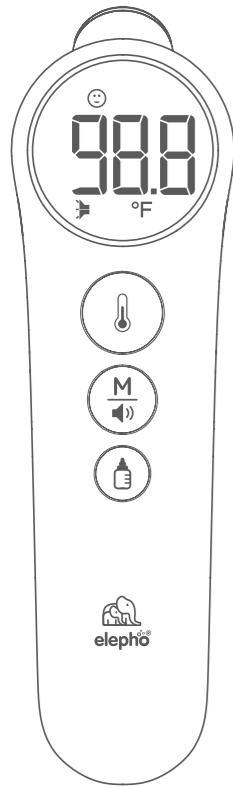


User Manual



1. Product introduction:

Thank you for selecting and purchasing an eTherm Plus thermometer. This high-tech infrared thermometer is used to measure human body temperature by absorbing infrared (IR) energy from a person's forehead.

Product/model name: eTherm Plus
Item/Device #: FDIR-V12
User manual version: V1.0

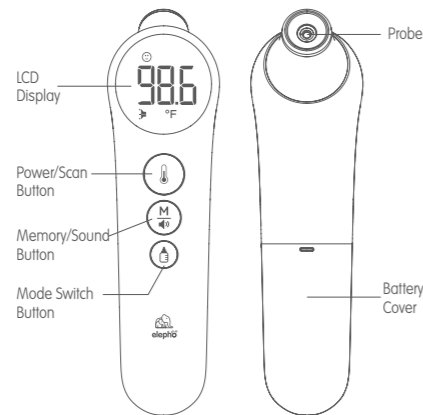
2. Package Contents:

Open the package to make sure that everything is there.

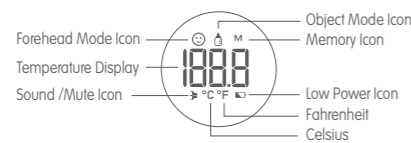
Quantity	Part
1	eTherm Plus Thermometer Device
1	User Manual
1	Quick User Guide
2	AAA Battery

3. Product Components:

The eTherm Plus thermometer consists of a plastic outer shell, an infrared temperature sensor module and probe, sound module, LCD display and battery. Product front and back views are shown below:



LCD Display Description



4. Intended Use and Application:

The eTherm Plus uses an infrared temperature measurement methodology to measure the temperature of the forehead and can be used for babies, children and adults.

This product MUST be operated, and its use supervised, by an adult when taking temperature measurements of babies and children.

5. Contraindications: Where This Product Should NOT Be Used

Do not use the eTherm Plus to measure the temperature of an inflammation, trauma or postoperative lesions, such as a region in an organ or tissue which has suffered damage through injury or disease, including wounds, ulcers, abscesses, or tumors.

6. Regarding eTherm Plus Measurements:

Please note the following when you take measurements with your eTherm Plus.

1. This product is intended for personal use only.
2. Measurement results are for reference only. They are not intended for self diagnosis or treatment. Consult your doctor or a medical professional before taking action.
3. There is no one standard temperature of a human body. It is important to know your normal average body temperature so you can assess whether or not you have a fever.
4. Before measuring forehead temperature, make sure you have cleaned perspiration, cosmetics and any oil deposits from the skin.

5. When taking repeated measurements, it is a normal phenomenon to see small deviations. We therefore recommended that you measure body temperature three times and then take the average of the readings for the most accurate result.

6. For accurate readings DO NOT take body temperature measurements within 30 minutes of showering, exercising, or eating, since these activities can affect your core body temperature. Body temperature measurements are more accurate during a state of rest.

7. DO NOT measure body temperature near an inflammation or scar tissue, since this may affect the accuracy of the reading.

8. DO NOT measure the body temperature immediately after taking medicine, since this may affect the accuracy of the reading.

9. DO NOT measure body temperature in an environment where the ambient (air) temperature changes rapidly, such as near an air conditioner or heater, since this may affect the accuracy of the reading.

