

快速使用教程

1. 开机及校准

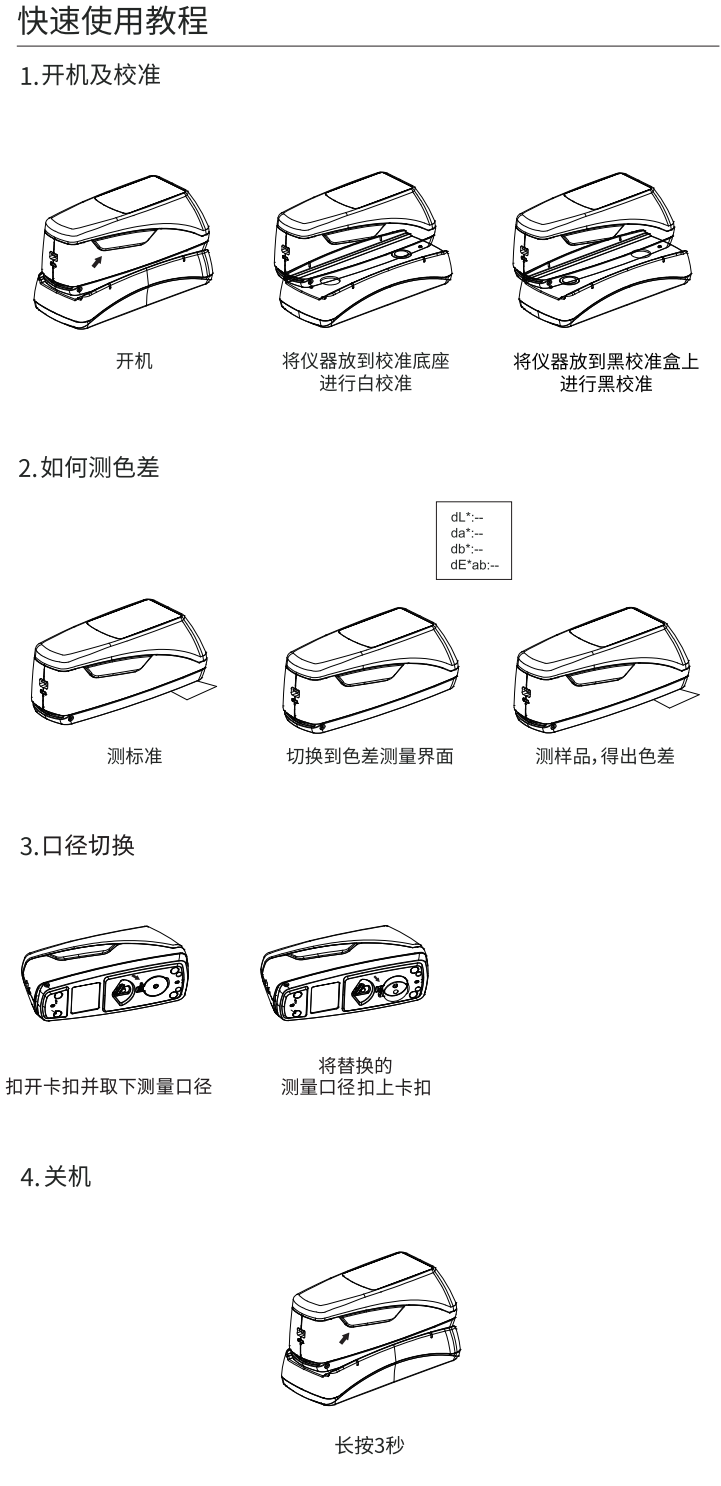
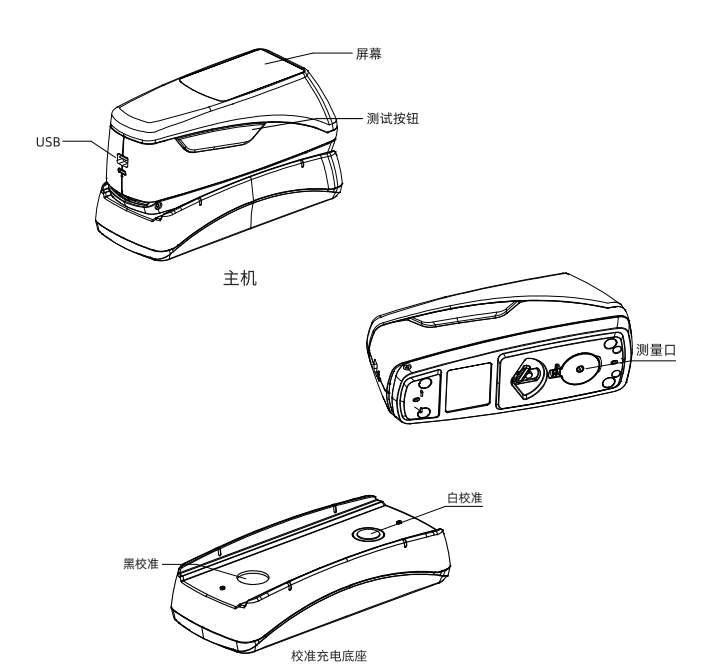


