SPECIFICATION

Infrared

Measurement Range: -20°C to 320°C (-4°F to 608°F)
Resolution: 0.1°C (0.1°F)
Accuracy:

	Range	Accuracy*
Celsius	-20°C to 0°C	± (2.0% of reading + 2°C)
	0°C to 200°C	± (2.0% of reading + 3°C)
	200°C to 320°C	± (2.5% of reading + 2°C)
Fahrenheit	-4°F to 32°F	± (2.0% of reading + 3.6°F)
	32°F to 392°F	± (2.0% of reading + 5.4°F)
	392°F to 608°F	± (2.5% of reading + 3.6°F)

* Accuracy specification assumes that the ambient operating temperature is 18°C to 28°C (64°F - 82°F) and the operating relative humidity is less than 80%.

Response Time: < 1 sec
Spectral Response: 7.5μm to 13.5μm
Emissivity: 0.95
Distance to Spot Ratio: 6 : 1

Probe

Measurement Range: -20°C to 250°C (-4°F to 482°F)
Resolution: 0.1°C (0.1°F)
Accuracy:

	Range	Accuracy*
Celsius	-20°C to 0°C	± (2.0% of reading + 1.5°C)
	0°C to 100°C	± (1.0% of reading + 2°C)
	100°C to 200°C	± (2.0% of reading + 1.5°C)
	200°C to 250°C	± (3.0% of reading + 1°C)
Fahrenheit	-4°F to 32°F	± (2.0% of reading + 2.7°F)
	32°F to 212°F	± (1.0% of reading + 3.6°F)
	212°F to 392°F	± (2.0% of reading + 2.7°F)
	392°F to 482°F	± (3.0% of reading + 1.8°F)

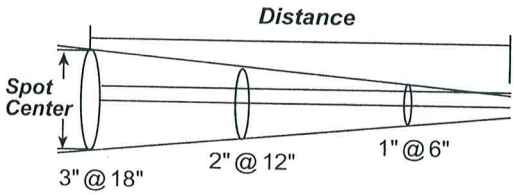
* Accuracy specification assumes that the ambient operating temperature is 18°C to 28°C (64°F - 82°F) and the operating relative humidity is less than 80%.

Other

Overrange Indication: If the measured temperature exceeds the upper limit of measurement range, " **Hi** " will appear on the corresponding display. If the measured temperature is lower than the lower limit of measurement range, " **Lo** " will appear on the corresponding display.
Operating Environment:
Temperature: 0°C to 40°C
Relative Humidity: 10% to 95% RH
noncondensing @ up to 30°C
Storage Temperature: -20°C to 50°C
Weight: about 230g (including battery)
Size: 19 x 11 x 5.2cm
Battery: 9V battery, 6F22 or equivalent, 1 piece

FIELD OF VIEW

As the distance (D) from the object being measured increases, the spot size (S) of the area measured by the thermometer becomes larger. This relationship between distance and spot size is normally expressed as the distance to spot, or D:S ratio, which is shown in the following figure. At a distance of 12 inches, the spot size would be 2 inch in diameter. The thermometer will display the average temperature across the spot area.



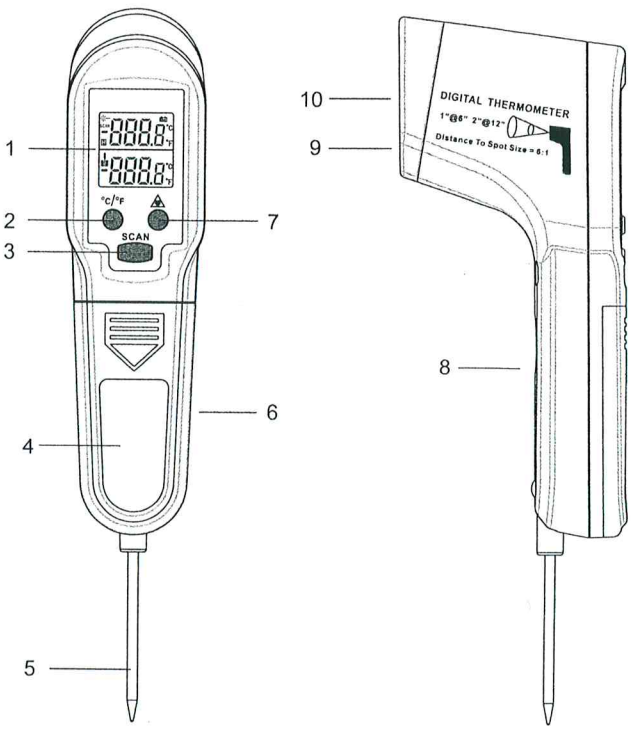
Distance to Spot size = 6 : 1

Note:

Make sure that the object to be measured is larger than the thermometer's spot size. The smaller the object, the closer you should be to it.

When accuracy is critical, make sure that the object is at least twice as large as the spot size.

