图 21 多角度界面

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 22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。

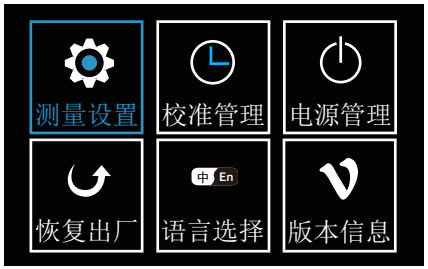

图 22 设置界面

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 23所示。

图 23 测量设置界面(单角度)

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 24 单角度界面

图 25 多角度界面

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 26所示。

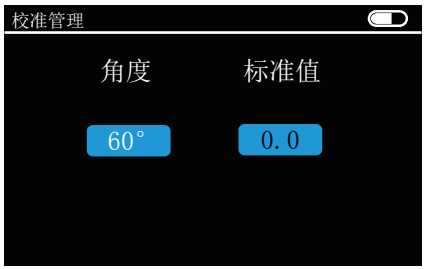

图26 校准管理界面

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27所示。如确认“ 校准值 ”数值正确，点击“ 是 ”即可完成修改。

图27 慎重修改界面

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 28所示。

图28 电源管理界面

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 29所示，移动蓝色方块（按“ Up ” “ Down ”键即可），当光标蓝色方块移动在“ 是 ”上，按“ Enter ”键确定则将存储器里的数据恢复成出厂设置，当光标移动在“ 否 ”上，按“ Enter ”键，则取消退出。

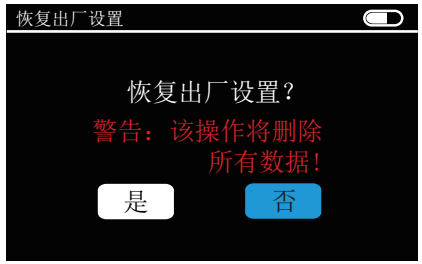

图29 恢复出厂设置界面

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 30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。

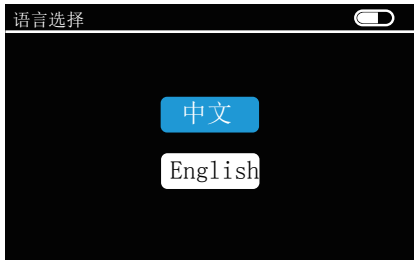

图30 语言选择界面

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31 版本信息界面

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。

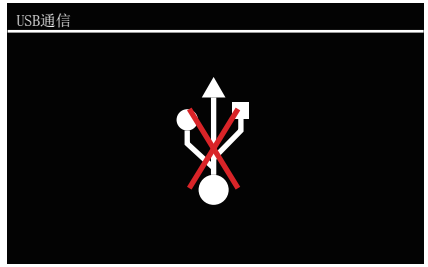

图32 USB通信界面

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连接口是否连接正常。 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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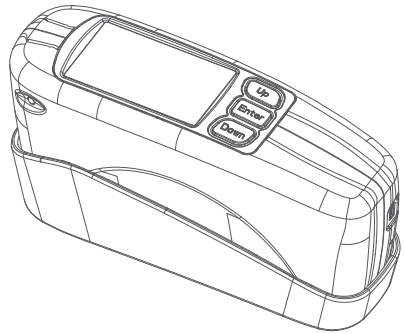
China's leading expert of color and gloss analysis

CHN Spec

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.

www.chnspec.com

V. 2022.1

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-300	CS-380
Measurement Angle	60 °	20 ° 60 ° 85 °
Measurement Spot (mm)	60 ° ：9*15	20 ° ：10*10
		60 ° ：9*15
		85 ° ：5*38
Measurement Range	60 ° ：0-1000GU	20 ° ：0-2000GU
		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°C	
Relative Humidity	Less than 85%, non-condensing	
Accessories	5V/1A charger, USB cable, manual, CD, calibration standard tile, metrology certificate	
Use	Paint ink, coating, electroplating, plastic electronics, hardware and other fields	

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

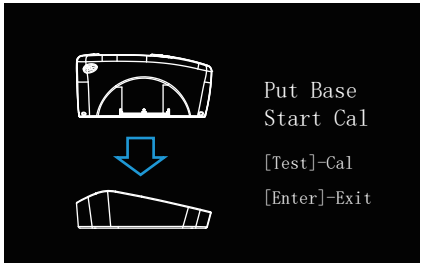


Figure 1

Figure 2

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.

