Infrared Forehead Thermometer

Product Specification

Product model:QY-EWQ-01

Thank you for purchasing our infrared thermometer Please read the instructions before use After reading, please keep it properly for reference at any time.

For emergency use only at the epidemic situation.

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1.Description

This product is a professional infrared forehead thermometer to measure the temperature of the human forehead. Different body parts were measured for different temperatures, because the more exposed the body parts were, the more influenced by the ambient temperature.

2.Safety manual

Please read this manual carefully before use, users should use this product according to the instructions.

The ambient temperature of this product is 16 $^{\circ}$ C \sim 35 $^{\circ}$ C, the optimal temperature is 25 $^{\circ}$ C.

Do not use this product in an environment above 50 ° C or below 0 ° C.

Do not place this product near live objects to avoid electric shock.

Do not use this product in an environment with a relative humidity greater than 93%.

Do not place this product too close to the electromagnetic range. (E.g. radio, mobile phone, etc.).

Please do not expose this product to the sun, or near the stove, and do not touch the water.

Do not bump or drop the product, and do not use it if it is damaged.

Sweat, hair, hat, or other foreign matter on the forehead can affect the accuracy of the measurement. Please make sure the measurement distance is within 3-5 cm.

When forehead sweating or other reasons cause the forehead temperature does not reflect the body temperature normally, please measure from the earlobe.

When cleaning is required, wipe the surface of the meter lightly with alcohol.

Contact the distributor if there is any problem with the product and do not repair the product by yourself.

3.Feature

1) Measure body temperature with high accuracy.

- 2) Optional for $^{\circ}C$ or $^{\circ}F$
- 3) Buzzer function
- 4) LCD display with backlight

5) Automatic range selection; resolution is $0.1 \circ C (0.1 \circ F)$

6) The latest 20 measurement data can be memorized and stored (press the up and down arrow keys to check that the latest 20 measurement data have been stored)

7) Automatic saving data and shutdown

4.Other instructions

1) This infrared forehead thermometer is a professional thermometer for measuring the forehead of a human body. It is widely used for the householder, unable to replace a doctor's diagnosis.

2) This manual is applicable to QY-EWQ-01, QY-EWQ-02, QY-EWQ-03 models.

5. Precautions before use:

1) Make sure follow the below steps before using:

Step 1: Use a traditional thermometer to measure, assuming got the value is 7.5 ° C (99.5 ° F)

Step 2: Then, use our infrared forehead thermometer to measure the same person, the distance is 3-5 cm between the thermometer and the forehead (be careful to remove any obstacles that may affect the measurement, such as hair, sweat, etc.), if you get the same temperature $37.5 \degree C$ (99.5 ° F), the infrared forehead thermometer is set up and ready for use. If you get a low reading, such as $36.4 \degree C$ (97.5 ° F, a difference of $1.1 \degree C$ (2.0 ° F), you need to correct the infrared forehead thermometer, plus the difference. Calibration steps "Note! Non-professional not operational!" After 5S, press and hold the + key and the function key to power on. After hearing 2 beeps, press the-key to enter the calibration mode. Take the 35-degree standard body and the 40-degree standard body in sequence. The calibration is completed. Then switch to material temperature mode for temperature verification.

Step 3: Measure again to check.

2) Power on self test

 \triangle Aim at the target and press the measurement switch, the LCD will display all the numbers and characters of the self-test.

And a self-test screen appears, as shown in Figure 1. This picture is displayed for about 1 second.



Picture 1:

 \triangle After the self-test is completed, a beep will be heard, indicating that the power-on self-test has been completed, and the target temperature will be displayed on the LCD.

6.Product structure

The product mainly consists of an infrared sensor, a processor, a liquid crystal display (LCD), buttons, a plastic case, a battery, and a circuit board.

1 . Switch model

- 2 . Liquid crystal (LCD) display
- 3 . Infrared sensor
- 4 . Handle
- 5 . Up + button
- 0 . Down-button
- ⑦ . Set key

7.Description of LCD display

(8) . The battery cover

Picture 2:

① Human body temperature mode

2 .Switch $\degree C$ or $\degree F$

③. Digital reading

④. Memory

- ⑤. Number of data logging / Standard model setting up
- 6. Battery indication
- ⑦. Prompt sound
- (a). Surface mode

8.Measure type and contraindications

8.1 Measure type

The heat radiation from the forehead can be well measured.

