



Work Together

Item Code 73038

Infrared Thermometer F

Instruction Manual

Introduction

Thank you for purchasing the Shinwa Infrared Thermometer F. Before using the device, 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.

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.
- Take care to thoroughly remove any dust or dirt, etc. adhering to the lens (the part that detects infrared rays) as this could cause measurement accuracy to decrease.
- Note that 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. 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.
- Keep the lens (the part that detects infrared rays) clean. To clean it, wipe with a soft cloth or cotton fabric dampened in water or alcohol for medicinal use (ethyl alcohol). Measurements taken while the device is wet could cause malfunction, so make sure that it is dry before using.
- 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.
- Do not use or store this device outside of its operating temperature.
- 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.

■ Before Using

Pull out the insulation tape that is sandwiched between the battery cover on the back of the device and turn on the power by pressing the ON/Measure(ON/測定) button.

■ Part Names

Body

Upper



Infrared lens (detects infrared rays)

Detects the infrared rays emitted by the object being measured.

Front



LCD panel

Displays the temperature measured.

ON/Measure (ON/測定) button

Measures temperature.

Hole for strap

Prevents dropping and is convenient for carrying.

Back



Battery cover

1x lithium battery CR2032

(Battery included is for trial use only and may not last as long.)

LCD panel

Temperature display

Displays the temperature measured. Measures up to 1 decimal place.



Temperature unit icon

This product displays temperature in °C (degrees Celsius).

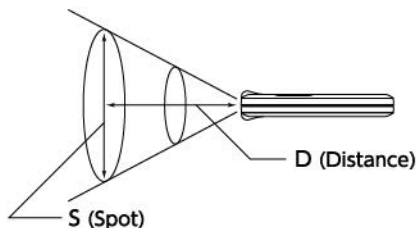
Battery icon

Displays the amount of battery power remaining.

■ Instructions

- ① Check to make sure that the lens (the part that detects infrared rays) is not scratched or dirty.
- ② Point the lens to the object and press the ON/Measure (ON/測定) button and read the temperature display. Each time you press the ON/Measure(ON/測定) button, the device will display the latest measured value.
*The device will automatically turn off after approximately 15 seconds pass without operation.

■ Measurement Distance and Range



[Distance coefficient] D (Distance) : S (Spot) = 1 : 1

Example: 10 cm distance to the object being measured

→ 10 cm spot

*Measuring range minimum diameter: 7 mm

■ About This Device and Emissivity

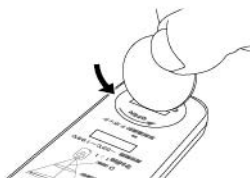
- This device is a non-contact thermometer which reads the infrared rays emitted from an object, converts them to temperature, and displays them on the LCD panel.
- The emissivity of infrared rays will differ depending on the object. To take an accurate measurement of temperature, it is necessary to match this device with the emissivity of the object.
- The emissivity of this device is fixed at 0.95. However, it is still possible to measure an object with emissivity other than 0.95 by affixing black-body tape or coating the object with a black-body paint.
- 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.

■ Changing the Battery

- The thermometer will not work when the battery is low. If the battery icon starts flashing, we recommend immediately replacing with a new lithium battery (CR2032).



Make sure the device is OFF before changing the battery.



- ① Turn the battery lid in the OPEN direction with a coin or similar object and remove it.

*Using small diameter coins or screwdrivers could damage the battery cover.



- ② Insert a toothpick or similar object into the recess indicated by the ○ illustrated to the left, pry up the battery and remove it.

- ③ Insert a new battery with the + side facing up so that it catches under the overhanging portion.



- ④ Replace the battery cover, turn it in the opposite direction of OPEN, and tighten it securely.

Troubleshooting

H ₁	Outside measurement range (higher than 199°C)
	Measure a temperature cooler than 199°C.
L ₀	Outside measurement range (lower than -33°C)
	Measure a temperature warmer than -33°C.
Er 2	Rapid change in temperature
	Measure after the device has adjusted to the ambient temperature.

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.

Specifications

Accuracy	0°C or more: $\pm 2.5^{\circ}\text{C}$ or $\pm 2.5^{\circ}\text{C}$ (higher value) -33 - 0°C: $\pm (-2.5^{\circ}\text{C} + (\text{displayed value} \times 0.05))^{\circ}\text{C}$
Measuring Range	-33 - 199°C
Resolution	0.5°C
Measuring Interval	1 sec
Operating Temperature	0 - 50°C
Emissivity	0.95 (Fixed)
Auto Power Off	15 seconds after stopped operation
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	91 × 36 × 15 mm
Weight	31 g (with battery)
Material	Body: ABS resin