

# i55

Advanced for  
Hospitals and Professionals

BODY COMPOSITION ANALYZER



# KEY FEATURES



## High Resolution 10.4 inch Color LCD Touch Screen

All operations can be conveniently performed on the wide touch screen.



## Wide Ranged Multi-Frequencies: 5,10,50,100,500,1000kHz

With a wide range of frequencies, comprehensive water analysis such as intracellular and extracellular water is available.



## Age Specific Assessment

It shows the percentile curve of BMI, SMI and FMI with respect to the age and gender of user. The percentile rank is the value indicating the position of user within the same age group relatively. The predicted body composition value after 10 years is the value predicted on the assumption that the current condition is kept.



## Whole Body Phase Angle

Phase angle indicates the ratio of reactance to resistance and is proportional to reactance, so it serves as an index for health condition of cell membrane and cell in theory.



## Previous Measurement Result Display

You can check the trend of body composition through previous measurement result display.



## Comprehensive Water Analysis

Comprehensive body water measurement such as body water, extracellular water, intracellular water, and extracellular water ratio is possible, and changes in body water can be checked at the same time.



## Muscle & Body Cell Mass Analysis

Muscle mass may be overestimated in patients with unbalanced intracellular/extracellular water. Therefore it is recommended to use body cell mass in addition to muscle mass for accurate analysis.



## Intake & Consumed Calories

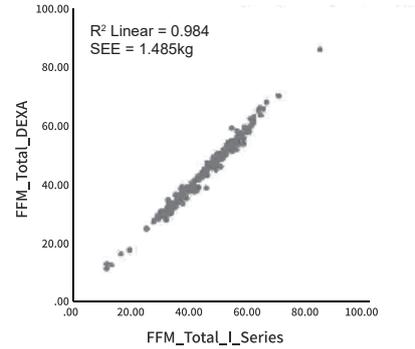
BMR, energy consumption can be checked and you can refer to exercise intensity, calorie consumption, duration for target body fat mass which is calculated based on the standard body fat ratio.





## Inch Perfect and Up to Date Body Composition Analysis Algorithm

Clinical trials of Golden Standards of Body Composition Analysis methods (DEXA, CT, and Isotope Dilution) were conducted in professional institutions to a wide range of demographics ranging from elderly to small children. The R2 value between the DEXA measurement and the body composition prediction equation was 0.984, indicating a high correlation.



## Result Sheet: Easy to Understand Description

Analysis results can be easily understood through the intuitively designed result sheet with previous measurement results and predicted values.



## User Friendly Design

- Rotated Handle: The wide rotating radius of the handle and the hand electrode, which can be rotated to suit user's posture, helps to test comfortably and accurately.
- Blind Mode : User can hide fat and weight information from the display by simply pressing a "Blind" button on the key pad. It can be turned on/off during measurement and will be written at the result paper all the time.



# RESULT SHEET



Model : i55

ID.	MEDIANA	Gender.	Male	Height.	175.0 cm	Age.	30
Name.	i55	Current.	2022.03.28	Previous.	2022.01.29		

## 1 Mediana Score

**80**

### 2 Weight Control

Obesity Degree (%)	<b>104.0</b>
Desirable Weight (kg)	<b>67.2</b>
Weight Control (kg)	<b>-2.8</b>
Fat Control (kg)	<b>-2.8</b>
Muscle Control (kg)	<b>0.0</b>

### 3 Abdominal Obesity Analysis

Waist Circumference (64.0 ~ 96.0cm)	<b>77.2</b>
Abdominal Fat Ratio (0.80 ~ 0.90)	<b>0.83</b>
Visceral Fat Area (0.0 ~ 100.0cm <sup>2</sup> )	<b>46.4</b>
Subcutaneous Fat Area (0.0 ~ 200.0cm <sup>2</sup> )	<b>77.6</b>
VSR (0.0 ~ 0.4)	<b>0.59</b>
WHR (0.00 ~ 0.50)	<b>0.44</b>

### 4 Reference

FMI (2.78 ~ 3.75kg/m <sup>2</sup> )	<b>4.18</b>
FFMI (15.72 ~ 21.25kg/m <sup>2</sup> )	<b>18.68</b>
SMI (6.60 ~ 8.91kg/m <sup>2</sup> )	<b>8.21</b>
Body Cell Mass (25.5 ~ 28.7kg)	<b>37.5</b>