8.2 Contraindications

1) Conditions such as birth defects, congenital malformations, septic shock, and circulatory failure that may seriously affect frontal temperature measurement;

2) suffering from mental disorders;

3) Suffering from serious heart, liver, kidney and other diseases;

4) Children have a defective immune system and severe fever who are from the 100 days newborn to

the age of three.

9.Technical Index

9.1Measuring range

> 1111-042 01111-8 1411-80	
Measured temperature range	33.0°C∼43.0°C
Proper measuring distance range	3 to 5 cm (1.18 to 1.97 inches) The best measurement is 3
	cm
Automatic shut-down	13s

9.2 Measurement accuracy

33∼43°C (91.4∼109.4°F)	±0.2°C (32.4°F)
<33°C (91.4°F)	±2.0°C (35.6°F)
>43°C (109.4°F)	±2.0°C (35.6°F)





9.3 Basic parameters	
The exact digits which displayed	0.1°C (0.1°F)
Storage temperature	$-20^{\circ}\text{C} \sim 55^{\circ}\text{C} (-4^{\circ}\text{F} \sim 131^{\circ}\text{F})$
Operation ambient temperature	16° C ~35 $^{\circ}$ C (60.8 $^{\circ}$ F ~95.0 $^{\circ}$ F) The best temperature is 25 $^{\circ}$ C
Relative humidity	≤85%RH
Power supply	DC 3V (2 AAA batteries)
Dimensions	154*87.7*44MM
Net weight:	0.11kg
Anti-shock type	Internal power supply equipment
Protection against electric shock	BF type application part
Degree of protection against incoming fluid	Not applicable
Operating mode	Continue to operate
Production date	See product nameplate for details
Maximum permissible error	 ±0.2°C within the range of 33°C to 43°C ±0.2°C outside the range of 33°C-43°C
Clinical accuracy	 Clinical deviation: ≤±0.3 °C Clinical standard deviation: ≤±0.3 °C
Clinical repeatability	≤±0.3℃

9.4 Product life

- 2 years (excluding battery)
- 9.5 Software release version No.: V1.1
- 9.6 Requirements for work environment, storage and transportation
- 1) Working environment:
 - Ambient temperature: 16 °C \sim 3 °C (60.8°F \sim 95.0°F) The best temperature is 25 °C
 - Relative humidity: ≤85% RH
 - Atmospheric pressure: 70Kpa ~ 106 Kpa
 - Power supply: DC3V (2 AAA batteries)
- 2) Storage and transportation environment:
 - Ambient temperature: $-20 \circ C-55 \circ C (-4 \circ F \sim 131 \circ F);$
 - Relative humidity: <85% RH;
 - No corrosive gas, well ventilated room.
- Transportation requirements are as stipulated in the order contract, but it must be prevented severe impact, vibration and rain and snow splashing during transportation.

3) Outer packaging environment

- Ambient temperature: -20 °C -55 °C
- Relative humidity: <85% RH;
- No corrosive gas, well ventilated room.
- Transportation requirements are as stipulated in the order contract, but it must be prevented from severe impact, vibration and rain and snow splashing during transportation.

10.Operating instructions

10.1 Battery instruction and key description

1. Battery usage instructions (refer to Figure 4):

There is a removable battery cover at the bottom of the handle. Please push here by hand in the direction indicated

Picture 4:



Battery installation and replacement:

1) After the battery cover is opened, place the battery in the direction of the positive and negative electrodes, and pay attention to the direction of the positive and negative electrodes.

2) Please replace the new battery while low battery alarm, press (Figure 4) to open the battery compartment cover (see product structure (9), pay attention to the positive and negative polarity when replacing the new battery. Noted that improper placement may damage the products or batteries.

3) If you do not use it for a long time, better to remove the battery to extend the life to prevent damage to the thermometer due to battery leakage.