分光密度仪 使用说明书

产品介绍

使用产品前请仔细阅读本说明书,并妥善保管

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测量/照明口径	2mm/5mm, 1.5mm/3mm
电池容量	单次充电可连续测量8000次, 7.2V/3000mAh
接口	USB, 蓝牙
密度范围	0.0 D - 3.0 D
密度标准	Status A, E, I, T, M
符合标准	ISO 5-4:2009(E), ISO 13655:2017,CIE No.15
仪器显示	全彩屏幕, 3.5英寸
支持语言	简体中文, 英语
照明光源	全波段均衡LED光源+UV
测量模式	M0, M1, M2, M3
测量结构*	45/0
测量时间	约1.5秒
测量重复性**	密度值: ≤0.001D,色度值: dE*ab≤0.03
波长间隔	10nm
波长范围	400-700nm
光源寿命	10年100万次
存储	仪器: 标样100条, 试样10000条; APP: 海量存储
分光方式	光栅
感应器	双列高精度CMOS阵列传感器
反射率测定范围	0-200%
反射率分辨率	0.01%
软件支持	Andriod,iOS,Windows,微信小程序
准确性保证	保证一级计量合格
台间差***	dE*ab≤0.3
显示精度	密度值: 0.001,色度值: 0.01
视场角	2°, 10°
测量指标	CIE-Lab,CIE-LCh,HunterLab,CIE-Luv,XYZ,Yxy,RGB,色差(ΔE*ab,ΔE*cmc,ΔE*94,ΔE*00),黑度(My,dM),沾色牢度,变色牢度,Tint(ASTM E313-00),色密度CMYK(A,T,E,M),同色异谱指数Milm,孟塞尔,遮盖力,力份(染料强度,着色力)
印刷质量指标	色密度CMYK(A,T,E,M),网点面积,网点面积增大,叠印率,印刷反差,灰度,色调误差
光源条件	A,B,C,D50,D55,D65,D75,F1,F2,F3,F4,F5,F6,F7,F8,F9,F10,F11,F12,CWF,U30,U35,DLF,NBF,TL83,TL84,ID50,ID65,LED-B1,LED-B2,LED-B3,LED-B4,LED-B5,LED-BH1,LED-RGB1,LED-V1, LED-V2

*45度环形照明/0度角接收

**白板校准后以5秒间隔测量白板30次标准偏差 (M3除外)

***BCRA系列 II 12块色板 M0 模式 5mm口径 测量平均值 (M3除外)

保修说明

本产品售后服务严格依据《中华人民共和国消费者权益保护法》、《中华人民共和国产品质量法》实行售后三包服务,服务内容如下:

- 1、自您签收日起7日内,本产品出现《产品性能故障表》所列性能故障的情况,经由本司售后服务中心检测确定,可免费享受退货或换货服务;
- 2、自您签收日起8-15日内,本产品出现《产品性能故障表》所列性能故障的情况,经由本司售后服务中心检测确定,可免费享受换货或维修服务;
- 3、由您签收日起至保修期结束,本产品出现《产品性能故障表》所列性能故障的情况,经由本司售后服务中心检测确定,可免费享受维修服务。