### 5 Whole Body Phase Angle

50kHz	<b>6.5 °</b>
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### 6 Impedance

kHz	LA	RA	TR	LL	RL
5	365.2	365.3	29.9	280.1	290.6
10	321.4	321.5	27.4	246.4	257.5
50	280.7	282.8	22.4	218.3	227.7
100	272.3	272.7	20.5	208.7	209.1
500	268.6	268.8	18.9	202.6	203.2
1000	249.8	249.9	17.6	188.4	188.6

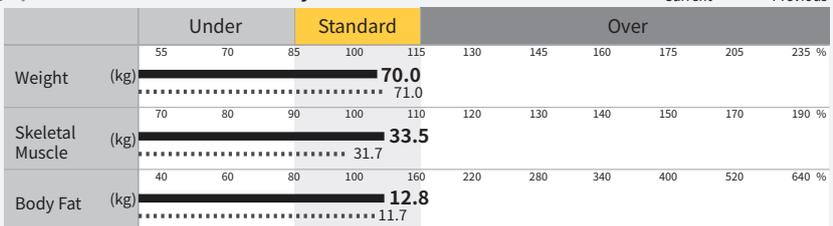


QR code reading allows you to manage your body composition measurement results with your smartphone

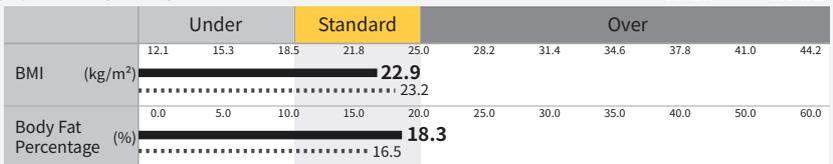
## 7 Body Composition Analysis

	Intracellular Water (L)	Extracellular Water (L)	Protein (kg)	Mineral (kg)	Body Fat (kg)
Values (Standard)	<b>16.0</b> (14.9 - 16.8)	<b>26.1</b> (24.4 - 27.4)	<b>11.4</b> (10.6 - 11.9)	<b>3.73</b> (3.77 - 4.24)	<b>12.8</b> (6.7 - 13.4)
Total Body Water (L)	<b>42.1</b> (39.4 - 44.3)		<b>54.1</b> (50.3 - 57.4)	<b>Osseous : 3.10</b> (3.13 - 3.52)	
Muscle Mass (kg)	<b>Skeletal Muscle : 33.5</b> (28.8 - 35.2)				
Fat Free Mass (kg)	<b>57.2</b> (53.9 - 60.6)				
Weight (kg)					<b>70.0</b> (56.7 - 76.6)

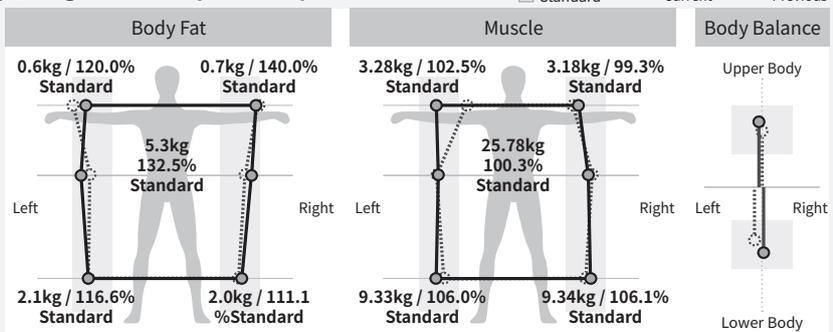
## 8 Skeletal Muscle & Fat Analysis



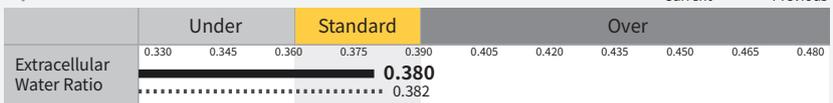
## 9 Obesity Analysis



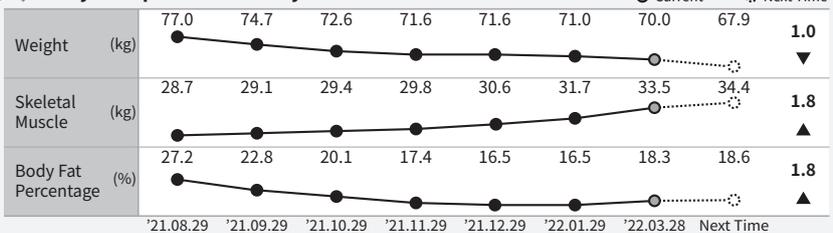
## 10 Segmental Analysis & Body Balance



## 11 Extracellular Water Ratio



## 12 Body Composition History



### 1 Mediana Score

MEDIANA score, utilizing the company's own technology, provides health issue analysis by combining body fat percentage and muscle mass.