2. Button description:

1): Calibration mode: After removing the battery, press and hold the + key and the function key to power on lasting 5S. After hearing 2 beeps, press the-key to enter the calibration mode. Take the numbers in sequence, complete the calibration, and then switch to the object temperature measurement mode for temperature verification.

2): Power-on key: Press and hold the switch / function key for 3 seconds to power on / off,

3): Power on, enter the screen self-test, the end of the beep reminder, and enter the ambient temperature display.

4): Temperature measurement key: short press, the collected temperature will be displayed on the screen within 1 second, and the current test record will be kept before the next action.

5): Function key

• Short press the first time to switch between body temperature and surface temperature mode.

• Press and hold for 3 seconds to enter the setting mode:

a. F1 state, for F and $^{\circ}C$ mode switching selection, press +,-to switch;

b. Short press again, F2 status is for adjusting the temperature of high temperature alarm, press +,-to adjust the temperature to be alarmed;

c. Short press once again, F3 state, for the display data offset setting, press +,-to adjust the value to be offset displayed;

d. Short press once again, F4 state, for the buzzer sound switch setting, press +,-to adjust the true sound switch;

• In the power-on state, press the +/- key: In order to enter the temperature measurement view

viewing mode, press + to turn up,-to turn down, the latest 20 measurement data can be stored

3. Data storage

The body thermometer can automatically store the temperature of the human body measured nearly 20 times and display it on the screen. You can view the stored data by "+" or "-" when the power is on.

10.2 Temperature measurement procedure

1.Aim the infrared forehead thermometer in the middle of the forehead (Above the center of the eyebrow, no hair covering)

And keep it vertical, 3 to 5 cm away, press the measurement button, the temperature is displayed immediately.

Picture 5:

2. The measured temperature can be automatically stored when measurement. (see product structure ①) (press the "+,-" key to check that the latest stored 20 measurement data) Note:

1) Before measuring, make sure there is no covering, like hair, sweat, cosmetics or hat and so on.

2) No temperature reflected when caused by the forehead's sweats or other reasons, please aim at the earlobe.still no covering by hair, sweat, cosmetics or hats



Picture 6:

3) The boot time is extended by 1 to 2 seconds if the thermometer has not been used for a long time that due to the thermometer will inspect the environment temp.

4) A person's body temperature changes at different times of the day, and is also affected by other external conditions, such as age, gender, and skin color.

5) It is recommended to measure about three times at a time, whichever is the most displayed data.

11. Reference temperature

11.1 Normal body temperature range at different measurement parts

The human body is a very complex biological comprehensive system. Body temperature is an important data to measure the normality of human life activities. Usually we measure our health by measuring the temperature of the forehead, cochlea, anus, mouth and axillary. Different part would be different value, the specific differences refer to the following table:

Measurement part	Normal temperature ($^{\circ}C$)	Normal Fahrenheit (° F)
Anus	36.6~38	97.8~100.4
Oral cavity	35.5~37.5	95.9~99.5
Oxter	34.7~37.3	94.4~99.1
Ear	35.8~38	96.4~100.4



11.2 Normal body temperature range at different ages

A person's body temperature changes at different times of the day and is also affected by other external conditions, such as age, gender, skin color, and thickness. For the normal temperature range of different age groups, please refer to the table below:

Age	Normal temperature ($^{\circ}C$)	Normal Fahrenheit (° F)
$0~\sim~2$ years old	36.4~38.0	97.5~100.4
3 to 10 years old	36.1~37.8	97.0~100.0
11 to 65 years old	35.9~37.6	96.6~99.7
> 65 years	35.8~37.5	96.4~99.5

Note:

Women's body temperature is different from men's, generally about 0.3 °C higher than men's, body temperature during ovulation will rise 0.3 °C \sim 0.5 °C than usual.

12. Advice

• The protective sheet outside the LCD frame is very important, it is also the fragile part of the meter, please use it carefully.

• Do not charge non-rechargeable batteries and do not throw them into fire.