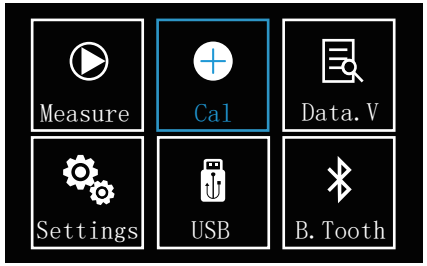


Figure 4

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.

Figure 5

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.

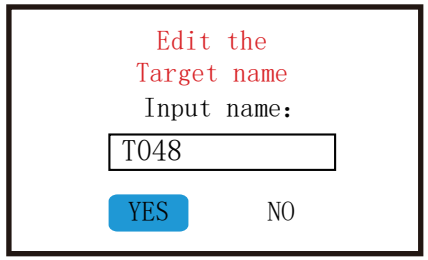


Figure 7

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×××".

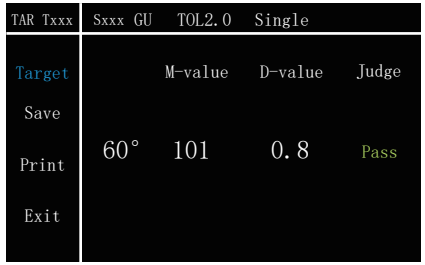


Figure 8

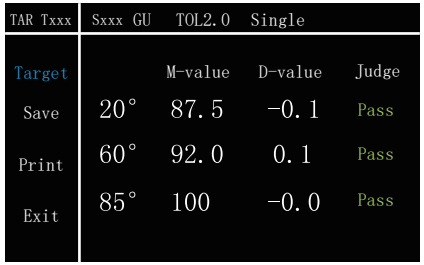


Figure 9

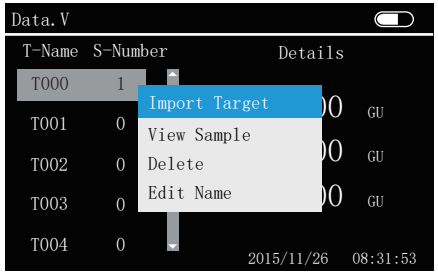


Figure 11

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.

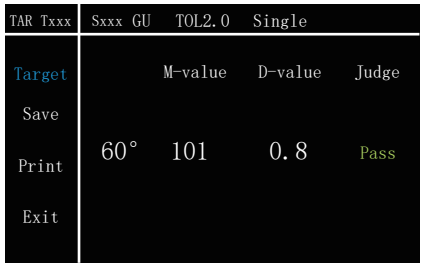


Figure 12

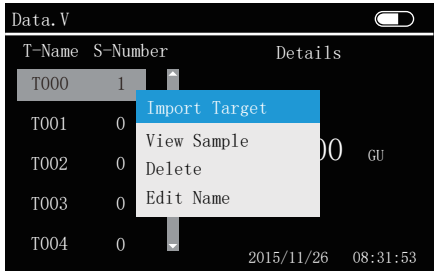


Figure 10

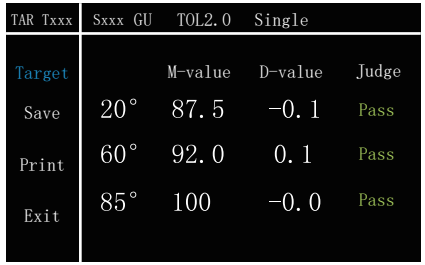


Figure 13

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.