10. DO NOT measure body temperature in an environment with strong electromagnetic interference, such as near a working microwave oven, induction cooker, or active mobile phone, since this may affect the accuracy of the reading.

7. While Using your eTherm Plus:

1. This product is a precision measurement device. Replace and store in a secure and dry environment after use to avoid contact with liquids or pieces of small foreign materials, such as dust, dirt etc.
2. Avoid dropping the device since this will cause damage to the measurement probe and will affect the accuracy of the reading.
3. Avoid any impact by any external force on the product.
4. Avoid direct contact of the temperature probe with your fingers or excessive blowing from your mouth.
5. If the internal infrared probe is covered, damaged, or is not clean, this could affect the accuracy of the reading.

6. Keep this product out of the reach of babies and children to prevent loss of parts or any risk of swallowing parts or batteries.

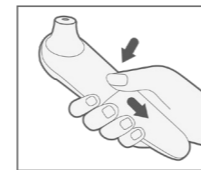
7. Remove the batteries from the battery compartment if the thermometer is not to be used for more than three months.

8. The product should NOT be used for self-diagnosis and/or self-treatment based on readings obtained. Always consult your medical professional for recommended treatment.

9. DO NOT try to disassemble and reassemble the product: this will void the warranty and may affect the accuracy of the reading.

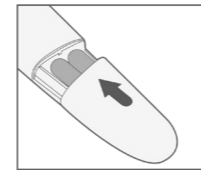
10. DO NOT place the thermometer or batteries into a fire to prevent a potential explosion.

8. Getting Started:



1. Remove the eTherm Plus thermometer from the packaging.

2. Gently **press** the battery door and slide it downwards to open it.



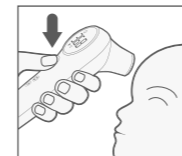
3. Position the two batteries provided in the packaging in the battery housing; taking care to insert them according to the polarity symbols engraved in the plastic casing to ensure correct placement.

4. Replace the battery door.

The eTherm Plus automatically begins a self-test, after which it is ready for use. If the battery power indicates a low reading during start-up, replace the battery to ensure adequate power supply for continued use.

9. Measurement Process:

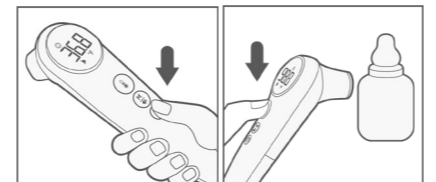
Forehead temperature measurement



A. Put the probe toward the forehead directly at a distance from 0.4in - 2.5in (1cm - 6cm).

B. Press the [Power/Scan Button] lightly. Testing result can be shown on display within 1 second.

C. Press the Mode Switch Button and the Object Mode Icon will appear on the display. Then put the probe towards the object at a distance of 0.4in - 2.5in (1cm - 6cm).



D. Press the [Power/Scan Button] lightly and testing result can be shown on display within 1 second.



For Forehead Temperature Measurement

The display indicates that the thermometer is in forehead measurement mode.

Position the thermometer probe at the center of the forehead.

Temperature measurement

eTherm Plus beeps when the measurement is completed. Remove the device and read the measurement result.

Be careful not to shine LED light into the subject's eyes during measurement.

10. Sound and backlight explanation

If infrared thermometer beeps once, it means everything goes well. Measurement readings will be displayed on screen and the back light color will be displayed along with a beep sound in accordance with table below.

Measurement range for BODY	Buzzer warning	Color of backlight
89.6°F (32.0°C) ≤ T ≤ 99.6°F (37.5°C)	The buzzer warning by sending out a long "beep"	Green
99.7°F (37.6°C) ≤ T ≤ 109.2°F (42.9°C)	The buzzer warning by sending out a "beep" "beep" "beep" "beep"... "beep" "beep" "beep" "beep"...	Red
T < 89.6°F (32.0°C) Displaying Lo	The buzzer warning by sending out a "beep" x4	Green
T > 109.2°F (42.9°C) Displaying Hi	The buzzer warning by sending out a "beep" x4	Green