· Please do not expose this product to the sun, and do not touch the water

13. Maintenance

13.1 Product care and cleaning

1) The sensor head is the most precise part of the product and must be carefully protected.

2) Do not use abrasive cleaners to clean this product.

3) Do not infiltrate the product into water or other liquids.

4) Keep the product in a dry place to avoid dust, pollution and direct sunlight.

5) Please clean the infrared forehead thermometer regularly, usually once a month. If necessary, you can perform appropriate cleaning according to the actual soiling of the product; please use a dry soft cloth to clean the infrared forehead thermometer. If the instrument is extremely dirty, use a cloth moistened with water or a neutral detergent to fully dry it, wipe the body, and then wipe it with a dry cloth.

13.2 Product Maintenance

If you encounter the following problems during use, please follow the instructions in the maintenance instructions to find a solution. If the problem persists, please contact our customer service.

1) LCD cannot display the value

If the temperature measurement mode is below 33 $^{\circ}$ C or above 43 $^{\circ}$ C, the LCD will not display the data and will display "Lo" or "HI".

2) LCD display message "HI"

Using infrared forehead thermometer, LCD shows "HI", analysis shows that it has exceeded the measurement range or measured temperature above 43 $\,^{\circ}C$ in human body temperature measurement mode.

3) LCD display message "Lo"

Using infrared forehead thermometer, the LCD displays the message "Lo", and the analysis shows that the temperature is below the measurement range or the measurement temperature is lower than

33 $^{\circ}$ C in the human body temperature measurement mode.

Reason for the message "Lo" or "HI"	Temperature measurement result is out of			
	measurement range			
Temperature value is affected by hair and	Ensure no obstructions during temperature			
sweat	measurement			
Temperature is affected by changes in	Ensure that the air remains stable during temperature			
airflow	measurement			
The measurement distance is too far	Please note that the measurement distance should			
	not be greater than 5 cm			
Enter indoors from outside low or high	Please wait 15 minutes until the subject's			
temperature	temperature adapts to the measurement environment			
	before measuring			

The information "Lo" or "HI" appears for reference:

14.Waste treatment instructions

• Disposing electronic products and batteries directly in the trash can cause harm to the environment. Please dispose of them in accordance with the laws of your area.

• Do not discard the trash can at the end of the use of the infrared forehead thermometer. Please dispose of it according to the laws in your area, or contact the manufacturer for recycling.

15.Electromagnetic compatibility warning

Note:

 \cdot Comply with the relevant requirements of electromagnetic compatibility of YY0505—2012 standard.

• Users should install and use according to the electromagnetic compatibility information provided in the accompanying documents.

• Portable and mobile RF communication equipment may affect the performance of infrared thermometers, avoid strong electromagnetic interference when using, such as near mobile phones, induction cookers, etc.;

 \cdot Guidelines and manufacturer's declarations are detailed in the annex.

Warning:

 \cdot The equipment or system should not be used close to or stacked with other equipment. If it must be used close to or stacked, it should be observed to verify normal operation in the configuration in which it is used.

Annex:

Guidance and manufacturer's declaration-electromagnetic emissions					
The infrared thermometer is intended for use in the electromagnetic environment specified below. The purchaser or user of the infrared thermometer should ensure that it is used in this electromagnetic environment:					
Launch test	Compliance		Electromagnet	ic Environment-A Guide	
GB4824 RF launch	1 set	Infr functio ca	Infrared thermometers use RF energy only for their internal functions. Therefore, its RF emissions are very low and may not cause any interference to nearby electronic equipment.		
GB4824 RF launch Class B Infrared forehead thermometers are suitable for use in all faciliti					
GB17625.1 Harmonic emission	Not applicable	directly connected to homes.			
GB17625.12 Voltage fluctuation / flicker emission	Not applicable				
Guide	lines and manufactu	rer's dec	laration-electroma	gnetic immunity	
The infrared forehead thermometer is expected to be used in the electromagnetic environment specified below. The purchaser or user of the infrared forehead thermometer should ensure that it is used in this electromagnetic environment					
Immunity test	IEC 60601 test	level	Coincidence	Electromagnetic Environment-A	
			level	Guide	
Electrostatic Discharge (ESD) GB / T 17626.2	± 6 KV contact discharge ± 8 KV air discharge		± 6 KV contact discharge ± 8 KV air discharge	or tile, and if the floor is covered with synthetic material, the relative humidity should be at least 30%.	
Electrical fast transient burst GB / T 17626.4	± 2 KV to power ± 1KV to input / ou	cord tput line	Not applicable	Not applicable	
Surge GB / T 17626.5	± 1 KV dif mode voltage ± 2 KV commo voltage	ferential on mode	Not applicable	Not applicable	

