TES Infrared Thermometer

Remote Temperature Measurement
(Non-Contact)

TES-1326S

INSTRUCTION MANUAL

TES1326S
INFRARED THERMOMETER

TES ELECTRICAL ELECTRONIC CORP.

7F, No. 31, Lane 513, Rui Guang Road, Neihu Dist. Taipei.
Taiwan, R. O. C.
Tel : (02) 2799-3660   Fax : 886-2-2799-5099
E-Mail : tes@ms9.hinet.net   http://www.tes.com.tw
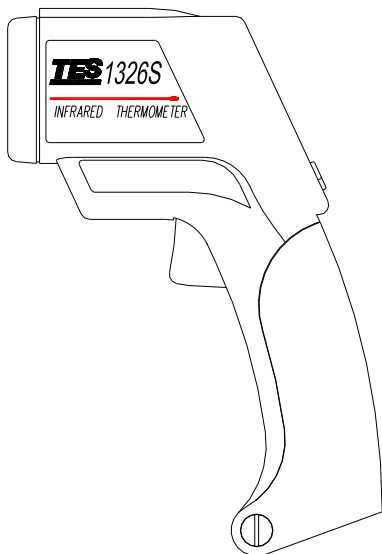
INTRODUCTION

The hand-held Infrared Thermometer is easy to operate. Furthermore, the backlight illumination function is helpful to user who is accustomed to measure in dark places. The Infrared Thermometer will also indicate a Laser symbol on LCD as a reminder and its additional **auto hold reading** & **auto power off** functions are practical to users.

The Infrared Thermometer is a **non-contact** thermometer with laser pointer. It can be used to measure the temperature of objects' surface that is improper to be measured by traditional (contact) thermometer (such as moving object, surface with electricity current or objects that are difficult to reach).

Ⅰ. SAFETY INFORMATION

1. Read the following safety information carefully before attempting to operate or service the meter.

2. Use the meter only as specified in this manual; otherwise, the protection provided by the meter may be impaired.

⚠ Warning

If user pulls the trigger while the 🔆 symbol is showing on LCD, then the meter will radiate the laser. At this moment, user has to avoid the laser radiating to your eyes to prevent any hurts.
- If the measured object with smooth surface and will reflect the laser, pls. prevent the reflected laser to radiate your eyes.
- Pls. don't radiate the laser to inflammable gas to avoid dangers.

3. Precautions:

a). Do not operate the thermometer near large electrical or magnetic fields.

b). Keep the thermometer away from direct sunlight or strong source of light, hot objects (70℃/158℉), high temperature, high humidity, or dust during use and storage.

c). If the thermometer is in an environment where the temperature changes drastically, please wait until the thermometer returns to a stable status before starting the measuring.

d). Condensation may form on the focal lens if the thermometer is moved quickly from a cold to a hot environment. Before taking measurements, please wait for the condensation to dissipate.

e). Do not touch the focal lens.

4. Environmental conditions:

a). Altitude up to 2000 meters.

b). Relative humidity 80% max.

c). Operating Ambient 0 ~ 50℃

5. Maintenance & Clearing:

a). Repairs or servicing that are not covered in this manual and should be performed by qualified personnel only.

b). Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on the instrument.

c). When servicing, use only specified replacement parts.

6. Safety symbols:

$\mathsf{C}\mathsf{E}$ Comply with EMC

Ⅱ. FEATURES

➤ ℃ / ℉ Selectable.

➤ Backlight LCD display.

➤ Laser targeting.

➤ Auto Hold function.

➤ Maximum/Minimum reading recorder function.

➤ Data memory and read function.

➤ Auto-Power off.

Ⅲ. SPECIFICATIONS

3-1 General Information :

Display :	Backlight LCD Display.
Auto power off :	Approx. 15 sec.
Data memory capacity :	50 set. (Direct reading from LCD display)
Over range indication :	"OL" or "-OL".
Low battery indication :	The 🔲 symbol is displayed on LCD when the battery voltage drops below the operating voltage.
Power supply :	Single 9V battery 006P 9V or IEC6F22, or NEDA1604.
Battery life :	Approx. 100 hours (laser pointer and backlight aren't on use) (Alkaline batteries)
Operating temperature and humidity :	0℃ to 50℃ (32℉ to 122℉), below 80%RH.

Storage temperature and humidity:	−10℃ to 60℃ (14℉ to 140℉), below 70%RH.
Dimensions :	172(L)×118(W)×46(H) mm 6.8(L)×4.6(W)×1.8(H) inches.
Weight :	Approx. 220g with battery.
Accessories :	instruction manual, battery.

3-2 Electrical Specifications :

| Measuring range :	-35℃ to 500℃ (-31℉ to 932℉)
Resolution :	0.1℃ , 0.2℉
Accuracy :	± 2% reading or ± 2℃ or ±4℉, whichever is greater.
Temperature coefficient :	0.1 times the applicable accuracy specification per ℃ from 0℃ to 18℃ and 28℃ to 50℃ (32℉ to 64℉ and 82℉ to 122℉).
Responding time :	2.0 times per second.
Spectral Response :	6 ~ 14um.
Field of view :	12:1 ; optics ratio with a 1" min target.
Sighting :	Laser marker 1mw (class 2).
Sensor :	Thermopile.

