

SPECTRAL HAZE METER **NEW MODEL**

SH 7000



NIPPON
Advanced Technology in Color and Brightness.
DENSHOKU

- The industry's first unit as this type of haze meter, making it possible to measure the total light transmittance, diffuse transmittance and haze in each wavelength between 380nm and 780nm at 5nm intervals.
- At one measurement, you can simultaneously have color values, spectral data, yellowness (YI) as well as the total light transmittance, diffuse transmittance, haze, etc.
- Best choice for evaluation of high-performance resin, optical films, glass, liquid, etc.

Features

- This haze meter is based on such standard test methods as JIS Z8722 (Illumination and light receiving geometric condition of transparent object), JIS K7361-1 (Total light transmittance test method of plastics as transparent material) and JIS K7136 (Haze measuring method of plastics as transparent material).
- A wide sliding door has been adopted at a sample chamber, by which samples up to A4 size can be measured. Also, this haze meter can be easily installed.
- On the large 5.7" color LCD, you can enjoy easily viewable chromaticity diagrams and approximate colors.



測定 JIS	
No.001	13/02/27 10:10:00
T.T	80.78
HAZE	10.96
P.T	71.93
DF	8.85
10:10:10 MENU:メニュー	

- You can connect a USB memory stick to the measuring unit, by which measurement data and conditions (CSV files) can be saved to or read in.
- You can set a liquid cell with light path length of up to 100mm. So, measurement is possible for thin to dense liquid samples.
- In option, you can also measure Hazen color number (APHA) and Gardner color number.
- Using the exclusive color management software (available in option), analysis of measurement data and various chromaticity diagrams becomes possible on the display of your personal computer.

New Control Unit
CU-II

Specifications of Optical Unit

Illumination/Light reception	Color: 0°: di (0° illumination: diffused light receiving)Haze: Based on the condition of JIS K7361-1
Measuring method	Total light transmittance, Flicker photometry of diffuse transmittance
Light receiving element	CCD image sensor
Measurable wavelength	380nm to 780nm, at 5nm intervals
Light source	Halogen lamp, 12V 50W
Illuminant/observer	A, B, C, D65, F6, F8 and F10
Observation condition	2° or 10° field of view for each illuminant/observer
Display	5.7" color TFT LCD
Operation switches	Membrane switches and touch panel
Operation screen	2 types of value screens, Spectral curve graph, Lab graph, Color deviation criterion chart, Approximate colors (Color system on each screen is arbitrarily selectable.)
Measuring items	XYZ, ΔXYZ, xyz, Δxyz, L*a*b*, ΔL*a*b*E*, L*C*h*, ΔL*C*h*E*, Lab, ΔLabE, LCh, ΔLChE, HVC, YI (ASTM E313), YI(ASTM D1925), ΔYI(ASTM E313), ΔYI(ASTM D1925)CMC, ΔE*94, ΔE00, Spectral distribution, Hazen color number (APHA), Gardner color number, Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance, Spectral diffuse transmittance, Spectral parallel transmittance, Spectral haze, etc.
Related standards	JIS (Z8722, K0071, K2580, K7136, K7361-1), ASTM (D1003, D1925, E308, E313)

Measuring Unit, CU-II

Averaging	2 to 99 times (Averaging frequency can be arbitrarily set.)
Reference data memory	100 data pieces (Settable from measurement data or manual input)
Internal data memory	400 data pieces (Saved data can be printed out by printer or
USB output	output from USB communication port or USB memory stick.)
Indication of periodical calibration	Measurement data is exported to USB. It can be also saved into a USB memory stick (by FAT32 file system). A message is indicated on the date set for expected calibration.
Clock function	Settable for year, month, date, hour, minute and second
Data saving function	Measuring conditions, etc. (like measuring method and display screen) can be saved into or read out of a USB memory stick.
Interface	USB communication (for connection with PC), RS-232C (for connection with the optical unit), USB memory stick and Parallel port (for connection with printer)
Language	English and Japanese
Power supply	100V to 240V AC, 50/60Hz
Dimensions & weight	600(W) x 406(D) x 320(H) mm, Net 23kg (optical unit) 220(W) x 255(D) x 100(H) mm, Net 1.8kg (measuring unit)
Option	Impact dot printer, Thermal line dot printer and Exclusive software

* The above specifications are subject to change without pre-notice in the future due to technical improvement.



