TIP THERMOMETER TM-100

OPERATION MANUAL

Thank you for buying *goot* Tip Thermometer TM-100. Read this Owner's Operation Manual before using your tip thermometer.

SAFETY MARK DEFINITIONS

In this manual, the following safety marks are used.

CAUTION — **Careless handling may result in injury to yourself or to others, physical damage, or a system failure of this device.**

NOTE — A note or word of advice.

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KEEP THIS MANUAL FOR FUTURE REFERENCE

TABLE OF CONTENTS

1. SPECIFICATIONS

UNIT

MODEL	TM-100
Power Supply	AA battery LR6 x 4pcs: 6V
Dimension	83(W) × 140(H) × 38(D)mm
Weight	150g (w/o battery)
Temperature Resolutions	1°C
Ranges	w/sensor (**TM-100S**): 0-550°C(32-932°F) w/optional probe (**TM-100SP**): 0-700°C(32-1292°F)
Accuracy	± 0.5% of the full scale (w/o sensor error)
Display	LED indication
Operating Environment	0-50°C, 20-85%RH (no condensation)

***Over 1000°F, temperature is indicated by F-1 and the last three digits of degrees °F.**

SENSOR

Model	TM-100S
Sensor Type	Type K (CA type)
Size	9(W) × 45(H) × 3(D)mm
Weight	0.8g

CALIBRATION

Accuracy assured for 1 year from the day of purchase. After 1 year we also offer calibration for a fee. Please contact your nearest distributor.

CAUTION

1. **The measuring tip is very hot. Handle with care. Careless handling may result in fire or personal injury.**
2. **Be sure not to heat the plastic case such as by contact with the hot tip, except to the sensor, or by blowing warm air onto the body. Excess heat will melt or damage the case.**
3. **Do not open the device. Sensitive parts might be damaged.**
4. **The LED can flash even when power is off. This is not a system error. This is an effect of static electricity.**
5. **Avoid impacts to prevent damage to, or deterioration of, the product during transportation. Be especially careful to avoid deformation or breakage from dropping.**

The sensor and the batteries are consumable items.

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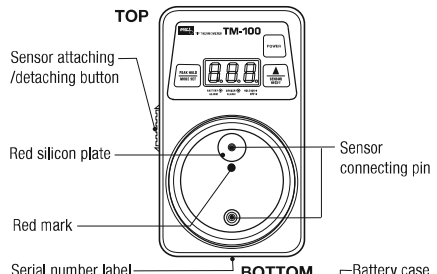
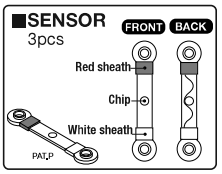
2. PACKAGE CONTENTS / NAMES OF PARTS

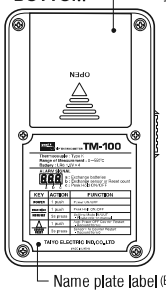
■UNIT ⓘ Protective clear seals on the key panel & silver plate.



■SENSOR 3pcs

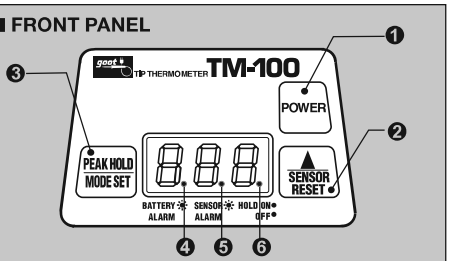


- ■ AA battery LR6 1.5V 4pcs
- ■ Instruction manual (Japanese/English, English/Chinese)
- ■ User registration card / Warranty card (Japan only)
- ■ Name plate label (Chinese)



⚠ The enclosed batteries are for testing only.

■ FRONT PANEL

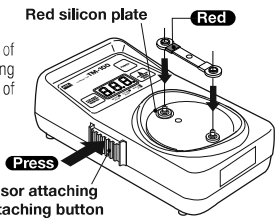


❶ Power ❷ Sensor Reset and Setting ❸ Peak Hold / Mode
❹ Battery Alarm Lamp (Flash) ❺ Sensor-life Alarm Lamp (Flash)
❻ Hold Lamp (light up)

3. HOW TO ATTACH / DETACH THE SENSOR

HOW TO ATTACH

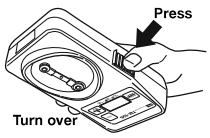
1. Attach the red sheath side of the sensor to the connecting pin on the red silicon plate of the device.



2. Press the attaching/detaching button on the left. The connecting pin & the red silicon plate will slightly move toward the opposite side. Then attach the white sheath side of the sensor to the other connecting pin of the device.

HOW TO DETACH THE SENSOR

Hold the device firmly and turn it upside-down. Press the left button several times, then the sensor will detach.



CAUTION **Attach with correct orientation, and right side up. Incorrect attaching will cause wrong temperature data. Put the sensor on the connector pin firmly. To avoid damaging the sensor, do not bend or deform it.**

NOTE When using the Sensor-life Counter function (described later), reset the sensor-damage value in measuring mode after replacing with a new sensor.