	<5% UT for 0.5 weeks			
	(on UT,> 95% sag)			
Voltage on power input line	40% UT. 5 weeks			
Sags, short interruptions	duration (60% sag on			
and	UT)	Not	Not applicable	
Voltage change	70% UT for 25 weeks	applicable		
GB / T 17626.11	(30% sag on UT)			
	<5% UT for 5S (> 95%			
	dip on UT)			
Power frequency magnetic			Power frequency magnetic fields should	
field	3A/m	3A/m/50H	have the power frequency magnetic field	
(50 / 60Hz)		z/60Hz	level characteristics of a typical place in a	
GB / T17626.8			typical commercial or hospital environment.	
Note: UT refers to the AC network voltage before the experimental voltage is applied				
Guidance and manufacturer's declaration-electromagnetic immunity				
The infrared forehead thermometer is intended to be used in the electromagnetic environment specified below. The				
purchaser or user of the in	frared forehead thermometer	er should en	sure that it is used in this electromagnetic	
environment:				
Immunity test	IEC 60601 test level	Coincidenc	Electromagnetic Environment-Guide	
		e level		
Note 1: Frequency of 80MHz and 800MH, using the high frequency channel.				
Note 2 These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption				
and reflection from buildings,	objects and people.			

a Fixed transmitter manufacturers, such as: base stations for wireless (cellular / cordless) phones and ground mobile radios, amateur radio, AM (Amplitude Modulation) and FM (Frequency Modulation) radio broadcasts, and television broadcasts. The field strength is theoretically It is impossible to predict accurately. In order to evaluate the electromagnetic environment of fixed RF transmitters, the survey of electromagnetic sites should be considered. If the measured field strength of the infrared forehead thermometer is higher than the RF compliance level of the above application, the infrared forehead thermometer should be observed to verify its normal operation. If abnormal performance is observed, supplementary measures may be necessary, such as reorienting or positioning the infrared thermometer.

b In the entire frequency range of 150KHz-80MHz, the plant strength should be lower than 3V / m.

			Portable and mobile RF
			communications equipment should not be
			used closer to any part of the infrared
			thermometer than the recommended
			isolation distance, including cables. This
			distance should be calculated by a formula
			corresponding to the frequency of the
RF conduction			transmitter.
GB / T	3 Vrms		Recommended isolation distance
17625.6	150 KHz to 80 MHz	Not	$d = 1.2 \sqrt{\mathbf{p}}$
		applicable	u -1.2 y p
RF radiation	3V/m		$d = 1.2 \sqrt{n}$ 80 MHz to 800 MHz
GB / T	80 MHz to 2,5 GHz	3V/m	$u = 1.2 \sqrt{p}$ so with to soo with
17626.3			d =2.3 \sqrt{p} 800 MHz to 2,5 GHz
			Among them, p is according to the
			transmitter's maximum output rated power
			provided by the transmitter manufacturer, in
			watts (W), and d is the recommended
			isolation distance in meters (m).
			The field strength of the fixed RF transmitter
			is determined by surveying the
			electromagnetic field, and it should be lower
			than the compliance level in each frequency
			range.

Recommended isolation distance between portable and mobile RF communication devices and infrared forehead thermometers

Infrared forehead thermometers are intended for use in electromagnetic environments where radiated RF disturbances are controlled. According to the maximum output power of the communication equipment. Purchasers or users of infrared forehead thermometers can prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communication equipment (transmitters) and infrared forehead thermometers as recommended below.

