

Specifications

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Note:

These specifications are subject to change without notice.

Basic Specifications

Type	Handy stand-alone spectrophotometer	
Spectroscopic device	MEMS Fabry-Perot Tunable Filter	
Spectral range	400 to 700 nm	
Sampling interval	20 nm	
Output data interval	10 nm (interpolated by software)	
Color value display	CIE L*a*b*	
Measurement frequency during scanning operations	13 measurements/second	
Measurement geometry	Circumferential illumination (45°c : 0°)	
Measurement aperture	Φ7.6 mm (Φ0.3 inches)	
Measurement spot diameter	Φ10 mm (Φ0.4 inches)	
Light source	LED (including UV)	
Reflectance measurement conditions	M0	Including UV light component, ISO 13655:2017 measurement condition M0
	M1e	Including UV light component, measurement conditions equivalent to ISO 13655:2017 measurement condition M1 (Measurement conditions held with a radiant power at all wavelengths from 400 to 700 nm, and power ratios in the 300 to 400 nm and 400 to 500 nm regions similar to D50)
	M2	Without UV, ISO 13655:2017 measurement condition M2
Illuminant	D50/D65/A/F1/F2/F3/F7/F8/F9/F10/F11/F12	
Observer	2°/10°	
ΔE Method	ΔE 2000/ΔE 1994 (Graphic Arts)/ΔE1994 (Textiles)/ΔE 1976	
Calibration	Performed using the white tile for calibration inlaid on the inside of the sensor cover	

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Inter-instrument agreement	0.4 or less ΔE_{00} (ΔE_{2000}) average 1.0 or less ΔE_{00} (ΔE_{2000}) maximum ☐ Deviation from SD-10 manufacturing standard for 12 BCRA color tiles (D50, 2°) ☐ Ambient temperature 23°C (73.4°F), humidity 50%
Short term repeatability	0.1 or less ΔE_{00} (ΔE_{2000}) white 0.1 or less ΔE_{94} (ΔE_{1994}) white ☐ Average of 10 measurements every 3 seconds on white tile (D50, 2°) ☐ Ambient temperature 23°C (73.4°F), humidity 50%
Color difference from BCRA tile calibration value	1.0 or less ΔE_{00} (ΔE_{2000}) average ☐ Deviation from the color measurement value for 12 BCRA color tiles (D50, 2°) using a measuring instrument traceable to the national measurement standards ☐ Ambient temperature 23°C (73.4°F), humidity 50%
Interface ^{*1}	USB 2.0 (Full speed USB) USB Type-C connector Bluetooth Low Energy (Bluetooth Class 2)
Internal memory	Number of measurement data items ☐ Spot mode: 100 colors ☐ Comparison (Spot) mode/Comparison (Scan) mode: total of 500 colors Number of reference data items ☐ 80 colors x 3 groups

^{*1} Simultaneous use (simultaneous access) of USB and Bluetooth connections is not supported.



Important:

Use the device at an altitude of 2,000 m (6,562 ft) or less.

External Dimensions Specifications

External Dimensions	Width: 35 mm (1.4 inches) Depth: 80 mm (3.1 inches) Height: 77.6 mm (3.1 inches) (sensor cover open), 80 mm (3.1 inches) (sensor cover closed)
Weight	Approx. 190 g (0.42 lb)

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Electrical Specifications

Spectrophotometer Electrical Specifications

DC input voltage	5 V
DC input current	0.9 A

Battery Specifications

Type	Li-ion
Rated voltage	3.6 V
Current capacity	1,860 mAh
Charging time (while the device is off)*1	USB port (5 V/0.5 A): Approx. 5 hours (when connected to a computer) USB port (5 V/0.8 A): Approx. 3 hours (when connected to a USB AC adapter)

*1: For a new battery

Note:

The following USB AC adapter was used to evaluate this device.

Apple A1385 (rated input: AC 100-240 V / 50-60 Hz / 0.15 A; rated output: DC 5 V 1 A)

Environmental Specifications

Temperature	In use	Spot color measurement: 0 to 40°C (32 to 104°F) Scan color measurement: 0 to 35 °C (32 to 95°F)
	In storage	Before unpacking: -20 to 60°C (-4 to 140°F)*1 After unpacking: -20 to 40 °C (-4 to 104°F)*2 Battery charging: 10 to 35°C (50 to 95°F)
Humidity	In use	5 to 85% (without condensation)
	In storage	5 to 85% (without condensation)
Pollution Degree	PD 2	
IP Protection Class	IPX0	

*1 Can be stored for one month at 40°C (104°F), or for 120 hours at 60°C (140°F)

*2 Can be stored for one month at 40°C (104°F)

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Supported Operating Systems

- ❑ Windows
Windows 7 (SP1, 64-bit), Windows 8/8.1 (64-bit), Windows 10 or later (64-bit)
(Bluetooth LE connection is for Windows 10 (Build 1809) or later)
- ❑ Android
Android 5.0 or later
- ❑ iOS
iOS 12.0 or later