### 2 Weight Control

It informs, based on your results, desirable weight and how much muscle and fat needs to be gained or lost.

### 3 Abdominal Obesity Analysis

Check your Abdominal Obesity based on your Waist Circumference, Abdominal Fat Ratio, Visceral Fat Area, Subcutaneous Fat Area, Visceral to Subcutaneous Fat Ratio(VSR) and WHtR.

### 4 Reference

FMI value is derived by body fat mass (kg) divided by height (m)<sup>2</sup>. FFMI value is derived by fat free mass (kg) divided by height (m)<sup>2</sup>. SMI is the limb muscle mass(kg) divided by the square of body height(m). Body Cell Mass is the sum of protein and intracellular water among the lean body mass which is all areas except for body fat.

### 5 Whole Body Phase Angle

Phase angle indicates the ratio of reactance to resistance and is proportional to reactance, so it serves as an index for health condition of cell membrane and cell in theory.

### 6 Impedance

Impedance is the resistance value that prevents the travelling of electric wave. Varying nature of impedance on different waves of frequency makes possible an accurate, more 'layered' analysis of body composition.

### 7 Body Composition Analysis

Human body consists of four major components – body water, protein, body fat and minerals, comprising total body weight

### 8 Skeletal Muscle & Fat Analysis

Weight, Skeletal Muscle and Body Fat is shown with the standard given in grey shade to check where you fall in comparison the standard.

### 9 Obesity Analysis

BMI value can be derived by dividing weight by the square of your height. Body Fat Percentage refers to the proportion of body fat mass against total weight.

### 10 Segmental Analysis & Body Balance

It gives analysis results for each separate body limb and trunk fat composition, enabling fat distribution analysis and for body balance assessment.

### 11 Extracellular Water Ratio

Extracellular Water, an indicator for body water balance can be used for diagnosis of edema and evaluation of health status by professional medical personnel.

### 12 Body Composition History

You can track changes in the main body composition values and prediction of next measurement results that you are likely to get based on the accumulated data.



# RESULT SHEET

## 13 Body Water Analysis

Body water takes up the largest share of body composition, carries oxygen and essential nutrition to cells, and removes waste materials out of the body.

The water inside the cell membrane is called intracellular water, and the water present in the blood and interstitial fluid is called extracellular water.

## 14 Segmental Body Water Analysis

It shows the distribution of body water and extracellular water ratio of the left arm, right arm, trunk, left leg and right leg.

You can check at a glance whether the intracellular and extracellular water in each part of the body are in balance.

## 15 Abdominal Obesity Analysis

It shows the analysis indicators of abdominal obesity in a graphic at a glance.