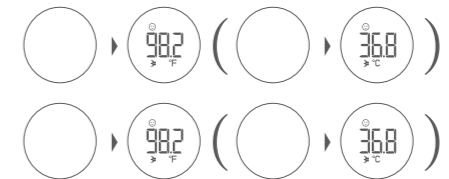
Measurement range for OBJECT	Buzzer warning	Color of backlight
32.0°F (0.0°C) ≤ T ≤ 140°F (60.0°C)	The buzzer warning by sending out a long "beep"	Green
T < 32.0°F (0.0°C) Displaying Lo	The buzzer warning by sending out a "beep" x4	Green
T > 140°F (60.0°C) Displaying Hi	The buzzer warning by sending out a "beep" x4	Green

Power Off: Auto-off Battery Saving Mode

If the device is not in use for eight seconds the device automatically powers off to save battery life. There is no need to manually turn the device off after use.

11. Memory function

1. This product has 19 groups of data memory function. After power on, press the [Memory/Sound Button] shortly to query the user's historical test data. During display process, the current data group sequence is displayed first, and then comes the temperature data of this group sequence.



2. Continue to press [Memory/Sound Button] shortly to query the next group of data. If it exceeds the last group, it will display the first group data again.



3. If there is no operation for 3 seconds, it will exit the memory mode display.

12. Mute mode function

After power on, press [Memory/Sound Button] for about 2 seconds to turn on or off the mute mode.



13. Switching measurement modes

Once power on, object mode and body mode can be switched by pressing [Mode Switch Button] slightly.



14. Power off

If the device is not in use, it will Power off automatically in 30 seconds.

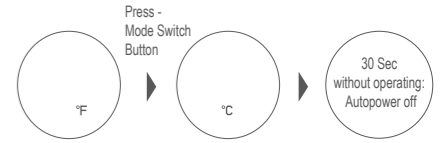
15. Temperature Unit Selection:

The eTherm Plus can be set to display temperature readings in either Celsius or Fahrenheit units. To change the temperature unit system:

1. After power on, press and hold the Mode Switch Button for ten seconds. The measurement system (°F or °C) automatically appears on the display.



2. Keep pressing the Mode Switch Button; the measuring units will automatically switch from °C to °F or from °F to °C. The desired measuring units are now set on the device.



16. Body Temperature Information

The temperature of the human body varies between individuals and depending on environment and physical activity levels the temperature of individuals may also vary from time to time. The following table indicates a general normative temperature range which should be read for reference only.

Ampit	94.5°F - 99.1°F	34.7°C - 37.3°C
Oral	95.9°F - 99.5°F	35.5°C - 37.5°C
Anus	97.9°F - 100.4°F	36.6°C - 38.0°C
Ear	95.9°F - 100°F	35.5°C - 37.8°C

Note: The temperature ranges above are for reference only and are NOT definitive for all individuals. Always consult your medical professional regarding your temperature measurements rather than rely on self diagnosis and self administrated treatment.

17. Calibration:

The thermometer is calibrated in the factory at the time of manufacture. The product service life is typically two years from first use, after which product accuracy is not guaranteed. Please refer to the warranty policy.

18. Cleaning the Device:

The thermometer probe is the most delicate part of the device. It must be kept clean and intact to ensure accurate readings. In order to clean the probe, please follow the below recommendations:

· Wipe the surface of the probe gently with 75% isopropyl alcohol using cotton bud or an equivalent soft cloth.

· Use a dry soft cloth to clean the screen (display) and thermometer casing. If the thermometer casing needs cleaning wipe it with 75% isopropyl alcohol on a soft cloth.

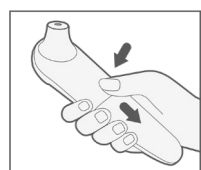
· The device is NOT water-proof. DO NOT immerse it in water or use detergents or cleansing liquids. Any water damage will void the product warranty.

