

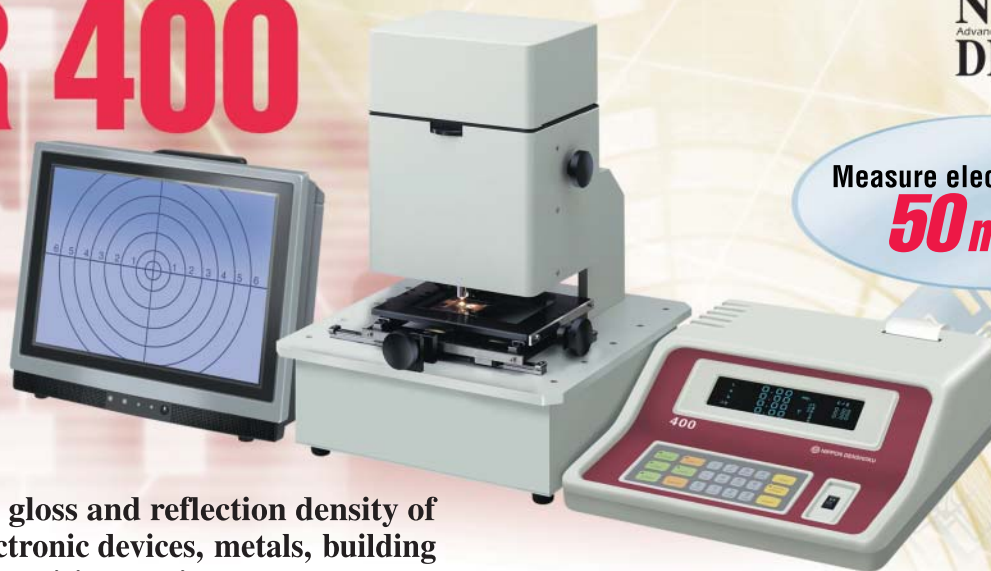
# MICRO COLOR METER

NEW MODEL

# VSR 400



**NIPPON DENSHOKU**  
Advanced Technology in Color and Brightness



Measure electronic devices  
**50 micron**

**To control the gloss and reflection density of leadframe, electronic devices, metals, building materials and precision equipment, etc.**

**To control the reflection density (OD) and reflection rate of printing, paper, etc.**



ISO 9001 certificate: Obtained in 2000

## Features

- **Directly measure very small measurement area.**
- **Measure the value of the various color formula and gloss of plating at the moment without touching sample.**
- **Adopts the 200 × 150mm sample bed which allows to measure large the sample.**
- **Loads the color CCD camera which focusing the correct measurement point.**
- **Possible to measure the gloss of the gold plating and the silver plating.**

## Specifications

Sensing unit	
<b>Dimensions</b>	W360mm × D360mm × H460mm
<b>Light Source</b>	Halogen Lamp
<b>Measuring Area</b>	0.05mmφ, 0.1mmφ, 0.2mmφ, 0.5mmφ,
<b>Illumination / Light-receiving Condition</b>	45° - 0° method, 45° illumination-vertical light-receiving
<b>Power Supply</b>	AC Power supply
<b>Sample Bed</b>	200mm × 150mm X: 120mm Y: 90mm Z: 50mm
<b>CCD camera</b>	Color
<b>Monitor</b>	13 inch color LCD

## Measuring unit

<b>Dimensions</b>	W350mm × D360mm × H110mm	<b>Display Unit</b>	Fluorescent display tube Display dot number: 256 dots × 64 dots Emitted color: Blue-green
<b>Measuring Item</b>	B black mode Y yellow mode (Reflection density, gloss) Lab, ΔLab, ΔE L*a*b*, ΔL*a*b*, ΔE YI, W, WB, ΔYI, ΔW, ΔWB, XYZ, Yxy	<b>Standard Data Setting</b>	Measurement values and standard values can be set from keyboard. (external input).
<b>Printer</b>	Thermal serial dot method, Thermal printer ● Printing direction: forward and backward ● Feeding dot: 256 dots × 8 dots ● Printing speed: 1.1 sec/line ● Paper width: 80mm	<b>Sample Name Input Function</b>	Sample name can be entered in alphabetical large characters or numerical characters.
<b>Measurement Accuracy</b>	High-speed, high-accuracy measurement is assured with the use of a high-speed 16 bit A/D converter (internally calibrated at 18 bit accuracy with built-in self-calibration function) and a low-drift, high-speed, high-accuracy amplifier.	<b>Clock Function</b>	Measurement time (YY/MM/HH/MM) can be printed with the measurement data.
		<b>External Output</b>	Measurement data, date/time (YY/MM/DD) details, and specimen name can be transmitted in ASCII codes via RS-232C interface.
		<b>Average Value Mode</b>	Averaging frequency can be set to any value (up to 99 times). Average printout is also selectable.
		<b>Memory Backup</b>	Built-in lithium dry cell for safe storage of all setting.
		<b>Operating Conditions</b>	0° ~ 40° C, 30 ~ 80%RH

※ The accuracy of this model is traceable to the national standard of the Japan Color Research Institute (JCRI).

Dealer Name



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