

**SMART  
SENSOR®**

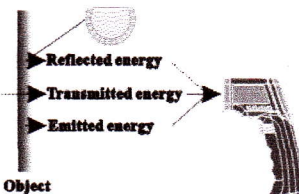
MODEL: AR350

**Non-contact infrared thermometer  
Instruction manual**



**Introduction**

Compact, rugged and easy to use. Just aim and push the button, read current surface temperatures in less than a second. Safely measure surface temperatures of hot, hazardous or hard-to-reach objects without contact.



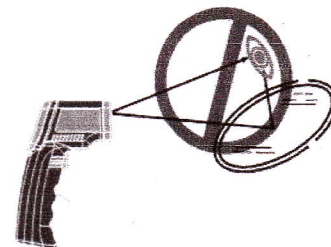
**How it works**

Infrared thermometer measures the surface temperature of an object. The unit's optics sense emitted, reflected, and transmitted energy which is collect and focused onto a detector. The unit's electronics translate the information into a temperature reading which is displayed on the unit. For increased ease and accuracy the laser pointer makes aiming even more precise.

**Cautions**

Infrared thermometer should be protected for the following:  
 --EMF (electro-magnetic fields) from arc welders, induction heaters.  
 --Thermal shock (cause by large or abrupt ambient temperature changes allow 30 minutes for unit to stabilize before use).  
 --Do not leave the unit on or near objects of high temperature.

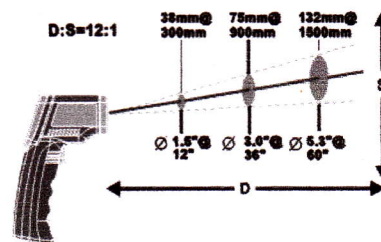
**Warning**



Do not point laser directly at eye or indirectly off reflective surfaces.

1. When take measurement, point thermometer toward the object to be measured and hold the yellow trigger. The object under test should be larger than the spot size calculated by the field of view diagram.

2. Distance & spot size: As the distance from the object increase, the spot size of measuring area becomes larger.



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

4. Emissivity: Most organic materials and painted or oxidized surfaces have an emissivity of 0.95 (pre-set in the unit). 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 tape or painted reach the same temperature as the material underneath.

2. Locating a hot spot: To find a hot spot aim the thermometer outside the area of interest, then scan across with up and down motions until you locate the hot spot. (please turn on the laser to for accurate measuring)

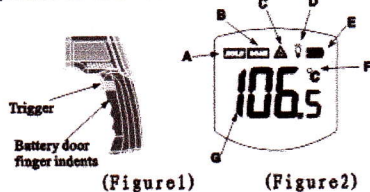
**Maintenance**

- 1) Lens cleaning: Blow off lose particles using clean compressed air. Gently brush remaining debris away with a moist cotton cloth.
- 2) Case cleaning: Clean the case with a damp sponge/cloth and mild soap.

**Note:**

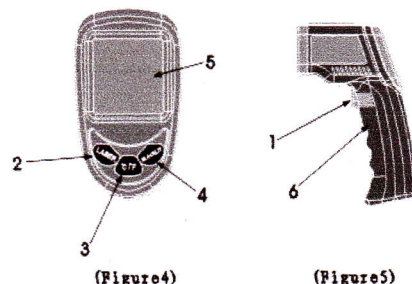
- 1) Do not use solvent to clean lens.
- 2) Do not submerge the unit in water.

**Quick start instruction**



1. Press battery door clip, instal battery correctly. Pull the trigger, LCD display reading & battery icon. Release the trigger and the reading will hold for 7 secretary.

- LCD display:
- A data hold icon
  - B scanning icon
  - C laser on icon
  - D back light on icon
  - E battery power icon
  - F measuring unit
  - G measuring reading



**4. Diagram description**

- (1) Trigger: When pulling the trigger LCD display reading with SCAN icon. Release the trigger, display reading with HOLD icon for 7 sec(approx). Built-in 20 sec auto power off function.
- (2) Laser on/off button
- (3) Celsius / Fahrenheit switch button
- (4) Back light on/off button: When back light turn on, any operations will remain back light for 10 sec.
- (5) LCD
- (6) Battery door: When replace battery door, please using the finger indents to pull open the battery door.

Specifications	
Temperature range	-50 to 350°C (-58 to 662°F)
Accuracy	25°C(77°F) to 350°C(662°F) ±2°C or ±2% 0°C(30°F) to 25°C(77°F) ±2°C or ±2% -60°C(-68°F) to 0°C(30°F) ±3°C or ±2% whichever is greater
Repeatability	1% of reading or 1°C
Response time	500 mSec, 95% response
Spectral response	8-14 um
Emissivity	pre-set 0.95
Ambient operating range	0 to 40°C (32 to 104°F)
Relative humidity	10-95% RH noncondensing, @ upto 30°C (86°F)
Storage temperature	-20 to 60°C (-4 to 140°F) without battery
Weight/Dimensions	130g; 146*80*38mm
Power	9v Alkaline or NiCd battery
Battery life (Alkaline)	Laser Models: 12 hrs
Distance to Spot Size	12:1