4

Ⅳ. FRONT PANEL DESCRIPTION
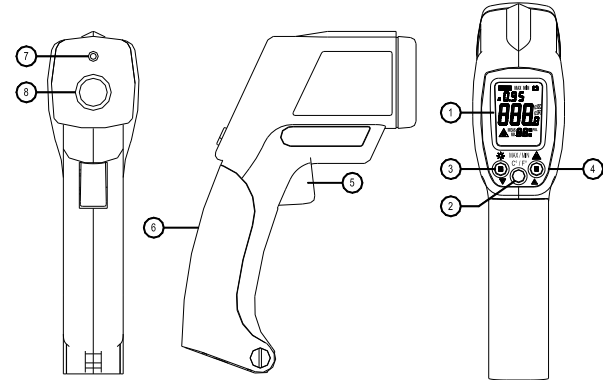
1. Display.

Key	Press one time	Press and hold 3 seconds
2. MAX/MIN ℃/℉	Enter to MAX/MIN recorder mode. MAX→MIN→Current reading (MAX/MIN) ↑‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾	①In MAX/MIN mode will exit this mode. ②In normal mode will change ℃ or ℉ unit.
3. ☼ M ▼	①In normal mode will turn on or off the backlight. ②In Read mode can decrease gradually to select the desired memory reading.	Memory the LCD reading.
4. ☀ R ▲	①In normal mode will turn on or off the laser mark. ②In Read mode can increase gradually to select the desired memory reading.	Read the memory data.

5. Measuring trigger : Trigger for powering on.
　　　　　　　　　　Pull the trigger to turn on the thermometer.

6. Battery cover.

7. Laser aperture.

8. Focal lens.　　　　　　5

Ⅴ. LCD DISPLAY DESCRIPTION
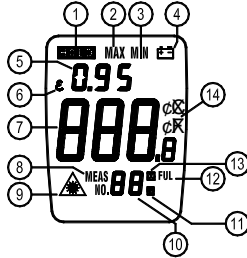
| 1. Hold function	8. Measure indicator
2. Maximum reading	9. Laser indicator
3. Minimum reading	10. Memory and Read address number
4. Low battery mark	11. Read memory data
5. Emissivity value	12. Memory full indicator
6. Emissivity	13. Store data to memory
7. Infrared measuring value	14. Unit " ℃ , ℉ "

Ⅵ. TEMPERATURE MEASUREMENT

1. Measurementing :
Pull the trigger to power on the meter and start measuring. Release the trigger to stop measuring and auto hold the reading. The meter will turn off automatically after 15 seconds.

2. MAX/MIN hold function:
Pull & hold the trigger then press " **MAX/MIN,**℃/℉ " for "1 time" to cycle select maximum (MAX), minimum (MIN) and current reading (MAX/MIN). Press " **MAX/MIN,**℃/℉" for "3 seconds" to exit this mode.
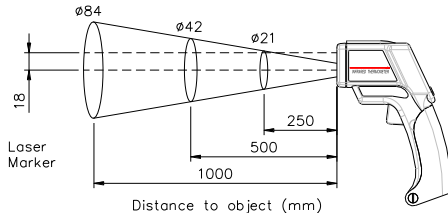
Note:
❑ Laser offset: The laser beam is offset 18mm(0.71in) from the focal lens. Choose a sampling spot that is large enough to include the laser offset.
❑ Surface Temperatures: The thermometer will measure the first surface it detects, even a glass cover, dust or fog. Make sure the object is not obstructed.

3. Selecting ℃/℉ unit :
While powering on the meter, the temperature unit that appears in LCD would be the last unit you measured. If user wants to change the temperature unit, pull trigger to turn on the meter, then "**MAX/MIN,**℃/℉" key for "3 seconds".

4. Memorize / Read logging function (50 readings)
① **To memorize the reading :**
Press " M " key for 3 seconds, stores one set logged reading in memory, LCD will show " M " and memory location numbers (1 to 50).

② **To recall and read the reading :**
a). Press " R " key for "3 seconds" to recall the reading memory data mode. LCD will show " R " and memory location numbers.
b). Press " ▲ " or " ▼ " key to scroll through the logged readings.
c). Press " **MAX/MIN,**℃/℉ " key to exit READ mode.

③ **To clean the memory :**
Under power off status, press and hold M button then pull trigger until " CLR " shows on LCD.

Ⅶ. BATTERY REPLACEMENT

1. As battery power is not sufficient, LCD will display the symbol ⊞. Replace old battery with a new one.

2. Open battery cover then take out the battery from instrument and replace with a new 9-Volt battery. Put back the battery cover.