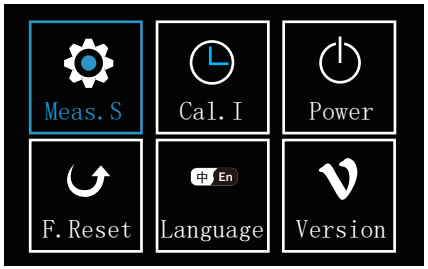


Figure14

Figure 15

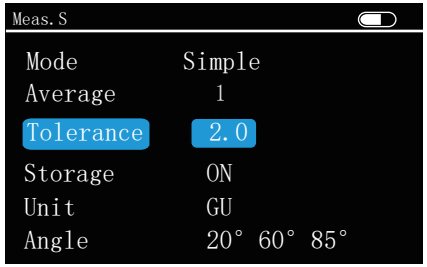


Figure 16

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.

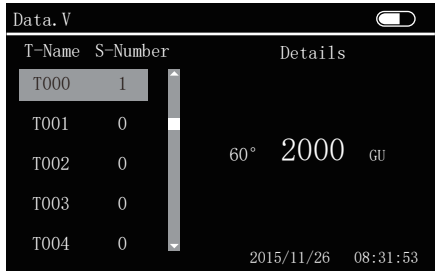


Figure 17

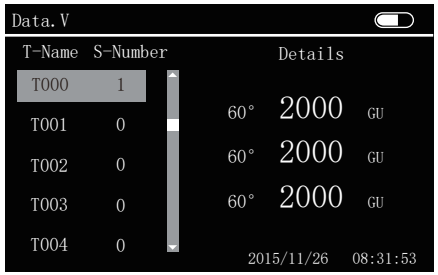


Figure 18

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 ”.

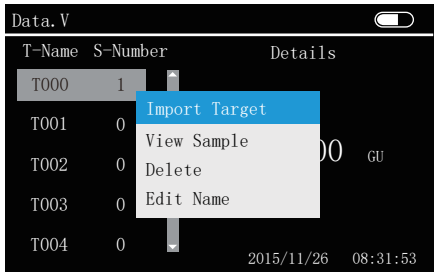


Figure 19

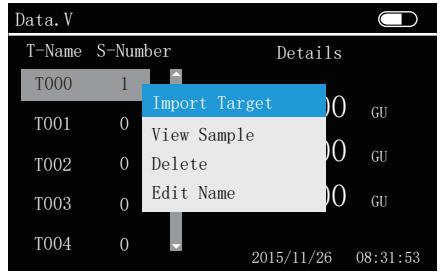


Figure 20

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

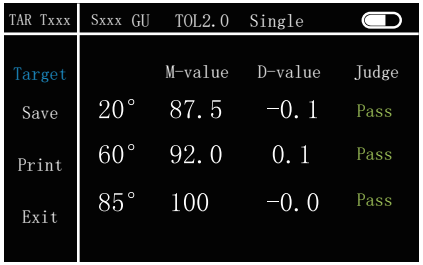


Figure 22

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 ”.

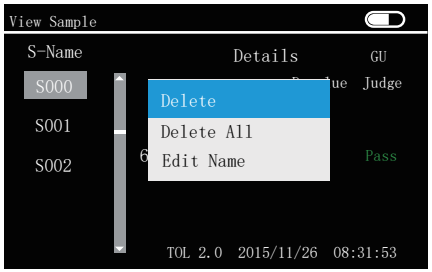


Figure 23

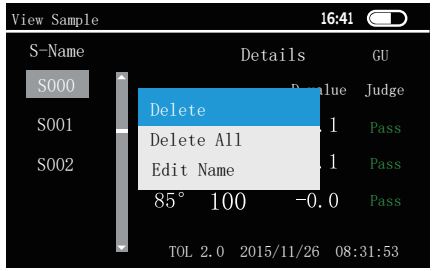


Figure 24

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", "Calibration Management" "Power","Factory Reset","Language","Version", and then press "Enter" to confirm

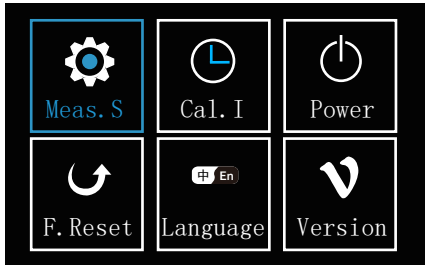


Figure 25

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.