4. HOW TO MEASURE THE TEMPERATURE

1. Press **POWER** to display the set-unit 88.8 Celsius or 888 Fahrenheit. When the room temperature appears the device is ready for measurement. (measuring mode)
2. Put the tip to the sensor chip, applying fresh solder to both parts. Please read when the displayed temperature is stable.

CAUTION **Too much pressure to the sensor risks damage. Apply the tip on the chip gently.**

NOTE  Be sure to attach the sensor properly before starting measurement. When the alarm (shown left) appears, it means that the sensor is not attached properly or measured tip's temperature is out of range. Check for a break in the sensor, or check the settings of the device.

NOTE Flux residue on the sensor chip, or a stained tip will reduce the accuracy of the measuring sensor. Clean them regularly with **CP series** (solder wick). Too little solder on the chip may result in wrong measuring data. Use the proper solder amount for your tip size.

NOTE The sensor reception will become worse because of the degradation of the chip after repeated use. Replace the degraded sensor with a new one to ensure accurate measuring. Please use the below Sensor-Alarm Function for replacement timing.

5. FUNCTION AND SETTING

Please refer to [7. OPERATIONS] for each function.

A. Measuring Mode

After power-on, always start with the measuring mode. Measuring mode has the following functions. (Digit change/setting can be configured in setting mode.)

Peak-Hold Function (factory default setting: **OFF**)
In measuring mode, press the **PEAK HOLD/MODE SET❸** button, then the HOLD ON lamp ❻will light up. Retains display of peak temperature. Press the **PEAK HOLD/MODE SET❸**button again to unset the peak hold function.

Automatic Power-Off function (factory default setting: **60 seconds**)
The device will power off automatically when 100°C or lower is continuously measured for more than the preset time. The setting time for the Auto Power-Off can be changed in units of 30 seconds. (MAX 300seconds) When the displayed temperature is under 100°C in measuring mode, the count time will be reset as the result of pressing **▲SENSOR RESET❷**button within the preset time. And extend the time until Auto Power-Off.

Sensor-Life Counter Alarm (PAT.P) (factory default setting: **200** times)
Weigh and integrate the sensor damage by our own calculational procedure by counting in units of 3-seconds' use at temperature 350°C(662°F). The alarm lamp❺ will flash when the counter exceeds the set number of counts, to indicate the approx. replacement-timing of the sensor. To turn off this function, set the preset value at 0.

To reset (return to 0) the integrated value of the damage, press and hold the **▲SENSOR RESET❷** for over 3 seconds in measuring mode.

Battery Alarm
The battery lamp will flash when the battery voltage drops lower than specified value to indicate the approx. replacement-timing of the battery.

NOTE The sensor life "200 times when counted in units of 3-seconds' use at temperature 350°C(662°F)." is just a tentative indication. The actual sensor-life can be changed by your operating conditions. When replacing the sensor, reset the damaged value. Figure out the sensor life and change its set value for effective use.

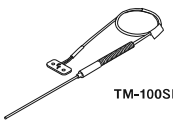
B. Setting Mode

To enter setting mode, press and hold the **PEAK HOLD/MODE SET❸** button for over 3 seconds in measuring mode. In setting mode, every pressing of the **PEAK HOLD/MODE SET❸** button will shift the setting function. To change the setting value, press the **▲SENSOR RESET❷**button.To return to measuring mode, press and hold the **PEAK HOLD/MODE SET❸** button for over 3 seconds in setting mode.

NOTE To turn off the device, return to measuring mode. In setting mode, the power off (& Auto Power-Off) function does not work.

6. REPLACEMENT PARTS / OPTION

- **Sensor** (3pcs) **TM-100S**
- **Sensor Probe** (for solder pot) **TM-100SP**



7. OPERATIONS

A. Measuring Mode

After power-on, always start with the measuring mode.

PEAK HOLD ON/OFF	Extension of Automatic Power-Off time	Sensor Damage Reset (Return to 0)
Press the PEAK HOLD/MODE SET **PEAK HOLD/MODE SET**	Press the ▲SENSOR RESET **SENSOR RESET**	Press and hold the ▲SENSOR RESET **SENSOR RESET** over 3 seconds.

B. Setting Mode

PEAK HOLD/MODE SET To switch between setting/measuring mode, press and hold **PEAK HOLD/MODE SET** for over 3 seconds.

Key Operation	Turn	Display	Function & Range
Shift Press the PEAK HOLD/MODE SET	↓	8.8.8.	**Set the time** (seconds) **until Auto-Power OFF.** Ranges: 0-300 (in units of 30seconds) Default setting: 60s. Turns off at 0.
	↓	8.8.8	**Set the temperature display in Celsius (°C) or Fahrenheit (°F).** The setting °C or °F Lights up. Default setting: °C.
Setting value change Press the ▲SENSOR RESET	↓	8.8.8.	**Set the sensor-life value.** Ranges: 0-500 (in units of 50 times) Default setting: 200 times. Turns off at 0.
	↓ Return to start	8.8.8	**Display the sensor-damage value.** Resetting displays 0. Default setting 0.