

# CM-SA Skin Analysis Software

## PRODUCT SPECS:

### What are the specs for the product?

#### <Major specifications of CM-SA>

Skin data display	Melanin Index Hb Index [Total hemoglobin (oxidized + reduced) index] Hb SO <sub>2</sub> Index (%) [Hemoglobin oxygen saturation index (%)]
Colorimetric value display	L*, a*, b*, Munsell value (Hue, Value, Chroma) <sup>*1</sup>
Graph display	Hue-Value Graph, Hb Index-Melanin Index Graph
Data handling	Saving/reading data in CM-SA original format Saving data in text (CSV) format [Melanin Index, Hb Index, Hb SO <sub>2</sub> Index (%), L*, a*, b*, Munsell value (Hue, Value, Chroma), Spectral reflectance (400-700 nm) <sup>*2</sup> ]

\*1 Munsell data are calculated for 2° observer and Standard Illuminant C.

\*2 The spectral reflectance data that are output are the reflectance obtained in SCI (specular component included) mode.

#### <PC operating environment>

OS	Windows® Vista Business SP1(32-bit), Windows® XP Professional SP2, Windows® 2000 Professional SP4
CPU	Pentium® III 600 MHz or equivalent (recommended)
Memory	128 MB or more (256 MB or more is recommended)
Hard disk	100 MB or more free disk space is required.
Display	Display capable of displaying 1024 x 768 pixels or above/16-bit color or above
Other	CD-ROM drive (required for software installation), USB port or serial port (required for connecting the PC with the instrument)

#### <Main specifications of compatible spectrophotometers>

\* Some instrument functions not available when using instrument with CM-SA.

Model	CM-700d	CM-600d	CM-2600d	CM-2500d
Wavelength range	400 nm to 700 nm		360 nm to 740 nm	
Wavelength pitch	10 nm			
Light source	Pulsed xenon lamp (with UV cut filter)		Pulsed xenon lamp	
Measurement time	Approx. 1 second		Approx. 1.5 seconds (Approx. 2 seconds for fluorescent measurement)	Approx. 1.5 seconds
Minimum measurement interval	Approx. 2 seconds for SCI or SCE measurement		3 seconds for SCI/SCE measurement (4 seconds for fluorescent measurement)	3 seconds for SCI/SCE measurement
Battery performance (max. measurement count)	Approx. 2,000 measurements with alkaline dry batteries Approx. 2,000 measurements with fully charged nickel-metal-hydride rechargeable batteries (2300 mAh) *Continuous measurements at 10-second intervals at 23°C (single measurement fixed at SCI or SCE)		Approx. 1,000 measurements with alkaline dry batteries *Continuous measurements at 10-second intervals at 23°C	
Measurement/illumination area	MAV : Ø8 mm / Ø11 mm SAV : Ø3 mm / Ø6 mm *Changeable by replacing target mask and selecting lens position	MAV : Ø8 mm / Ø11 mm only	MAV : Ø8 mm / Ø11 mm SAV : Ø3 mm / Ø6 mm *Changeable by replacing target mask and selecting lens position	MAV : Ø8 mm / Ø11 mm only
Repeatability	Spectral reflectance: Standard deviation within 0.1% Colorimetric value: Standard deviation within $\Delta E^*ab$ 0.04 *When a white calibration plate is measured 30 times at 10-second intervals after white calibration		Spectral reflectance: Standard deviation within 0.1% (standard deviation within 0.2% for the wavelength range of 360 to 380 nm) Colorimetric value: Standard deviation within $\Delta E^*ab$ 0.04 *When a white calibration plate is measured 30 times at 10-second intervals after white calibration	
Inter-instrument agreement	Within $\Delta E^*ab$ 0.2 (MAV/SCI) *Average of 12-color measurement with the BCRA Series II compared to values measured with a master body at 23°C			
No. of averaging measurements	1 to 10 measurements (automatic averaging); 1 to 30 measurements (manual averaging)		1/3/5/8 measurements (automatic averaging); 1 to 30 measurements (manual averaging)	
Interface	USB1.1 and Bluetooth® standard version 1.2*		RS-232C-compliant	
Power	4 AA-size alkaline dry batteries or nickel-metal-hydride rechargeable batteries; Special AC adapter			
Size	73 (W) x 211.5 (H) x 107 (D) mm		69 (W) x 96 (H) x 193 (D) mm	
Weight	Approx. 550 g (without white calibration cap and batteries)		Approx. 670 g (with Measuring Base/without batteries)	

\* Applicable Bluetooth® profile: Serial Port Profile, Output: Bluetooth® Power Class 1

The communication distance may vary depending on the obstacles and radio wave conditions between the devices.

Successful wireless communication is not guaranteed with all Bluetooth®-ready equipment.

• Bluetooth® is a registered trademark of The Bluetooth SIG, Inc. and is used under license agreement.

• Windows® is a trademark or registered trademark of Microsoft Corporation in the U.S.A. and other countries.

• Pentium® is a trademark or registered trademark of Intel Corporation in the U.S.A. and other countries.

• Specifications shown here are subject to change without notice.