

## High Temp. + Type K/J/R/E/T

# Infrared THERMOMETER

Model : TM-939

FEATURES	
* -20 °C to 650 °C Wide range IR temperature measurement.	* Data hold function for stored the desired value on display.
* Infrared thermometer, non-contact temperature measurement, -20 °C to 650 °C (-4 °F to 1202 °F), precision for none contact temperature measurement.	* Memory function to record the maximum & minimum reading with recall.
* Emissivity adjustment for IR thermometer.	* Build the REL button, useful for relative measurement.
* Laser guide for IR thermometer.	* Sensor select button on the front panel, easy to change different type probe.
* 2 in 1, Infrared thermometer + Thermocouple ( Type K/J/T/E/R ) thermometer.	* RS 232 data output, easy cooperate with computer.
* Thermocouple probe accepts 5 different types : type K, type J, type T, type E, type R.	* Optional data acquisition software for data record.
* Microcomputer circuit with high performance.	* Auto power shut off saves battery life.
* Build in °C & °F select button on the front panel.	* Built-in low battery indicator.
	* Heavy duty & compact housing case with stand.
	* 006P DC 9V battery power supply.

GENERAL SPECIFICATIONS			
Display	51 mm x 32 mm supper large LCD display, 15 mm (0.6") digit size.	Memory Recall	Memorize the Maximum, Minimum reading with recall.
Measurement	1. Infrared thermometer ( Non contact temperature measurement ) 2. Thermocouple probe, type K/J/T/E/R	Offset	For thermocouple thermometer offset
		Adjustment	adjustment by pushing button on front panel.
Functions	°C, °F, Data hold, Memory ( Max., Min. ), Relative measurement, Emissivity adjustment (IR thermometer).	Over Indication	Show " - - - - ".
		Data Output	RS232 PC serial interface.
Resolution	1 degree or 0.1 degree.	Power Supply	Alkaline or heavy duty type, DC 9V battery, 006P, MN1604 ( PP3 ) or equivalent.
Circuit	Exclusive microcomputer circuit, the software build in linearity correction instead the traditional hardware circuit.	Power Consumption	Approx. DC 10 mA ( laser guide off ). Approx. DC 19 mA ( with laser light on ). * Above consumption value is calculated under the function of IR thermometer.
IR Emissivity Adjustment	Range : 0.20 to 1.00. Adjustment by pushing button on front panel.	Operating Temperature	0 to 50 °C (32 to 122 °F).
IR Sensor	Thermocouple pie.	Operating Humidity	Less than 80% RH.
IR Measure Wave Length Region	6 to 12 micro meter.	Weight	220 g/0.48 LB.
IR Distance Factor	D/S ratio : Approx. 7 : 1. * D - Distance, S - Spot.	Dimension	HWD 220 x 68 x 30 mm ( 8.7 x 2.7 x 1.2 inch ).
Laser Guide	Red laser light, less than 1 mW, Meet EN60825	Standard Accessory	Operational manual.....1 PC.
Probe Input Socket	Thermocouple probe : Standard 2 pin thermocouple socket.	Optional accessories & temp. probe	* Temperature probe : TP-01, TP-02A, TP-03, TP-04
Sampling Time	Approx. 1 second.		* Carrying case, Model : CA-06, CA-03.
Hold Function	To freeze the display reading value.		* RS232 cable, Model : UPCB-02
			* Application software, windows version. Model : SW-U801-WIN

MEASURING RANGE/ RESOLUTION							
Type	Resolution	Range	Accuracy	Type	Resolution	Range	Accuracy
Infrared thermometer	1 °C	-20 °C to 650 °C	-20 °C to 400 °C :	Thermocouple type T	0.1 °C	-100.0 to -50.0 °C	± (0.2%+1°C)
	1 °F	-4 °F to 1202 °F	± 3% of reading or ± 3°C (5°F) > 400 °C :		0.1 °C	-49.9 to 400.0 °C	± (0.2%+0.5°C)
Thermocouple type K	0.1 °C	-100.0 to -50.0 °C	± 3% of reading	Thermocouple type E	0.1 °F	-148.0 to -58.0 °F	± (0.2%+1.8°F)
	0.1 °C	-49.9 to 1300.0 °C	± (0.2%+1°C)		0.1 °F	-57.9 to 752.0 °F	± (0.2%+1°F)
	0.1 °C	-49.9 to 1300.0 °C	± (0.2%+0.5°C)		0.1 °C	-100.0 to -50.0 °C	± (0.2%+1.3°C)
	0.1 °F	-148.0 to -58.0 °F	± (0.2%+1.8°F)		0.1 °C	-49.9 to 900.0 °C	± (0.2%+0.8°C)
	0.1 °F	-57.9 to 2372.0 °F	± (0.2%+1°F)		0.1 °F	-148.0 to -58.0 °F	± (0.2%+2.8°F)
Thermocouple type J	0.1 °C	-100.0 to -50.0 °C	± (0.2%+1°C)	Thermocouple type R	0.1 °F	-57.9 to 1652.0 °F	± (0.2%+2°F)
	0.1 °C	-49.9 to 1150.0 °C	± (0.2%+0.5°C)		1 °C	0 to 600 °C	± (1%+5°C)
	0.1 °F	-148.0 to -58.0 °F	± (0.2%+1.8°F)			601 to 1700 °C	± (1.5%+5°C)
	0.1 °F	-57.9 to 2102.0 °F	± (0.2%+1°F)		1 °F	32 to 1112 °F	± (1%+10°F)
						1113 to 3092 °F	± (1.5%+10°F)