## Large 5.7" color LCD with touch panel:

Easily viewable large display and easy operationality 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 8VA due to the adopted intermittent LED illumination. Power consumption at the time of measurement is 14VA.

## 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.

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### **Related standards**

JIS K 7361-1	Test method for total light transmittance of plastics and transparent material (ISO 13468) Haze measuring method for plastics and transparent material (ISO 14782) Optical test method for plastics
JIS K 7136	
JIS K 7105	
ASTMD 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 ( $\lambda$ ) filter
Sample shape and	30mm x 30mm to 210mm x 297mm (A4 size)* Protruding
size	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 7361-1 / 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, 14VA
Dimensions & weight	334(W) x 294(D) x 473(H) mm, Net 14kg



# **Control Unit** CU-II

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.

#### 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	A message is indicated on the date set for expected calibration.
periodical 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	Dot impact printer, PC control software, Film measuring
	attachment, Attachment for abrasion test ( $\Phi$ 7mm)

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

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# 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** Screen of software

less power consumption: Standby power requirement is 8VA due to the adopted intermittent LED illumination. Power consumption at the time of measurement is 14VA.

## Hatch type trap:

Total light transmittance of even highly hazy diffuser panels can be stably measured. t from the measuring method B specified by JIS K7

#### Attachment



Sample presser foot

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



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Setting vertically or horizontally is possible.

## **Exclusive software** for control of the main unit and data management

### 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
ASTMD 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.)
Sample shape and size	30mm x 30mm to 210mm x 297mm (A4 size)* Protruding
	unnecessary part for measurement is possible.
Measuring	Total light transmittance Standard deviation within 0.03%, where 20
accuracy	measurements were continuously made at airspace. (JIS 7361-1 / 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, 14VA
Dimensions & weight	334(W) x 294(D) x 473(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:

#### 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	Windows8.1, Windows8, Windows 7,

\* Windows, Excel and Word are the trade marks of Microsoft Corporation in U.S.A.



#### NIPPON DENSHOKU INDUSTRIES CO, LTD.

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