· If the thermometer probe is damaged during cleaning the unit will not function correctly. Only the manufacturer is authorized to dismantle or repair the thermometer probe and any unauthorized dismantling of the thermometer probe, product modules or part of it will automatically void the warranty.

19. Battery Replacement:

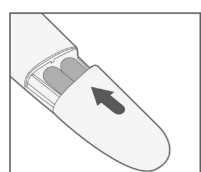
When the eTherm Plus is powered on it automatically detects the battery power level. If the battery power is low but still sufficient to obtain a reading, the low power symbol (Lo) appears on the screen along with the measurement result. However, when the battery power is critically low, the low power symbol (Lo) flashes continuously on the screen, and measurements cannot be taken. After eight seconds the device automatically shuts down to maintain minimum battery power.

To continue using the device replace the batteries as follows.



1. Gently **press** the battery door and slide it downwards to open it.

2. Remove the old batteries and dispose of them according to local regulations.



3. Insert two new AAA batteries in the battery housing, taking care to insert them according to the polarity symbols engraved in the plastic casing to ensure correct placement.

4. Replace the battery door.

Note: Please follow local regulations regarding the disposing of the batteries. DO NOT discard old batteries in an open fire.

Remove the batteries from the battery compartment if the thermometer is not to be used for more than three months.

20. Troubleshooting:

Problem or error message	Checklists	Solution
No response	The batteries are dead?	Replace batteries with new ones.
	The batteries type are wrong or reversed polarity?	Remove the batteries and adjust them correctly.
	Poor battery connection?	
	Temperature is measured beyond temperature range from 89.6°F - 109.2°F (32.0°C - 42.9°C). Lo: means that the temperature measured is too low	Refer to the user manual and measure the temperature again.
	Hi: means that the temperature measured is too high	
	The ambient temperature is beyond the operating range of 50°F - 104°F (10°C - 40°C)	Keep the thermometer in the environment where the temperature is between 50°F - 104°F (10°C - 40°C) for 30 minutes.
	Battery is running low	Please replace the battery in time not to disturb usage.
	The battery is almost dead and can not be used anymore.	Must replace new battery to continue usage.
	Hardware damage	Please contact distributor for support

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If you are concerned that the device might not be functioning correctly, do not attempt to repair the thermometer yourself.

The thermometer is a very precise product. Any improper or unauthorized repair or disassembly will cause inaccuracy of the measurements and will VOID the product warranty.

Please contact point of purchase support for any product issues within the warranty period.

21. Product Specifications:

Item/Device #:	Product/model name:
FDIR-V12	eTherm Plus
Power Supply: DC 3V, 2*1.5V AAA batteries	
Measurement Range for Body: 89.6°F - 109.2°F (32.0°C - 42.9°C)	
Measurement Range for Object Surface: 32.0°F - 140.0°F (0.0°C - 60.0°C)	
Measurement Accuracy: Body Mode : ±0.4°F/0.2°C, if temperature at 95.0°F - 107.6°F ±0.5°F/0.3°C, if temperature lower than 95.0°F or higher than 107.6°F Object Mode: ±3°F (±1°C)	
Memory function: 19 groups of data memory	
Display Resolution: 0.1°C /0.1°F	
Clinical Repeatability: Within ± 0.5°F/0.3°C	
Measurement Position: Forehead	
Reference Position: Oral cavity	
Operating Conditions: Temperature: 50.0°F -104.0°F (10.0°C - 40.0°C) Humidity: ≤95% RH Atmospheric pressure: 70 kPa - 106 kPa	
Transport/Storage Condition: Temperature: -13.0°F to 131.0°F (-25.0°C to 55.0°C) Humidity: ≤95%, non-condensing Atmospheric pressure: 70 kPa - 106 kPa	
Grade of waterproof: IP22	
Electric shock: Internally powered ME equipment	
Applied part: Type BF applied part,including the whole unit	
Battery Life: Approximately two years or 1000 measurements	
Product Size: 145mm*41mm*49mm	
Product Weight: 93 g	
Product Service Life: 5 years	
Warranty: 1 year	
Software Version: V1.0 (firmware)	

22. Final disposal

Please do not dispose of the product in the household waste at the end of its useful life. To protect the environment, dispose of empty batteries at appropriate collection sites according to national or local regulations.