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.

Calibration Management

Select" Calibration Management" ico by clicking 'Up' and 'Down' , and press 'Enter' key to enter " Calibration Managerment " interface , as shown in figure 27 .

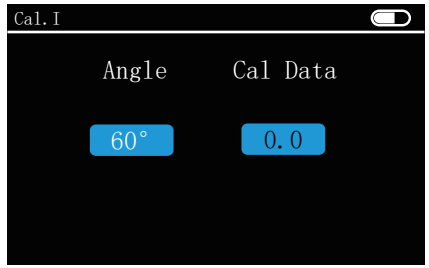


Figure 27

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 28. If you confirm that the "Calibration Value" value is correct, click "Yes" to complete the modification。

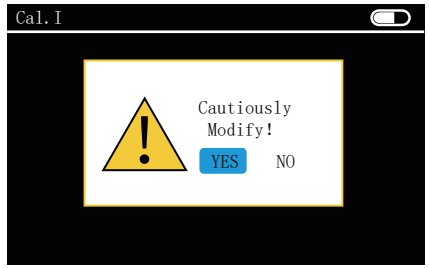


Figure 28

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 29.

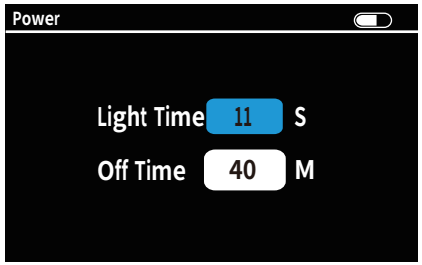


Figure 29

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 30. 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 30

Language

Use "Up" or "Down" to select "Language" icon, and press "Enter" to navigate to the "Language" screen, as shown in Figure 31. Use "Up" or "Down" to select the appropriate language, and press "Enter" to confirm. This device supports Chinese and English language.

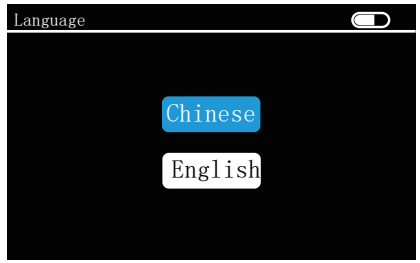


Figure 31

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.

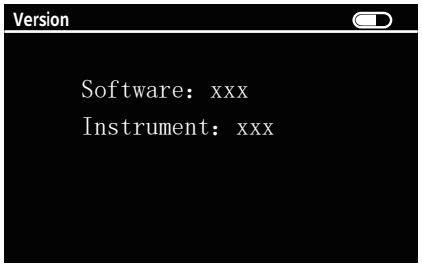


Figure 32

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 33. Press "Enter" for automatic device calibration. After successful calibration, the system automatically navigates to the "Main Menu" screen,as shown in Figure 34.

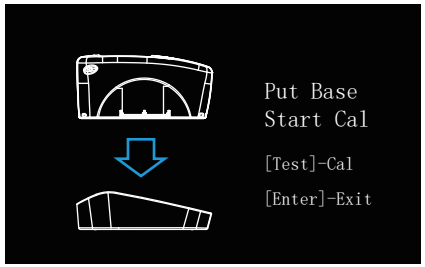


Figure 33

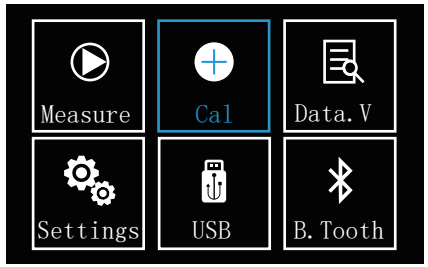


Figure 34

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.

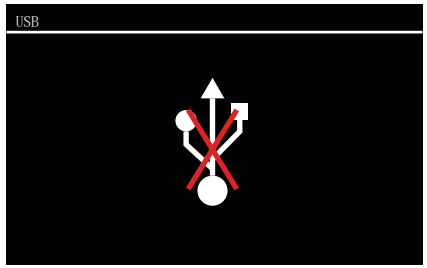


Figure 35

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.

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