

HAZE METER

NDH 7000SP II

Best choice for evaluation of high-performance resin, optical film, packing material, glass, etc.

Large 5.7" color LCD with touch panel:

Easily viewable large display and easy operability by intuition. Direct data saving is possible by connecting a USB stick memory.

White LED as a light source:

A lamp replacement is no more needed, and deviation of data by such a replacement will no more happen.

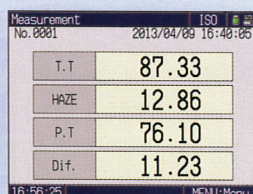
Energy-saving instrument with less power consumption:

Standby power requirement is 12VA due to the adopted intermittent LED illumination. Power consumption at the time of measurement is 16VA.

Hatch type trap:

Total light transmittance of even highly hazy diffuser panels can be stably measured.

* This is different from the measuring method B specified by JIS K7105.



Example of screen display

Related standards

JIS K 7361-1	Test method for total light transmittance of plastics and transparent material (ISO 13468)
JIS K 7136	Haze measuring method for plastics and transparent material (ISO 14782)
JIS K 7105	Optical test method for plastics
ASTM D 1003	Standard test method for haze and luminous transmittance of transparent plastics

Specifications of Optical Unit

Measuring method	Double-beam, Method of integrating sphere with compensator opening
Light source	White LED, 3W (No lamp replacement is needed.)
Light receiving element	Si photo diode with V (λ) filter
Sample shape and size	30mm x 30mm to 297mm x 420mm (A3 size)* Protruding unnecessary part for measurement is possible.
Measuring accuracy	Total light transmittance Standard deviation within 0.03%, where 20 measurements were continuously made at airspace. (JIS K7361-1 / ISO 13468)
Measuring items	Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance & Turbidity
Related standards	JIS (K7361-1, K7136, K7105), ASTM (D1003), ISO (13468, 14782)
Power supply	100V to 240V AC, 50/60Hz, 16VA
Dimensions & weight	400(W) x 285(D) x 480(H) mm, Net 14kg

Control Unit, CU-II

Display	5.7" color TFT LCD
Operation switches	Membrane switches and touch panel
Operation screen	Value screens, Graph
Measuring items	Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance & Turbidity
Averaging	2 to 99 times (Averaging frequency can be arbitrarily set.)
Internal data memory	1,000 data pieces (Saved data can be printed out by printer or output from USB communication port or USB memory stick.)
USB memory	Measurement data can be saved into a USB memory stick as CSV files (by FAT32 file system).
Indication of periodical calibration	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, 10VA
Dimensions & weight	220(W) x 255(D) x 101(H) mm, Net 1.7kg
Option	Impact dot printer, Thermal line dot printer, PC control software, Film measuring attachment, Attachment for abrasion test (Ø7mm)

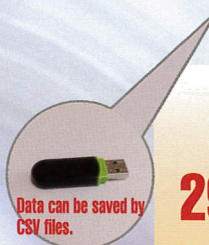
* The above specifications are subject to change without pre-notice in the future due to technical improvement.

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Control Unit CU-II



A3 size



**Large samples of
30mm X 30mm up to
297mm X 420mm(A3 size)
can be measured.**

- Measurement is possible even for larger samples by protruding unnecessary part for measurement.
- This model will be very suitable to evaluate surface distribution.

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Open type sample chamber free from effect of outside light:

Opening and closing of a measuring window is not needed. It is why measurement is possible without effect of outside light even if a measuring window is open.

White LED as a light source:

A lamp replacement is no more needed, and deviation of data by such a replacement will no more happen.

Energy-saving instrument with less power consumption:

Standby power requirement is 12VA due to the adopted intermittent LED illumination. Power consumption at the time of measurement is 16VA.

Hatch type trap:

Total light transmittance of even highly hazy diffuser panels can be stably measured.

* This is different from the measuring method B specified by JIS K7105.

Screen of software

	Date	Time	Haze	Total	Parallel	Turbidity
1	2006/09/02	15:04:15	81.52	5.37	86.89	4.93
2	2006/09/02	15:05:07	84.41	10.72	95.13	21.54
3	2006/09/02	15:06:44	87.88	23.39	111.27	50.23
4	2006/09/02	15:07:37	72.84	21.88	94.72	50.34
5	2006/09/02	15:08:09	70.23	16.38	86.61	37.10
6	2006/09/02	15:09:43	65.54	32.72	98.26	85.89
7	2006/09/02	15:10:19	64.10	32.75	96.85	82.79

Most suitable for quality control of transparent material such as plastic, film, glass and diffuser panels



Samples of 30mm x 30mm up to A4 size can be put into a sample chamber.

Related standards

JIS K 7361-1

Test method for total light transmittance of plastics and transparent material (ISO 13468)

JIS K 7136

Haze measuring method for plastics and transparent material (ISO 14782)

JIS K 7105

Optical test method for plastics

ASTM D 1003

Standard test method for haze and luminous transmittance of transparent plastics

Specifications of Optical Unit

Measuring method	Double-beam, Method of integrating sphere with compensator opening
Light source	White LED, 3W (No lamp replacement is needed.)
Light receiving element	Si photo diode with V (λ) filter
Sample shape and size	30mm x 30mm to 210mm x 297mm (A4 size)* Protruding unnecessary part for measurement is possible.
Measuring accuracy	Total light transmittance Standard deviation within 0.03%, where 20 measurements were continuously made at airspace. (JIS K7361-1 / ISO 3468)
Measuring items	Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance & Turbidity
Related standards	JIS (K7361-1, K7136, K7105), ASTM (D1003), ISO (13468, 14782)
Power supply	100V to 240V AC, 50/60Hz, 16VA
Dimensions & weight	400(W) x 285(D) x 480(H) mm, Net 14kg
Option	Control unit (CU-II), Film measuring attachment, Attachment for abrasion test (Φ7mm)

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

Distributed by:

Attachment

● Attachment for film measurement



It is useful when evaluating thin samples or samples of vinyl material.

● Sample presser foot



Samples can be fixed by this presser foot with spring. It is useful when measuring films with tension.

Specifications of Software

Display items	Haze, Total light transmittance, Diffuse transmittance, Parallel transmittance, Turbidity, Name, Memo, Measured date, etc.
Data list	Display and print of measurement data list, Edit (cut, copy, input of name and memo, etc.)
File input & output	Read-in and saving of unique data file format, Output is possible by CSV text file format (variable length, data row breakpoint by comma).
Data file	1 file, 1,000 data pieces
Operating system	Windows 8.1, Windows 8, Windows 7,

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