



Work Together

Item Code 73009

Compact Infrared Thermometer A

Emissivity Adjustable Model with Clock Function

Instruction Manual

Introduction

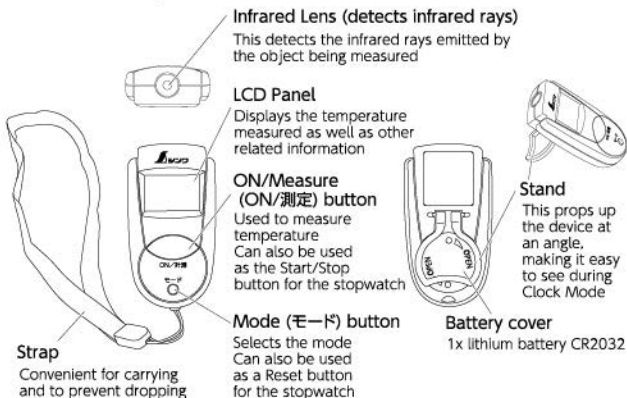
Thank you for purchasing Compact Infrared Thermometer A Emissivity Adjustable Model with Clock Function. Before using the product, please read the instructions contained in this manual to ensure correct use. After having read this manual, always keep it with you or in a safe place.

■ Before Using

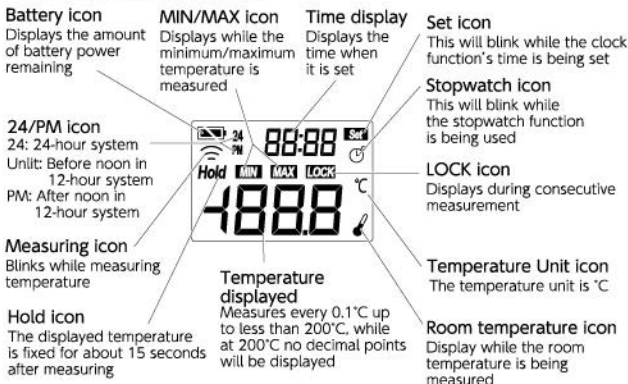
- ① Remove the insulation tape that is wedged inside the battery cover on the rear of the device, then press the ON/Measure (ON/測定) button and turn on the device.
- ② Next, set the time (the device will always display the room temperature and time when not measuring infrared temperature).
 - ※ Measuring infrared temperature is possible even without setting the time, but the display will turn off when 15 seconds pass without an operation.

■Part Names

●Main body



●Liquid crystal display



■Setting the time

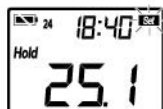
- ① Press the ON/Measure (ON/測定) button to go to the Start Screen.
- ② From the Start Screen press the Mode (モード) button 6 times, and it will change to the Clock Set Screen (Set will flash).



Start Screen



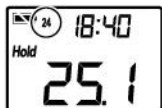
Press the Mode (モード) button 6 times



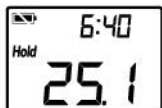
Set Time Screen

※The temperature and time displayed will vary with environment and settings.

- ③ Press the ON/Measure (ON/測定) button and the "24" icon will blink. Each time the ON/Measure (ON/測定) button is pressed, the display will alternate between a 24-hour system and a 12-hour system.



24-hour system display



12-hour system display

※When the 12-hour system is selected, no icon will be displayed before noon and after noon a PM icon be displayed.

Select the display method and press the Mode (モード) button to set it.

- ④ When the "Hour" part is blinking, press the ON/Measure (ON/測定) button to adjust the hour, and press the Mode (モード) button to set.
- ⑤ When the "Minute" part is blinking, press the ON/Measure (ON/測定) button to adjust the minute, and press the Mode (モード) button to set.

※The time will always be displayed except during Stopwatch Mode.

※The setting status will end when more than 15 seconds passes without an operation. If that happens, please start again from the beginning.

■ About This Device and Emissivity

This device is a non-contact thermometer which reads the infrared rays emitted from an object, converts them to temperature, and displays them on the LCD panel.

The emissivity of infrared rays will differ depending on the object. To take an accurate measurement of temperature, it is necessary to match this device with the emissivity of the object.