提示信息

因运输过程中需用包装箱保证产品运输安全,建议自签收日起至少保留包装箱30天。

非保修条例

- 1、未经授权的维修、误用、碰撞、疏忽、滥用、进液、事故、改动、使用非本产品配件,或撕毁涂改标签、防伪标记;
- 2、已超过三包有效期;
- 3、因不可抗力造成的破坏;
- 4、不符合《产品性能故障表》所列性能故障的情况;
- 5、因人为原因导致非本产品及其配件产生《产品性能故障表》所列性能故障。

警告

- 请勿尝试拆卸或更换仪器内部零件,如需服务请联系代理商或官方客服。
- 请勿将仪器放置于热源或直接暴露在炉火旁。
- 若任何液体不小心进入仪器,请立即关闭仪器电源。
- 本产品及内部零件,如被儿童误食可能导致窒息等危险。

性能故障表

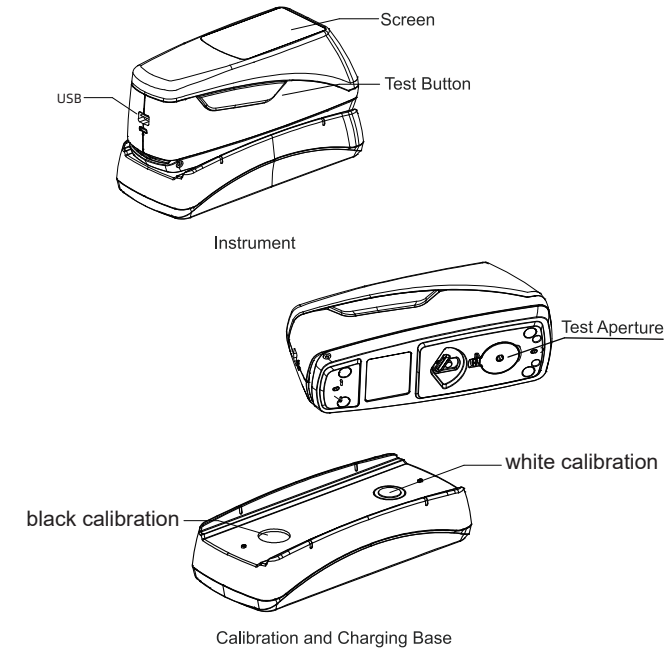
名称	性能故障
分光密度仪	1、电源指示灯不亮(电池没电除外); 2、仪器开关卡滞,不能正常开关; 3、仪器显示器无法正常显示; 4、测量光源不亮; 5、蓝牙无法连接。

Spectrodensitometer

Operation instruction

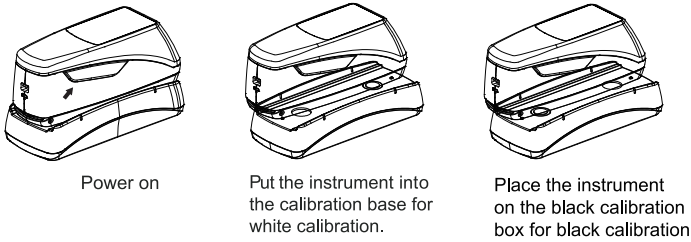
Product introduction

Please read this manual carefully before using the product.