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23. Accessories

We only use original accessories. Check the accessory list as below to ensure if the package delivered is complete.

Quantity	Parts
1pcs	eTherm Plus device
1pcs	User Manual
1pcs	Quick Guide
2pcs	AAA Battery

24. Information on critical parts

Name	Model	Supplier
Infrared sensor	XWIR010	F001
IC	XWIC030	A102
Thermometer casing	ABS	D014

25. Explanation of standardized symbol

	Attention: See instructions for use!
	Authorized representative in the European Community.
	Caution! Consult accompanying documents
	Type BF applied parts
	Batch code
	Serial number
	Complies with the European Medical Device Directive (93/42/ EEC), Notified Body is SGS Belgium NV.
	Manufacturer information:
	IP code of the device: this device's grade of against ingress of solid foreign objects
	Disposal in accordance with Directive 2002/96/EC (WEEE)

26. Electromagnetic Compatibility Information

Guidance and manufacturer's declaration – electromagnetic emission – for all EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic emission		
The eTherm Plus is intended for use in the electromagnetic environment specified below. The customer or the user of eTherm Plus should assure that it is used in such an environment.		
Emissions Test	Compliance	Electromagnetic Environment: Guidance
RF emissions CISPR 11	Group 1	The eTherm Plus uses RF energy only for its internal function. There for, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The eTherm Plus suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity – for all EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic immunity			
The eTherm Plus is intended for use in the electromagnetic environment specified below. The customer or the user of the eTherm Plus should assure that it is used in such an environment.			
Immunity test	IEC 60601	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	± 8 kV contact ± 2 kV, ± 4 kV, ± 8 kV, ± 15 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
			Mains power quality should be that of a typical commercial or hospital environment.
Electrostatic transient / burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
			Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV differential mode ± 2 kV common mode	± 1 kV differential mode	Mains power quality should be that of a typical commercial or hospital environment.
			Mains power quality should be that of a typical commercial or hospital environment. If the user of the eTherm Plus requires continued operation during power mains interruptions, it is recommended that the eTherm Plus be powered from an uninterruptible power supply or a battery.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % U _n ; 0.5 cycle U _n ; At 0'; 45'; 90'; 135'; 180'; 225'; 270' and 315'	0 % U _n ; 0.5 cycle U _n ; At 0'; 45'; 90'; 135'; 180'; 225'; 270' and 315'	Mains power quality should be that of a typical commercial or hospital environment. If the user of the eTherm Plus requires continued operation during power mains interruptions, it is recommended that the eTherm Plus be powered from an uninterruptible power supply or a battery.
			Mains power quality should be that of a typical commercial or hospital environment.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
Note: UT is the a. c. mains voltage prior to application of the test level.			

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Guidance and manufacturer's declaration – electromagnetic immunity – for EQUIPMENT and SYSTEM

Guidance and manufacturer's declaration – electromagnetic immunity			
The eTherm Plus is intended for use in the electromagnetic environment specified below. The customer or the user of the eTherm Plus should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 6 V in ISM and amateur radio bands between 0.15 MHz and 80 MHz 10 V/m 80 MHz to 2.7 GHz 385MHz-5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of IEC 60601-1-2:2014)	3V 150 kHz to 80 MHz 6 V in ISM and amateur radio bands between 0.15 MHz and 80 MHz 10 V/m 80 MHz to 2.7 GHz 385MHz-5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of IEC 60601-1-2:2014)	Portable and mobile RF communications equipment should be used no closer to any part of the eTherm Plus, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = \left[\frac{3.5}{v_t} \right] \sqrt{P}$ $d = \left[\frac{12}{v_t} \right] \sqrt{P}$ $d = \left[\frac{3.5}{E_1} \right] \sqrt{P}$ $d = \left[\frac{7}{E_1} \right] \sqrt{P}$ 800 MHz to 2.7 GHz where p is the maximum output power rating of the transmitter in watts (W) according to the manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of equipment marked with the following symbol:
			Proximity magnetic fields IEC 61000-4-39