The emissivity of a mirrored surface or an object through which light passes will be strongly affected by reflectivity and transmittance. To take an accurate measurement of temperature, please measure after first affixing black-body tape or coating with a black-body paint.

Emissivity Chart

Measured Object	Emissivity	Measured Object	Emissivity
Water/ice	0.98	Paper	0.92
Soil	0.92~0.96	Fruit/vegetable	0.98
Stone/asbestos	0.92	Meat	0.98
Plastic	0.90~0.95	Copper oxide	0.5~0.6
Rubber (black)	0.95	Iron oxide	0.7~0.8
Wood	0.98	Tile	0.8

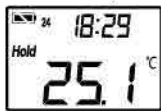
※Emissivity may differ slightly depending on factors such as the temperature of the object measured, the condition of its surface, and its color. Please use the Emissivity Chart above only as a reference.

■ How to Set Emissivity

①Press the ON/Measure (ON/測定) button to go to the Start Screen.

②From the Start Screen press the Mode (モード) button 5 times, and go to the Set Emissivity Screen.

※The initial setting is 95E(=Emissivity 0.95)



Start Screen



Press the Mode
(モード) button
5 times



Set Emissivity Screen

※The temperature and time displayed etc.
will vary with the environment and settings.

③Press the ON/Measure (ON/測定) button and set the emissivity. Press the Mode (モード) button to complete the setting.

The set emissivity will not change even when the device is off.

※The setting status will end when more than 15 seconds passes without an operation. If that happens, please start again from ①.

■Measuring Temperature

●Measuring infrared temperature

- ①Temperature can be measured by pressing the ON/Measure (ON/測定) button. Each time the ON/Measure (ON/測定) button is pressed the latest value will be displayed.

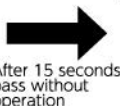
※The measurement distance and the measurement range diameter are 1:1. Please refer to the ■Measurement Distance and Range section and check that the object to be measured is greater than the measurement range diameter.

●Measuring room temperature

- ①If there is no operation for 15 seconds after measuring infrared temperature, the device will switch to display room temperature.



Infrared temperature display



After 15 seconds
pass without
operation



Room temperature display

●Measuring minimum/maximum temperature

- ①Press the ON/Measure (ON/測定) button to go to the Start Screen.
②From the Start Screen, press the Mode (モード) button once (MIN will blink) or twice (MAX will blink) and the device will change to the Minimum or Maximum Temperature Measurement Mode.



Minimum Temperature
Measurement Mode



Maximum Temperature
Measurement Mode

- ③The infrared temperature's minimum or maximum temperature will be displayed while the ON/Measure (ON/測定) button continues to be pressed.

※The measurement will stop when more than 15 seconds pass between operations ① and ②. If that happens, please start again from ①.

●Continuous infrared temperature measurement

- ①Press the ON/Measure (ON/測定) button to go to the Start Screen.
②From the Start Screen press the Mode (モード) button 3 times and the device will go into Continuous Infrared Temperature Measurement Mode (LOCK will blink).

- ③During consecutive measurement, the device will continue to measure infrared temperature until either 60 minutes pass or the ON/Measure (ON/測定) button is pressed.



■ Stopwatch Mode

- ① Press the ON/Measure (ON/測定) button to go to the Start Screen.
- ② From the Start Screen press the Mode (モード) button 4 times and the device will go into Stopwatch Mode (the (☺) icon will blink).
- ③ Each time the ON/Measure (ON/測定) button is pressed, the device will alternate between starting and stopping the time measurement.
- ④ Pressing the Mode (モード) button will change it to zero.
- ⑤ Press the Mode (モード) button while in the state of ④ above will return to the Start Screen.

※ The Stopwatch Mode will end if there is no operation for 1 minute. If that happens, please start again from ①.



Without decimal point
1:28:75

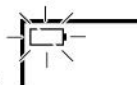


With decimal point
1:28:47.50

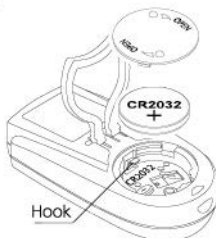
■ Changing the battery

The thermometer will not work when the battery is low. We recommend immediately replacing with a new lithium battery (CR2032). When changing the battery, please check that the device is displaying the room temperature.