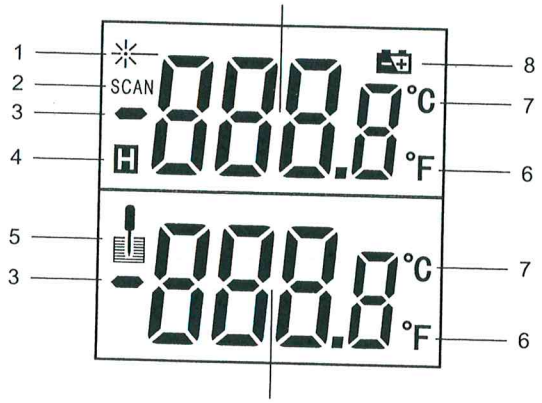
STRUCTURE



1. LCD Display
2. " °C/°F " Button
3. " **SCAN** " Button
4. Battery Cover
5. Probe
6. Handle
7. " ⚠ " Button
8. Probe Storage
9. Laser Pointer
10. Infrared Sensor

LCD INSTRUCTION

The Upper Display



The Lower Display

1. ✳— ------ Laser function indicator which appears when the laser function is enabled. When this indicator appears, the laser pointer will emit laser beam while you press the " **SCAN** " button.
2. SCAN ------ Infrared measurement indicator which appears when the thermometer is making infrared temperature measurement. The reading is shown on the upper display.
3. ▬ -------- Negative sign
4. H -------- Data hold indicator which appears to indicate that the

infrared measurement reading (on the upper display) is being locked.

5. 🌡 ----------Probe measurement indicator which appears to indicate that the probe mode is active and that the thermometer is making probe temperature measurement. The reading is shown on the lower display.
6. °F ------- Fahrenheit temperature unit
7. °C ------- Celsius temperature unit
8. 🔋 ------ Low battery indicator. Replace the battery immediately when this low battery indicator appears.

OPERATING INSTRUCTION

Infrared Mode

Tip: Before you can make infrared temperature measurement, you must store the probe in the probe storage properly.

1. Hold the handle and point the infrared sensor to the object to be measured. Press and hold down the " **SCAN** " button to turn on the thermometer and start measurement.
   The reading is shown on the upper display and changes with the surface temperature of the target. To stop measuring, release the " **SCAN** " button. " H " appears on the display indicating that the last measurement reading is locked.

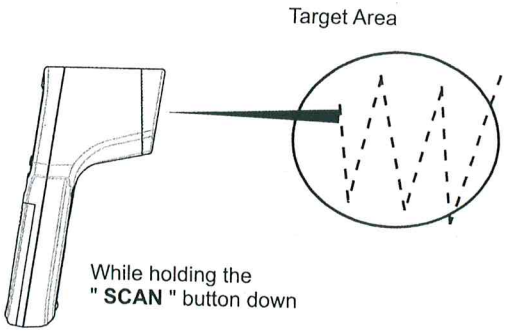
Note: Each time you press the " **SCAN** " button, you must press it for at least 1 sec.

2. To enable or disable the laser function, press the " ▲ " button. When the laser function is enabled, " ✳— " will appear on the display.
3. When the thermometer is making infrared temperature measurement, " **SCAN** " will appear on the display. After the laser function is enabled, the thermometer will emit a laser beam when you press the " **SCAN** " button.
4. Press the " °C/°F " button to switch between Farenheit reading and Celsius reading.
5. In infrared mode, the thermometer will turn off automatically if you have not operated it for about 30 secs.

Note:

1. The infrared temperature measurements are used for screening and measuring surface temperatures only. To measure internal temperature, use the probe mode.
2. Make sure that the target surface is larger than the thermometer's spot size. The smaller the target surface, the closer you should be to it (see the " **FIELD OF VIEW** " section).
   When accuracy is critical, make sure the target is at least twice as large as the spot size.
3. The thermometer can not measure through transparent surfaces such as glass. it will measure the surface temperature of the glass instead.
4. Steam, dust, smoke, etc., can prevent accurate measurement by interfering with the energy emitted from the target.
5. To save battery power, it is recommended to disable the laser function when you measure near object.

6. Most organic materials and painted or oxidized surfaces have an emissivity of 0.95. This thermometer is preset at 0.95. Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape or flat black paint. Measure the tape or painted surface when the area has reached the same temperature as the material underneath.
7. To find a hot or cold spot, aim the thermometer outside the desired area. Then, slowly scan across the area with an up and down motion until you locate the hot or cold spot.



Probe Mode

1. To turn on the thermometer, press the " **SCAN** " button and then release it.
2. Extend the probe, " 🌡 " will appear on the screen to indicate that the thermometer is in probe mode. In this mode, the infrared temperature measurement function is disabled.

3. Insert the probe about 15mm to 45mm into the target. Wait about 2 minutes and then read the reading on the lower display.

Note:

1. Reading on the lower display can not be locked.
2. When in probe mode, the automatic power-off is disabled. To turn off the thermometer, store the probe in the probe storage properly to exit probe mode, the thermometer will turn off automatically about 30 secs later.
3. The probe must be sterilized before and between measurements of food samples to avoid cross contamination.

MAINTENANCE

To Clean the Lens:

Blow off loose particles using clean compressed air. Carefully wipe the surface with a moist cotton swab. The swab may be moistened with water.

To Clean the Case:

Use soap and water on a damp soft cloth. Don't use abrasive or solvent.

Note:

Do not immerse the thermometer in water, and do not let any liquid enter the case; otherwise the thermometer may be damaged.

To Clean the Probe:

Use soapy water to clean the probe and then rinse it with clean water.

To sterilize the probe, you can use boiling water or alcohol, remember to rinse the probe thoroughly with clean water after using alcohol.

NOTE

1. This manual is subject to change without notice.
2. Our company will not take the other responsibilities for any loss.
3. The contents of this manual can not be used as the reason to use the thermometer for any special application.

DISPOSAL OF THIS ARTICLE

Dear Customer,
If you at some point intend to dispose of this article, then please keep in mind that many of its components consist of valuable materials, which can be recycled.
Please do not discharge it in the garbage bin, but check with your local council for recycling facilities in your area.