## 16 Abdominal History

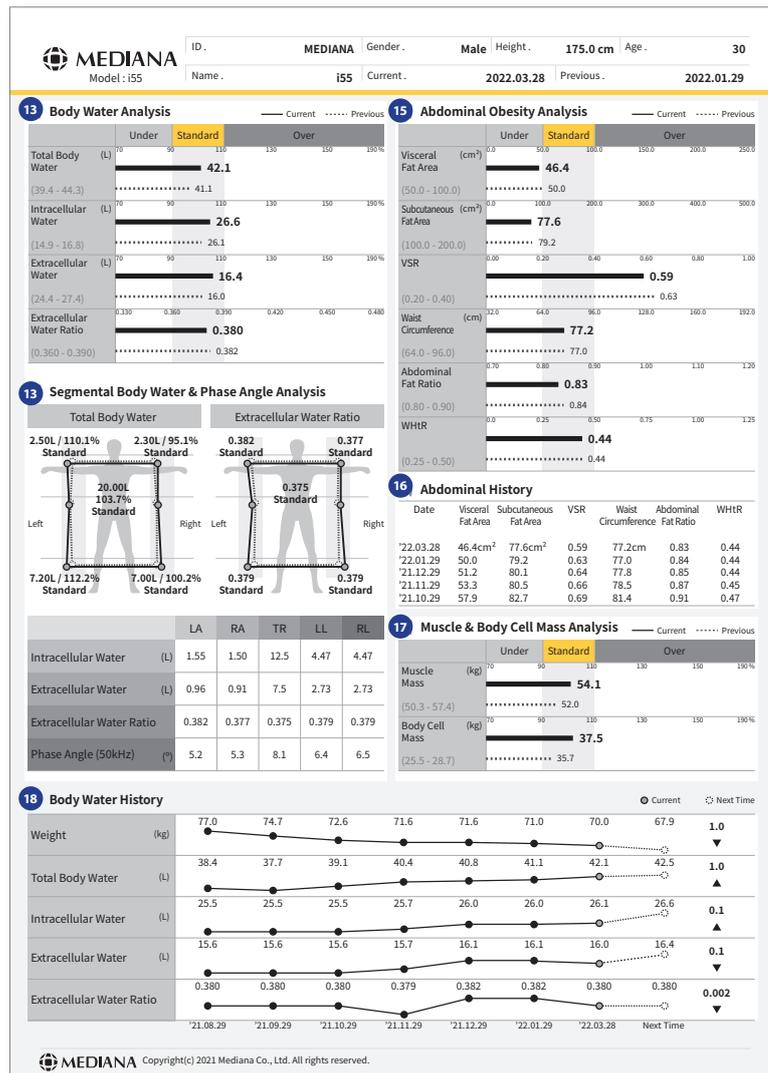
You can check the change in the abdominal obesity analysis index if you cumulatively manage the measurement results.

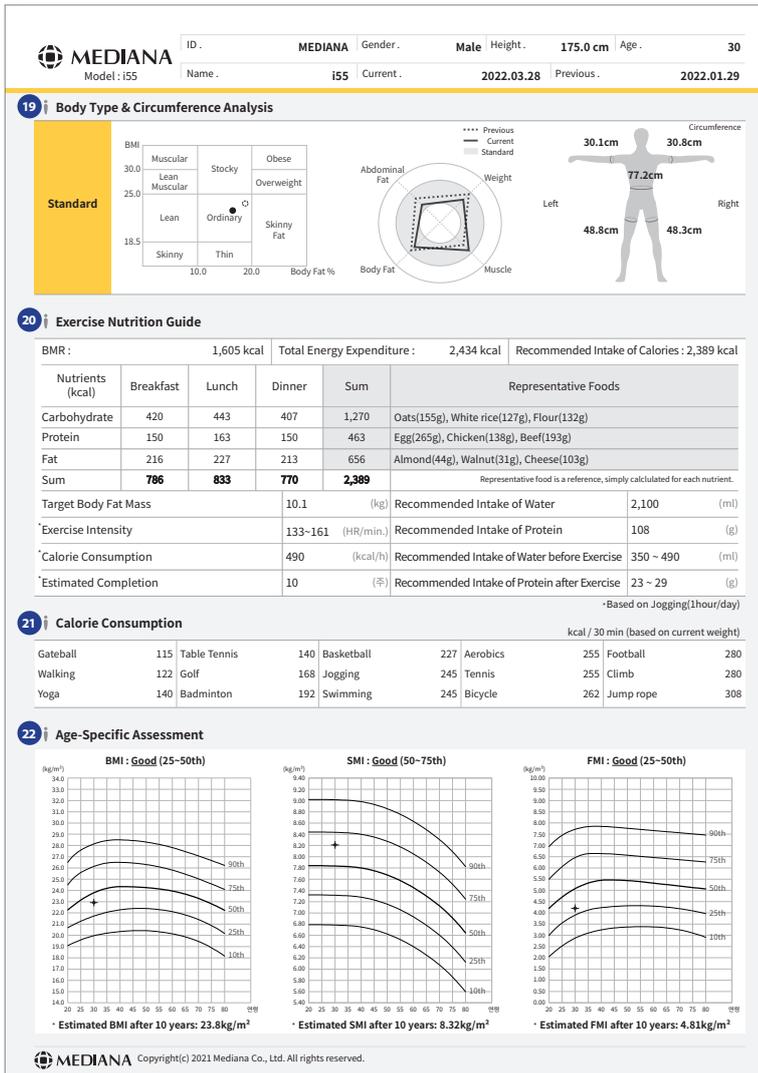
## 17 Muscle & Body Cell Mass Analysis

Muscle mass may be overestimated in patients with unbalanced intracellular/extracellular water and accurate analysis may be hard. Therefore, in case of patients with unbalanced body water, it is recommended to use body cell mass in addition to muscle mass for accurate analysis.