※ Changing the battery when other information is displayed could lead to breakdown or malfunction. If the device seems to have some breakdown or malfunction, turn the device off and on again.



Insert something thin like a toothpick into the depression shown inside the circle (○) and pry out the battery.



When closing the cover, rotate until you feel it click into place.

The battery should be inserted with the plus ("+") sign facing upwards.

Insert the battery so that it is caught by the hook as depicted in the right diagram.

■ Troubleshooting



Outside measurement range (higher than 220°C)
Measure a temperature cooler than 220°C.



Outside measurement range (lower than -55°C)
Measure a temperature that is warmer than -55°C.



Rapid change in temperature
Measure after the device has sufficiently adjusted to the ambient temperature.



Outside operating temperature (lower than 0°C or greater than 50°C)
Measure after the device has sufficiently adjusted to be within the operating temperature range.

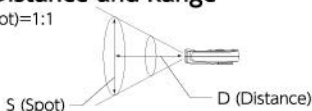


Errors other than the above
After turning the device off, remove the battery and reinsert it after 1 minute, then turn the device on again.

The thermometer requires at least 30 minutes to adjust to the ambient temperature. For all other error messages, it is necessary to reset the thermometer. To reset it, turn the device off, remove the battery and wait for at least 1 minute, then reinsert the battery and turn on. Please contact us if the error message remains.

■ Measuring Distance and Range

D (Distance):S (Spot)=1:1



Example: 10cm distance to the object being measured → 10cm spot
※Measuring range minimum diameter:8mm

■ Specifications

Accuracy	±2% or ±2°C (higher value)
Measuring Rang	-55~220°C
Resolution	-9.9~199.9°C:0.1°C Other values:1°C
Sampling Interval	1 second
Operating Temperature	0~50°C
Emissivity	Adjustable 0.05~1 (default as 0.95)
Auto Power Off	15 seconds after stopped operation (when clock function has not been set)
Battery Life	40 hours (continuous use)
Power Source	1x Lithium battery CR2032 (Battery included is for trial use only and may not last as long)
Body Size	68×37×18mm
Weight	31g(including battery)
Material	Body: ABS resin

Caution

- Do not use the thermometer as a clinical thermometer.
- The device is not resistant against water. Do not use in an area where it could get wet, as this could damage it.
- Do not disassemble or alter the device, as this may lead to malfunctioning.
- Do not drop or subject to strong impact as this may cause the device to operate incorrectly.
- Dust and grime on the infrared lens adversely affect the accuracy, so be sure to remove any dust that may adhere to the lens. Avoid use in a dusty environment.
- Steam, dust, and smoke can affect the accuracy of the temperature measurement.
- Remove the battery before storing the device when not being used for a long period.
- This is a non-contact infrared thermometer. Do not allow it to touch the object being measured. Contact with an object at a very high temperature may cause a mistaken measurement to be displayed or cause the device to break down.
- See the ■ Specifications section for details about the accuracy of this device. For temperature control that requires greater accuracy, please purchase a precision thermometer.
- Measurement differences may occur depending on factors such as material, luster, thickness, color and emissivity of the object.
- When using the device in an environment with electronic noise, the display could become unstable or there may be significant errors. Also, do not bring the thermometer close to electrified objects.
- Do not wash or wipe the device with alcohol, thinner, or any other organic solvent. To wipe dirt away, soak a gauze or similar fabric with neutral detergent in lukewarm water and wipe only after thoroughly wringing out the cloth. Do not wipe the infrared lens directly with the gauze.
- A rapid change in the ambient temperature may affect the accuracy. Use the device after it has sufficiently adjusted to the ambient temperature. In the case that the ambient temperature changes by more than 10°C, it will take the device more than 30 minutes to adjust to it.
- We shall not be liable for any consequential, incidental, or indirect damages such as losses and lost profits to the customer as well as a third party resulting from the operation of this product, regardless of whether or not they were foreseeable or the possibility was reasonably foreseeable. However, this shall not apply in the case where there is willful or gross negligence or when the customer is a consumer according to the Consumer Contract Act. In the event that we are liable for the use of this product, we shall be liable for damages limited to an amount equal to the price of the product.