Transmitter's rated	Isolation distance for different frequencies of the transmitter / m			
maximum output power	150kHz—80MHz 150kHz—80MHz		150kHz—80MHz	
/ w	$d=1.2\sqrt{p}$	$d=1.2\sqrt{p}$	$d=2.3\sqrt{p}$	
0.01	Not applicable	0.12	0.23	
0.1	Not applicable	0.38	0.73	
1	Not applicable	1.2	2.3	
10	Not applicable	3.8	7.3	
100	Not applicable	12	2.3	

For the rated maximum output power of the transmitters not listed in the table above, the recommended isolation distance d, in meters (m), can be determined using the formula in the corresponding transmitter frequency column, where p is the emission provided by the transmitter manufacturer Machine maximum output power in watts (w).

Note 1: At 80MHz and 800MHz frequencies, the higher frequency range formula is used.

NOTE 2 These guidelines may not be suitable for all situations. Electromagnetic propagation is affected by absorption and reflection from buildings, objects and people.

16.Symbol Description

Symbol graphics	Meaning	Symbol graphics	Meaning
\triangle	Note, refer to the attached file	I	Reference instructions
	Low voltage alert		BF type application part
R	Trash		

17, Product Maintenance Card

Product Maintenance Card

(This link is reserved for the seller, using

this card as a voucher)

(This card is used for customer service

return, and must be completed)

Client's name:Phone:Address:Product name:Product name:Product model:Purchase date:Purchase city:

Fault description:

Dear customer, please use the AAA battery

when replacing the battery

Produc	t Maintenance Card
(This link is r	eserved for the seller, usin
this o	card as a voucher)
(This card is us	ed for customer service
return, and mu	st be completed)
Client's name: Address:	Phone:
Product name:	Product model:
Purchase date:	Purchase city:
Fault description	on:

when replacing the battery

Free Warranty Provisions

(I) Warranty period starts from the date of purchase. You can enjoy a two-year free warranty and lifetime maintenance service taking a shopping invoice or warranty card.

(2) The warranty provides free maintenance service if using according to the instruction manual.

(3) Go to the service center or repair location if caused by the manufacturing problems.

(4) The following conditions will not enjoy free repair:

(a) Disassemble and modify the products unauthorizedly

(b) Improper storage, such as breakdown and damage caused by transportation damage, bumps, battery leakage, etc.

(c) Damage caused by force majeure (fire, earthquake, flood, lightning, etc.).

(d) Failure caused by the improper operations, not with the instructions.

(e) The warranty is invalid if altering the maintenance card or invoice without authorization.

(5) Make sure ask the store staff to stamp the warranty card when purchasing this product. Free service should hold the warranty card which was filled with purchase date and the sealed (including the name and address of the store).

(6) Charged outside the warranty if need repair serive.

(7) This product maintenance card is only valid in China. One card per machine is not reissued.

Free Warranty Provisions

(I) Warranty period starts from the date of purchase. You can enjoy a two-year free warranty and lifetime maintenance service taking a shopping invoice or warranty card.

(2) The warranty provides free maintenance service if using according to the instruction manual.

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(6) Charged outside the warranty if need repair serive.

(7) This product maintenance card is only valid in China. One card per machine is not reissued.

18. Product accessories list

One QY-EWQ-01 infrared forehead thermometer, one manual, one certificate of conformity. Please in kind prevail.

19.Statement

If necessary, the company can provide the specified circuit diagrams, component lists, legends, calibration details for helping the users' qualified technicians repair.

Certificate of Conformity

Product name: Infrared Forehead Thermometer Product model: QY-EWQ-01

IQC:_____

Manufacturing Date:

Registrant/Manufacturer / After-sales service company: Hangzhou Qingyuan Medical Equipment Technology Co.,Ltd.

Registrant/ Manufacturer residence: No.688 Dong'an 1st Road, Xintang Street, Xiaoshan District, Hangzhou

Manufacturing Address / After-sales Service Address: No.688 Dong'an 1st Road, Xintang Street, Xiaoshan District, Hangzhou

This product has been inspected by the company's quality control and assurance department, and its quality meets technical standards.