## 18 Body Water History

You can track changes in the main body water values and prediction of next measurement results that you are likely to get based on the accumulated data.





## 19 Body Type Analysis & Circumference Analysis

Body type table and graph help define body type through BMI and body fat percentage.

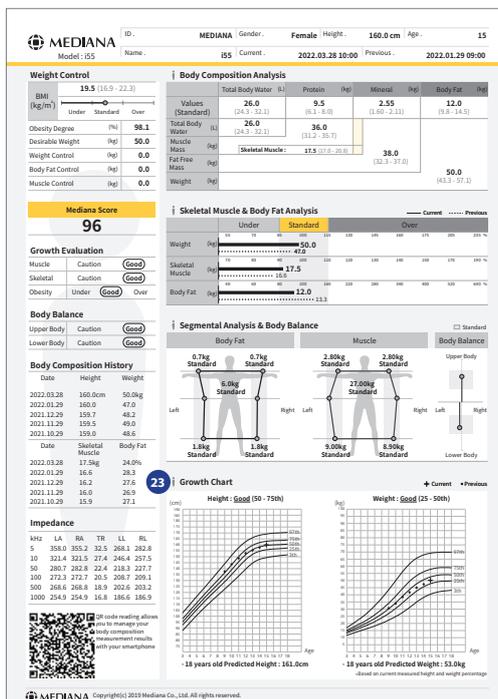
It shows the circumference of each segment predicted based on impedance measurements. It is classified by three measurement points: Arms, Waist and Thigh.

## 20 Exercise Nutrition Guide

It suggests that the intake of 3 major nutrients in the following ratios (Carbohydrate 55~65%, Protein 7~20%, Fat 15~30%) based on the recommended calorie intake, along with the representative food high in the nutrients as a reference for your diet plan.

## 21 Calorie Consumption

Calorie consumption of exercise on results sheet represents expected consumed calories for 30 minutes of every exercise presented on the table.



## 22 Age-Specific Assessment

BMI is the value of body weight(kg) divided by the square of body height(m). SMI is the limb muscle mass(kg) divided by the square of body height(m). FMI is the value of body fat mass(kg) divided by the square of body height(m).

It shows the percentile curve of BMI, SMI and FMI with respect to the age and gender of user. The percentile rank is the value indicating the position of user within the same age group relatively. The predicted body composition value after 10 years is the value predicted on the assumption that the current condition is kept.

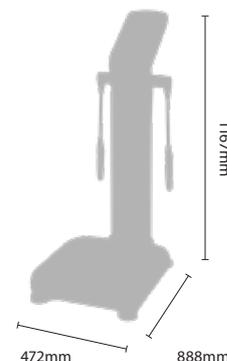
## 23 Growth Chart(Children Result Sheet)

Children result sheet predicts a child's future height and weight based on the current status of growth curve. It describes a form of relative weight and height from peer-age groups.

