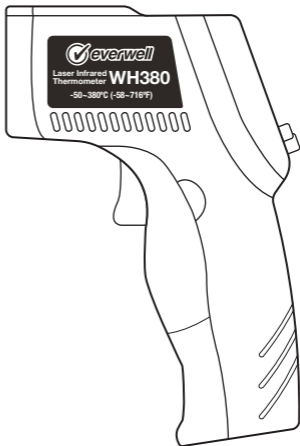




# WH380

Digital Infrared Thermometer

## OPERATOR'S INSTRUCTION MANUAL



### WARNING

**READ AND UNDERSTAND THIS MANUAL  
BEFORE USING THE INSTRUMENT.**

## **A. INTRODUCTION**

This infrared thermometer is used for measuring the temperature of the object's surface, which is applicable for various hot, hazardous or hard-to-reach objects without contact safely and quickly.

This unit consists of optics, temperature sensor signal amplifier, processing circuit and LCD Display. The optics collect the infrared energy emitted by an object and focus it onto the sensor. Then the sensor translates the energy into an electricity signal. This signal will be turned to a digital data which will be shown on the LCD after the signal amplifier and processing circuit.

Functions:

1. Celsius / Fahrenheit switchable
2. Equipped with a laser for precision pointing
3. Temperature hold
4. LCD backlight
5. 7 seconds auto power off
6. Light weight and easy operation

## **B. WARNING & CAUTIONS**

### **1. Warning:**

To avoid the potential situation may cause harm or damage to people, please pay attention to the following items:

- 1) Before you use this unit, check on the plastic housing carefully. If there is any damage, do not use it.
- 2) Do not point laser directly at eye or indirectly off reflective surfaces.
- 3) Do not use this unit in the environment of explosive gas, steam or dust.

### **2. Caution:**

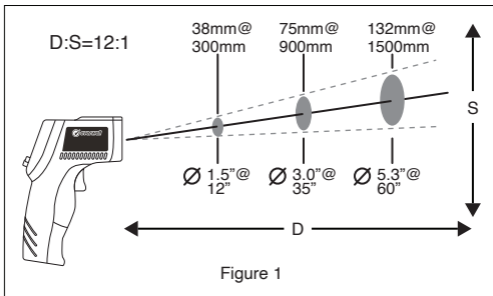
To avoid damage to the unit or the target, please protect from the following situations:

- 1) EMF (electro-magnetic fields) from ARC welders, induction heaters.
- 2) Thermal shock (caused by large or abrupt ambient temperature changes) allows 30 minutes for unit to stabilize before use.
- 3) Do not leave the unit on or near objects of high temperature.

## C. DISTANCE TO SPOT SIZE

1. When taking measurements, pay attention to the distance to spot size. As the distance (D) from the target surface increases, the spot size (S) of the area measured by the unit becomes larger.

The distance to spot size of the unit is 12:1. This unit is equipped with a laser, which is used for aiming accuracy.



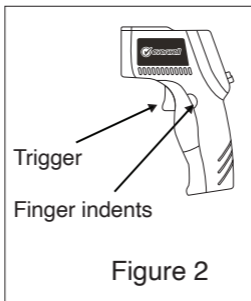
## 2. Field of view:

Make sure the target is larger than the unit's spot size. The smaller the target, is the closer measure distance. When accuracy is critical, make sure the target is at least twice as large as the spot size.

## D. EMISSIVE

Most organic materials and painted or oxidized surfaces have an emissive of 0.95 (pre-set in the unit). Inaccurate readings will result from measuring shiny or polished metal surfaces. To compensate, cover the target surface with masking tape or flat black paint. Measure the tape or painted surface when the tape or painted reach the same temperature as the material underneath.

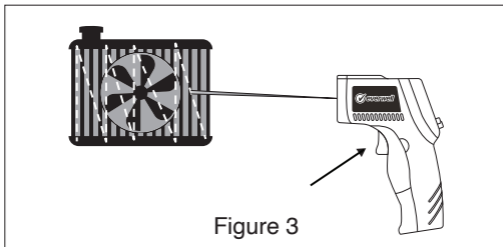
## E. OPERATION



### 1. Operating the unit:

- 1) Open the battery door and insert a 9V battery.
- 2) Press the trigger to turn on the unit.
- 3) Aim at the target surface and press the trigger, then temperature will be shown on the LCD. This unit is equipped with a laser, which is only used for aiming.

## 2. Locating a Hot Spot:

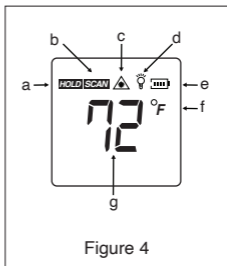


To find a hot spot, aim the thermometer outside of interest, and then scan across with an up and down motion until you locate the hot spot. (Figure 3)

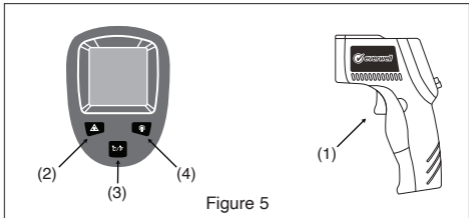
## F. LCD DISPLAY & BUTTONS

### 1. LCD display: Figure 4

- a. Data hold icon
- b. Scanning icon
- c. Laser on icon
- d. Backlight on icon
- e. Battery power icon
- f. Temperature unit
- g. Temperature reading



## 2. Buttons: Figure 5



(1) Trigger: When pressing the trigger, LCD display will read with SCAN icon. Release the trigger, display reading with HOLD icon for 7 seconds (approx). Built-in 7 seconds auto power off function.

(2) Laser on/off button

(3) Celsius / Fahrenheit switch button

(4) Back light on/off button: When backlight is on, any operations will activate the backlight for 7 seconds.

## G. MAINTENANCE

### 1. Lens Cleaning:

Blow off loose particles using clean compressed air. Gently brush remaining debris away with a moist cotton swab. The swab may be moistened with water.

2. Case cleaning: Clean the case with a damp sponge/cloth and mild soap.

### Note:

1) Do not use solvent to clean plastic lens.

2) Do not submerge the unit in water.

## H. SPECIFICATION

Temperature Range	550: -50~550oC (-58~1022oF)
	380: -50~380oC (-58~716oF)
Accuracy: Whichever Is Greater	-50 oC(-58 oF) ~0 oC(32oF): ±3oC(±5oF) 0oC(-32oF) ~550oC(1022oF): ±1.5oC(±2.7oF) or ±1.5%
Resolution	0.1oC or 0.1oF
Repeatability	2% of reading or 2oC
Response Time	500mS, 95% response
Spectral Response	8-14um
Emissivity	0.95 Preset
Distance To Spot Size	12:1
Operating Temperature	0~40oC (32~104oF)
Operating Humidity	10~95%RH non-condensing, Up to 30oC(86oF)
Storage Temperature	-20~60oC (-4~140oF)
Power	9V Alkaline or NiCd battery
Typical Battery Lift (Alkaline)	Non-laser mode: 22hrs; Laser mode: 12hrs
Dimension	153x101x43mm





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