JQA-QM7364



Obtained ISO 9001 certificate in 2008

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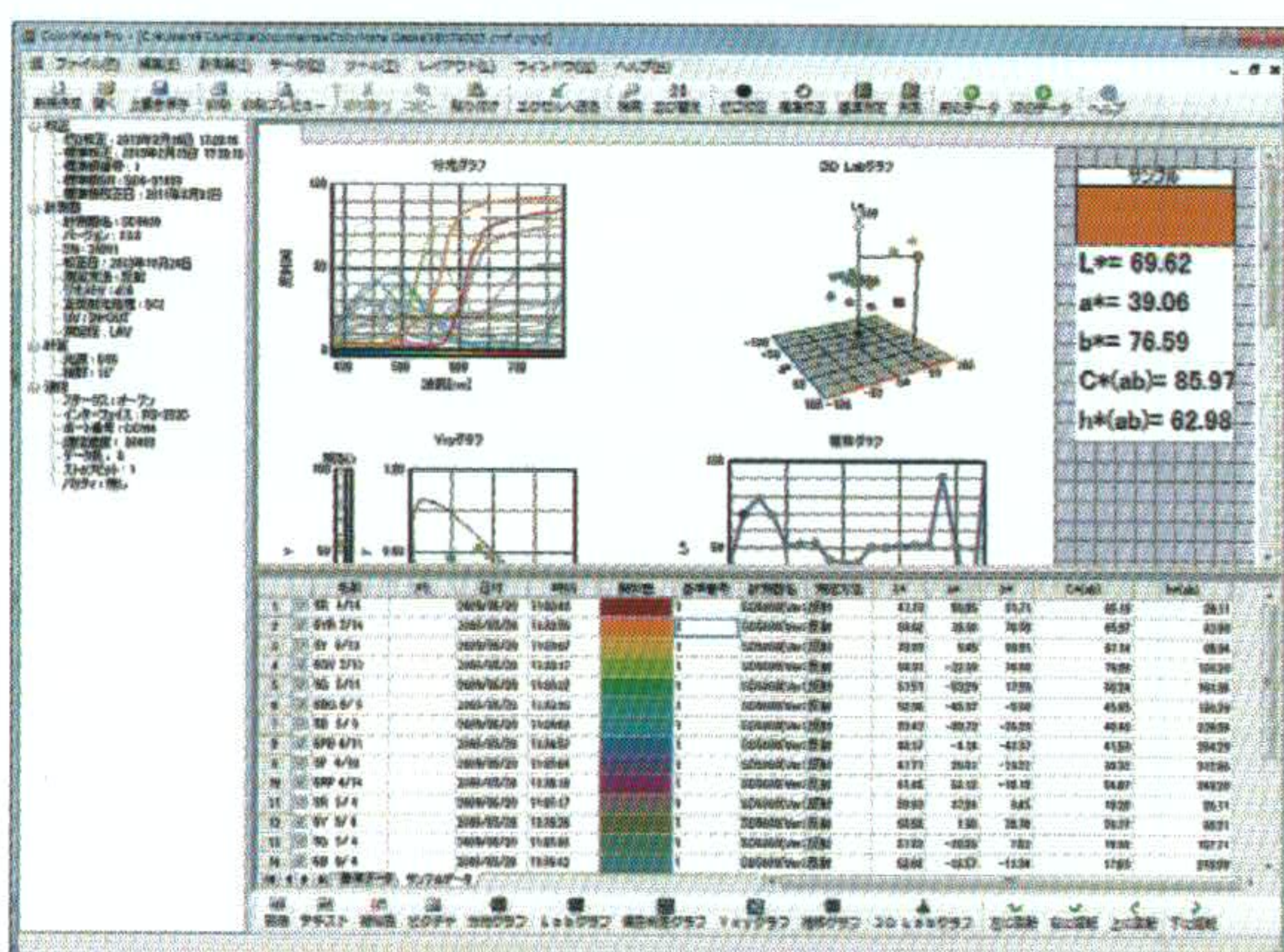
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Power supply	100V to 240V AC, 50/60Hz
Dimensions & weight	600(W) x 406(D) x 320(H) mm, Net 23kg (optical unit)
Option	Measuring unit (CU-II)

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With Exclusive Software



Specifications of Software

Display/Print	Data list, Spectral curve graph, Lab graph, Yxy graph, Color deviation criterion chart, Transition graph, Value data, Text, Picture, 3D Lab graph
Management items	Name, Memo, Measured date, Measured time, False color, Measuring method, Average, Reference number, Data attribute
Illuminant/observer	A, B, C, D50, D55, D65, D75, F6, F7, F8, F10, F11 and F12
Observation condition	2° or 10° field of view for each illuminant/observer
Measuring items	XYZ, ΔXYZ, xyz, Δxyz, L*a*b*, ΔL*a*b*, LCh*, ΔL*C*H*E*, Lab, ΔLabE, LCh, ΔLChE, HVC, YI (ASTM E313), YI (ASTM D1925), ΔYI (ASTM E313), ΔYI (ASTM D1925)CMC, ΔE*94, ΔE00, Spectral distribution, Hazen color number (APHA), Gardner color number, Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance, Spectral diffuse transmittance, Spectral parallel transmittance, Spectral haze, etc.
Data saving	Reference: 500 data pieces, Sample: 500 data pieces, Layout: 1 data piece
Environment for operation	O.S.: Windows 7, Windows Vista (32bit version), Windows XP PC: CPU (Pentium 2GHz or faster), Memory (1GB or more), HDD (100MB or more vacant memory), Optical drive (CD-ROM), Display (1280 x 800 pixels or more/full colors recommended)

* Windows is the trade marks of Microsoft Corporation in U.S.A.

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