DENSITOMETER
ND-11

Use For

- **To control the gloss and reflection density of leadflame, electronic devices, metals, building materials and precision equipment, etc.**
- **To control the reflection density (OD) and reflection rate of printing, paper, etc.**

JQA-QM7364 091-A

ISO 9001 certificate: Obtained in 2000

- ***Compact, lightweight, simple operation, and comes with a target mark to confirm the measurement area and allows effective partial measurements.***
- ***Comes with a data correction function to provide good compatibility with previous models.***
- ***Can store 500 data pieces and exchange data with a personal computer. This model is even more powerful !!!***

※ *This meter is traced by the Japan Color Research Institute (JCRI).*

Option

Serial printer PR-95

Features

● Compact and lightweight
The compact size and lightweight makes it easy to carry anywhere, indoors and out, and to allow simple measurement using just one hand.

● Simple operation
Just turn on the power and wait for it to calibrate, then place it on the sample position and press the head to begin measurement. Easy for anyone to use.

● Accurate target alignment
Comes with a film-like target mark to make possible accurate target alignment even when measuring small locations.

● Energy-saving design
Powered by 4 internal Ni-Cd batteries. An automatic power off function can be set to one of four different time periods to automatically turn the power off if you forget to. This prevents the battery power from being wasted.

● In addition to the visual reflection density and yellow density, a variety of other reflection rate measurements can be conducted with just this one device.
The visual reflection density is useful for measuring silver-color gloss and yellow density is useful for measuring gold-color gloss.

● Measurement data storage and batch output
Up to 500 pieces of measurement data can be stored and measurement data can be output in batch for a freely specified data range. Data can be output in order by connecting a printer or computer to the external output connector.

● Average value calculation function
The measurement averages value for up to a maximum of 9 points. If a printer or computer is connected to the external connector, the average element data or average value data can be output for each measurement.

● Data compensation function
To ensure a good compatibility with previous models, a very convenient function that uses a freely measured point to compensate the calibration slope with one touch is provided.

● Full range of options
1. Serial printer (PR-95)
2. Communications cable for connecting a personal computer or printer.
3. Data communication software that transfers data measured to and makes possible storing files by the personal computer.

Specifications

Name and model:	Densitometer ND-11
External dimensions:	210 mm L × 72 mm D × 50 mm H
Weight:	530 g (including batteries)
Optical conditions:	0° −45° directional light reception (ISO 5/4, ANSI PH2.17, DIN 16536)
Light source:	Halogen lamp (approx. 2,856°K)
Photosensitive element:	Photodiode
Measurement radius:	3 mmφ standard (The diameter of the target film is 4.5 mm.) 1.7 mmφ (The diameter of the target film is 2.5 mm.) 1.0 mmφ (The diameter of the target film is 2.0 mm.)
Sensitivity measurement:	Spectral luminous efficacy, yellow (ISO 5/3 Status T equivalent)
Measurement items:	Reflection density, reflection rate
Measurement range:	Reflection density: 0.00 to 3.00 D or higher (The range exceeding 2.50 D should be used as a reference.)
Reflection rate:	0.00 to 100.0%
Display resolution:	Reflection density: 0.01 D, Reflection rate: 0.1%
Repetition accuracy:	3.0 mmφ (standard): ±0.01 D (2.0 D or less) 1.7 mmφ: ±0.02 D (1.0 D or less), ±0.06 D (2.0 D or less) 1.0 mmφ: ±0.03 D (1.0 D or less), ±0.10 D (2.0 D or less)
Calibration:	Straight-line calibration using 2 black and white points.
Data compensation function:	Data compensation function to ensure good compatibility with previous models
Averaging measurement:	The average value of the reflective density for 2 to 9 points can be calculated with one touch.
Measurement time:	Approx. 1 sec.
Automatic power off:	Up to 4 different time periods can be set.
Battery remaining power display:	The remaining battery power is continuously displayed on the LCD.
Buzzer:	Built in (The buzzer can be turned off.)
Measurement data storage:	Up to 500 data pieces.
Measurement data output:	Measurement data can be output in a batch in a freely settable data range.
Display dimensions:	128 × 64 dot matrix liquid crystal display (with contrast adjustment function)
Display area size:	62 × 44 mm
Display highlight function:	Built in
Power supply:	Built-in Ni-Cd batteries 4.8 V, 800 mAh
Charging time:	Approx. 90 min.
Number of measurements on a full charge:	Approx. 5,000 times (A at temperature of 20 to 25℃ and measuring at 10 sec intervals.)
Operational temperature range:	5 to 40℃ (when no condensation forms.)
External communications function:	RS-232C (19,200 bps, 9,600 bps, 4,800 bps, 2,400 bps)
Data printing:	Can be connected to a serial printer (PR-95) and the output items can be selected.
Standard accessories:	Soft case, calibration plate, AC adapter, instruction manual
Options:	Serial printer (PR-95), communications cable, data reception add-in software for Excel, standard plate for accuracy management

※ The above specifications are subject to change at any time without prior notice.

Dealer Name

NDK NIPPON DENSHOKU
Advanced Technology in Color and Brightness.

NIPPON DENSHOKU INDUSTRIES CO., LTD.

HEAD SALES DEPT.

SENGOKU HASEGAWA BLDG., 4-45-17 SENGOKU, BUNKYO-KU, TOKYO 112-0011 JAPAN

PHONE : 81-3-3946-4392 ▪ FAX : 81-3-3946-1690

URL http://www.nippondenshoku.co.jp/

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