



# Automatic measurement of "Qmax", which is a significant parameter of "cool" and "warm" sensations when human skin touches an object.

Test standard: JIS L 1927 Textiles-Measurement method of cool touch feeling property GB/T 35263-2017 Textiles-Testing and evaluation for cool sensation at contact instant CNS15687, L3272 Method of test for the instantaneous cool sensation fabrics

**KES-QM** Warm/Cool Feeling Measurement Tester

# **KES-QM**

# System configuration



### Features

### • Design that simulates touching an object

The load and contact area of the heat plate that contacts the target sample are designed to simulate the feeling you experience when touching an object. This technology allows a maximum heat transfer rate that is closer to human sensation can be measured.

### • Up to 10 consecutive automatic measurements

Automatic measurements can be performed up to 10 consecutive times.

The automation has also improved the accuracy of the measurement values.

# **KES-QM** Warm/Cool Feeling Measurement Tester

Dimensions / weight (approx.)	W330 × D620 × H664 (mm) / 42 kg		
Power supply	100 to 240 V AC, 50/60 Hz Maximum power consumption 250 W		
Measurement environment	20 to 30°C / 50 to 70%RH No condensation. Keep the temperature and humidity stable during measurement. (Standard conditions: 20°C / 65%RH) Note: The tester must be installed at a location with minimal effect from airflow and vibration.		
Measurement unit configuration	T-Box: 30 × 30 (mm) Thermo Cool: 118 × 118 (mm)		
Temperature display	Unit: Celsius Minimum display: 0.1°C		
Coldness and warmth feeling evaluation value	qmax [W/cm²]		
Number of automatic measurements	1 to 10 times		

Heater control	Combination of PID control and output in voltage proportional to temperature difference		
Configurable temperature	T-Box: Room temperature to 40°C (increments of 0.1°C) Thermo Cool: 10°C to 40°C (increments of 0.1°C)		
Sample dimensions	180 × 180 mm (standard) Thickness: 25 mm (or less)		
Display	Touch panel system: Projected capacitive type Screen size: 7 inch wide Resolution: 800 × 480 (WVGA) Effective display area: 152.4 × 91.44 (mm)		
Configuration	Stabilization time: 0 to 60 (min), configurable with increments of 1 min Operation sound: ON/OFF switchable Display of data transfer confirmation screen: ON/OFF switchable		
Data check	Touch panel display: Maximum 10 × 3 (times) Import using application: Maximum 30 (times)		
A Precautions	<ul> <li>To use this product correctly and safely, be sure to thoroughly read the Operation Manual before use.</li> </ul>		

Please be aware that the contents are subject to change without notice.



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Acquired data					
Measurement item	Characteristic value	Measured quantity	How to read the data		
Thermophysical property	qmax	Peak value of heat flow	The larger the value, the colder it feels The smaller the value, the warmer it feels		

## Measurement screen sample on the main unit touch panel



▲Thermophysical property (qmax)

### PC output data

The qmax values are displayed using the dedicated software. Data is saved in the CSV format for each measurement. Note: Waveforms are not displayed.

# Acquired data

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