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Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.
Note 2: These guidelines may not apply in all situations.
Electromagnetic is affected by absorption and reflection from structures, objects and people.
a. The ISM industrial, scientific and medical bands between 150 kHz and 80 MHz are 6.765 MHz to 6.795 MHz; 13.553 MHz to 13.567 MHz; 26.957 MHz to 27.283 MHz; and 40.66 MHz to 40.70 MHz. The amateur radio bands between 0.15 MHz and 80 MHz are 1.8 MHz to 2.0 MHz, 3.5 MHz to 4.0 MHz, 5.3 MHz to 5.4 MHz, 7 MHz to 7.3 MHz, 10.1 MHz to 10.15 MHz, 14 MHz to 14.2 MHz, 18.07 MHz to 18.17 MHz, 21.0 MHz to 21.4 MHz, 24.89 MHz to 24.99 MHz, 28.0 MHz to 29.7 MHz and 50.0 MHz to 54.0 MHz.
b. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the eTherm Plus is used exceeds the applicable RF compliance level above, the eTherm Plus should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the eTherm Plus.
c. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT or SYSTEM – for EQUIPMENT and SYSTEMS

Recommended separation distances between portable and mobile RF communications equipment and the eTherm Plus				
The eTherm Plus is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the eTherm Plus can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the eTherm Plus as recommended below, according to the maximum output power of the communications equipment.				
Rated maximum output of transmitter W	Separation distance according to frequency of transmitter m			
	150 kHz to 80 MHz outside ISM and amateur radio bands $d = \left[\frac{3.5}{v_t} \right] \sqrt{P}$	150 kHz to 80 MHz in ISM and amateur radio bands $d = \left[\frac{12}{v_t} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[\frac{3.5}{E_1} \right] \sqrt{P}$	800 MHz to 2.7 GHz $d = \left[\frac{7}{E_1} \right] \sqrt{P}$
0.01	N/A	0.20	0.035	0.07
0.1	N/A	0.63	0.11	0.22
1	N/A	2.00	0.35	0.70
10	N/A	6.23	1.10	2.21
100	N/A	20.00	3.5	7.0
For transmitters rated at a maximum output power not listed above the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.				
Note 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.				
Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.				

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27. Warranty

The warranty period for device is one year from date of delivery. In case of a warranty claim, the date of delivery has to be proven by means of the sales receipt or invoice.

Repairs under warranty do not extend after the warranty period.

The following cases are excluded under the warranty:

- All damage due to improper treatment, e.g. failure to follow the user guide.
- All damage due to repair or tampering by the customer or unauthorized third parties.
- Damage incurred during transport from the manufacturer to the consumer or during transport to the service center.
- Accessories that are subject to normal wear and tear.
- Battery replacement is not covered under the warranty.

Liability for direct or indirect consequential losses caused by the unit is excluded even if the damage to the unit is accepted as a warranty claim.

Contact your point of sales representatives and include your product purchase receipt as evidence for service support during the warranty period.



Name: Shanghai International Holding Corp. GmbH (Europe)
Dimdi No: DE/0000040627
Add: Eiffestrasse 80, 20537 Hamburg, Germany



Famidoc Technology Co., Ltd.
via Guangdong Province, P.R. China.

Manufactured for:



Elepho Inc., 466 Central Ave (2nd floor), Cedarhurst, New York 1 516. USA

Item/Device #: FDIR-V12
Product/model name: eTherm Plus

E-mail support: customercare@elepho.com

Telephone support via Elepho Consumer Relations at: 1-833-435-3746 (1-833-4-ELEPHO)

General information regarding Elepho full product line: www.elepho.com

This product design is protected and registered under the EU IPO patent and trademark office

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