# SPECIFICATIONS

Item	Contents
Electrode Type	Tetra-polar electrode method using 8 point electrodes
Measurement Method	Segmental measurement using multi frequency
Power	<ul style="list-style-type: none"> <li>• Adapter(BM060S12F, Manufacturer: BRIDGEPOWER CORP) Input: AC 100-240V, 50-60Hz, 1.5A(1.5-0.7A), Output: DC 12V. 5.0A</li> <li>• Adapter(GSM60A12, Manufacturer: MEAN WELL ENTERPRISE CO., LTD) Input: AC 100-240V, 50/60Hz, 1.5A(1.4-0.7A), Output: DC 12V. 5.0A</li> </ul>
Analysis Items [General Result]	<ul style="list-style-type: none"> <li>• <b>Body Composition Analysis:</b> Total Body Water, Muscle Mass, Skeletal Muscle, Fat Mass, Fat Free Mass, Protein, Mineral, Osseous Mineral, Intracellular Water, Extracellular Water</li> <li>• <b>Skeletal Muscle &amp; Fat Analysis:</b> Weight, Skeletal Muscle, Body Fat Assessment with previous result</li> <li>• <b>Obesity Analysis:</b> BMI, Body Fat Percentage Assessment</li> <li>• <b>Segmental Analysis:</b> Segmental Fat, Muscle, Body Water, Intracellular Water, Extracellular Water, Extracellular Water Ratio, Phase Angle and Body Balance Assessment</li> <li>• <b>Weight Control:</b> Obesity Degree, Desirable Weight, Weight/Fat/Muscle Control</li> <li>• Mediana Score, Extracellular Water Ratio, FMI, FFMI, SMI, Body Cell Mass, Segmental Impedance, Whole Body Phase Angle</li> <li>• <b>Body Composition History:</b> Weight, Skeletal Muscle, Body Fat</li> <li>• <b>Body Water Analysis:</b> Total Body Water, Intracellular Water, Extracellular Water, Extracellular Water Ratio, Abdominal History</li> <li>• <b>Abdominal Obesity Analysis:</b> Visceral Fat Area, Subcutaneous Fat Area, VSR, Waist Circumference, Abdominal Fat Ratio, WHtR, Changes of Abdomen</li> <li>• Muscle &amp; Body Cell Mass Analysis</li> <li>• <b>Changes of Body Water:</b> Weight, Total Body Water, Intracellular Water, Extracellular Water, Extracellular Water Ratio</li> <li>• <b>Body Type Analysis:</b> Body Type Table, Body Type Graph Assessment with previous result, Segmental Circumference</li> <li>• Exercise Nutrition Guide and Calorie Consumption</li> <li>• <b>Age-Specific Assessment:</b> BMI, SMI, FMI, Estimated BMI/SMI,FMI after 10 years</li> </ul>
Analysis Items [Children Result]	<ul style="list-style-type: none"> <li>• <b>Body Composition Analysis:</b> Total Body Water, Muscle Mass, Fat Mass, Fat Free Mass, Protein, Mineral, Skeletal Muscle</li> <li>• <b>Skeletal Muscle &amp; Body Fat Analysis:</b> Weight, Skeletal Muscle Mass, Body Fat Mass Assessment with previous result</li> <li>• <b>Segmental Analysis:</b> Segmental Muscle, Fat and Body Balance Assessment</li> <li>• <b>Growth Chart:</b> Height and Weight with 18 years old Predicted Value</li> <li>• <b>Body Composition History:</b> Weight, Skeletal Muscle Mass, Body Fat, Height</li> <li>• <b>Weight Control:</b> BMI, Obesity Degree, Desirable Weight, Weight/Fat/Muscle Mass Control</li> <li>• <b>Growth Evaluation:</b> Muscle, Skeletal, Obesity Evaluation</li> <li>• Mediana Score, Segmental Impedance</li> </ul>
Measurement Frequency	5, 10, 50, 100, 500, 1000kHz
Measurement Current	200uArms
Measuring Range	10 ~ 1000Ω
Measured Weight	2.0~250.0 kg (Resolution 50g)
Range of Height	60.0~220.0 cm
Input Interface	Touch Screen, Barcode reader
Addition Function	Data Backup and Restore to USB, and DB export to CSV file
Supported Printer	Laser Printer that Mediana recommended
External Interface	RS232C(9Pin Serial) 2ea, USB(type A) 4ea, Mini-USB(type B) 1ea, LAN 1ea
Measurement Time	About 90 sec.
Age of Use	3~99 years old
Display	10.4inch(IPS, 768 x 1024 ), Color Full Touch LCD
Dimension	472(W) x 888(L) x 1167(H)mm (±3mm)
Weight	About 24.0kg (±2kg)
Operating Environment	Temp 10~40°C, Humidity 30~75%, Air pressure 70~101.3 kPa
Storage Environment	Temp -10~60°C, Humidity 10~80%, Air pressure 50~101.3 kPa
Supporting Result Sheet	General Result, Children Result
Measurement Mode	Expert Test, Self Test, Classmate, Blind

\* Above contents are subject to change without prior notice to improve appearance and performance of the product. (N0022)



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