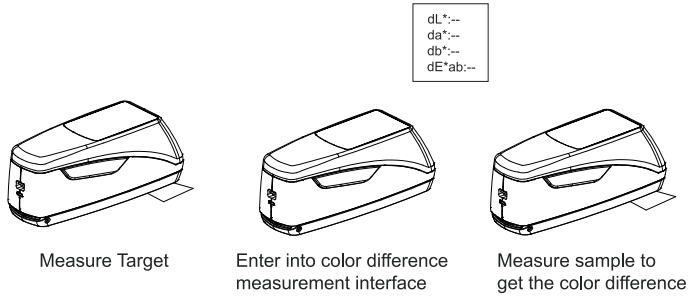


Quick Start

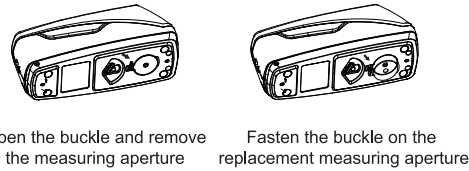
1. Power on and Calibration



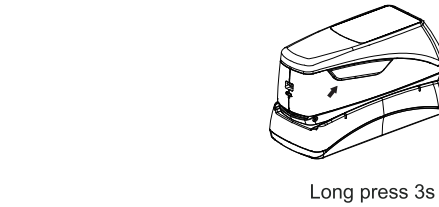
2. How to measure color difference



3. Switch Aperture



4. Power off



Parameters

Measurement/illumination aperture	2mm/5mm, 1.5mm/3mm
Battery capacity	8000 continuous measurements on a single charge, 7.2V/3000mAh
Interface	USB, Bluetooth
Density range	0.0 D – 3.0 D
Density standard	Status A, E, I, T, M
Compliance with standard	ISO 5-4:2009(E), ISO 13655:2017,CIE No.15
Instrument display	Full-color screen, 3.5 inches
Supported language	简体中文, English
Illumination source	Full-band balanced LED light source + UV
Measurement mode	M0, M1, M2, M3
Measurement structure*	45/0
Measurement time	About 1.5 seconds
Measurement repeatability**	Density value: ≤0.001D, Chroma value: dE*ab≤0.03
Wavelength interval	10nm
Wavelength range	400-700nm
Light source life	10 years, 1 million times
Storage	Instrument: 100 standard samples, 10,000 test samples; APP: Mass storage
Spectroscopic method	Grating
Sensor	Dual-row high-precision CMOS array sensor
Reflectivity measurement range	0-200%
Reflectivity resolution	0.01%
Software support	Andriod, iOS, Windows, WeChat applet
Accuracy guarantee	Guaranteed first-level metrology qualification
Inter-unit difference***	dE*ab≤0.3
Display accuracy	Density value: 0.001, Chroma value: 0.01
Field of view	2°, 10°
Measurement index	CIE-Lab, CIE-LCh, HunterLab, CIE-Luv, XYZ, Yxy, RGB, color difference (ΔE^*ab , ΔE^*cmc , ΔE^*94 , ΔE^*00), blackness (My, dM), staining fastness, color fastness, Tint (ASTM E313-00), color density CMYK (A, T, E, M), metamerism index Milm, Munsell, hiding power, strength (dye strength, tinting strength)
Printing quality index	Color density CMYK (A, T, E, M), dot area, dot area increase, overprint rate, printing contrast, grayscale, hue error
Light source conditions	A, B, C, D50, D55, D65, D75, F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, F12, CWF, U30, U35, DLF, NBF, TL83, TL84, ID50, ID65, LED-B1, LED-B2, LED-B3, LED-B4, LED-B5, LED-BH1, LED-RGB1, LED-V1, LED-V2

*45 degree ring lighting/0 degree angle reception

**Measure the standard deviation of the white board 30 times at 5 second intervals after white board calibration (except M3)

***BCRA series II 12 color plates M0 mode 5mm diameter measurement average value (except M3)

Warranty

Reminder

It is recommend that keep the packing box for at least 30 days as the packing box is required to ensure the safety of transportation.

Non warranty regulations

- 1.Unauthorized repair,misuse,accident,modification,use of nonofficial accessories.
- 2.Instrument is out of warranty.
- 3.Damage caused by force.
- 4.Not the performance failure listed in the product performance failure table.
- 5.Performance failure caused by human factors.

Warning

- .Do not attempt to disassemble or replace any part of the equipment. Please contact the agent or official customer service for after sales service.
- .Do not place the equipment near heat source or directly expose to the fire.
- .If any liquid enters the equipment,please power off the equipment immediately.
- .This product contains small parts.It may cause suffocation and other hazards,if swallowed by children.

Product Performance Failure Table

Name	Performance failure
Spectrodensitometer	1.The equipment can't power on. 2.The equipment's button can't work normally. 3.Equipment screen fails to work normally. 4.Equipment lamp fails to work normally. 5.Bluetooth can't connect.