

# Diagnostic NC300

## NON-CONTACT INFRARED THERMOMETER INSTRUCTION FOR USE



Please read carefully the instruction before using the device. Use the product only in accordance with its purpose described in this instruction. Individual measurement means control but not a diagnosis. Do not take any action on medical nature without prior consultation with a physician.

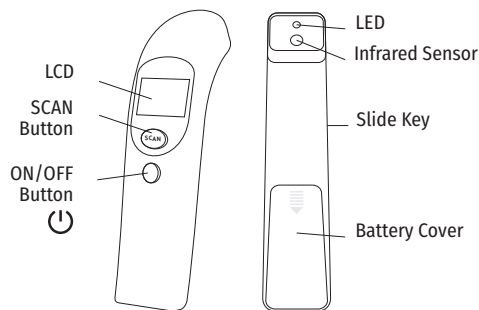
### 1. GENERAL DESCRIPTION OF THE PRODUCT

The infrared non-contact thermometer is intended for measurement body temperature in children and adults and the environment in a non-contact manner, which allows you to obtain a measurement result much faster. The thermometer is used to measure body temperature when there is a suspicion of the disease and during it, during the convalescence after surgery or exhaustion. The thermometer is intended for home use or by medical personnel.

#### Product advantages:

- Easy to clean sensor
- Fever alarm (only during body temperature measurement), when measurement temperature is 37.8 °C or higher, a sound signal will automatically appear, which indicates the occurrence of fever
- Enables quick and accurate temperature reading
- Illuminated display
- Convenient to use
- Memory of the last 12 measurements
- After switching on, the device automatically displays the last measured temperature value

### 2. CONSTRUCTION OF THE DEVICE



### 3. SYMBOLS AT THE LCD

	Measurement Result
	Ambient Temperature
	Forehead Measuring Mode
	Celsius Scale
	Fahrenheit Scale
	Low Battery
	Last Memory Result
	Sound Signal (ON/OFF)

**NOTE:** In the case of difference between the storage and usage temperature the device should be left for 2-4 hours in a room, in which the measurement will be carried out. Perform the measurement, when the device is at ambient temperature.

### 4. TAKING MEASUREMENT

Select the body measurement mode or the ambient measuring mode .

#### 1) Non-contact temperature measurement on the forehead (Fig.5.1B)

**NOTE:** First, select the measurement mode manually using the ON/OFF button. Before measuring, clean and dry the skin on the forehead and move hair away from the measurement point.

- Turn on the device by pressing the "POWER" button, all symbols will be displayed on the screen for a moment (Fig. 5.2B).
- Then the last measurement result will be displayed on the LCD temperature, as shown in (Fig. 5.3B). After a few seconds the device will switch to the forehead temperature measurement mode. On the display the symbol will appear and the temperature unit °C or °F will start flashing, it means that the device is ready for taking measurement (Fig. 5.4B).
- Direct the thermometer to the forehead at a distance of 5-10 cm, press and release "SCAN" button for 1 sec. The measurement is completed when a beep sound appears. Read the result on the screen (Fig. 5.5B).
- When the temperature symbol °C or °F flashes, wait **5 seconds** to taken the next measurement. **After 5 consecutive measurements**, it is recommended to make one minute break before the next measurement.
- If there is no command for 60 seconds, the device will automatically switch off.

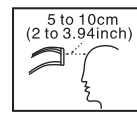


Fig. 5.1B



Fig. 5.2B



Fig. 5.3B

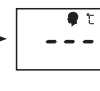


Fig. 5.4B



Fig. 5.5B

#### 2) Ambient temperature measurement mode (Fig. 5.1C)

- First, select the ambient mode manually using the slide key button. Turn on the device by pressing the "POWER" button and then on the screen all symbols will be displayed for a moment (Fig. 5.2C). The display will show the last temperature measurement result (Fig. 5.3C). After a few seconds, the device switches to the ambient temperature measurement mode, the symbol will appear on the display and a temperature unit °C or °F will start flashing. It means, that the device is ready for taking measurement (Fig. 5.4C).
- Point the thermometer towards the object at a distance of 5-10 cm, then press and release the "SCAN" button for about 1 sec. When a long beep sound appears, the device will take measurement and the result will appear on the screen (Fig. 5.5C).
- When the temperature symbol °C or °F flashes, wait **5 seconds** to taken the next measurement. **After 5 consecutive measurements**, it is recommended to make one minute break before the next measurement.
- If the device is not used again, it will switch off automatically after 60 seconds.



Fig. 5.1C



Fig. 5.2C



Fig. 5.3C

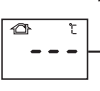


Fig. 5.4C



Fig. 5.5C

#### 3) Setting the sound signal

- With the device turned off, press the "SCAN" button while holding it down for about 5 seconds until the "ON or OFF" symbol appears on the screen. Press the "SCAN" button again to switch ON or OFF the sound signal.

#### 4) Setting the temperature unit °C or °F

- With the device switched off, press the "SCAN" button while holding it down for about 10 seconds until the "---" symbol and unit temperature °C or °F appears on the screen. Press the SCAN button to set the desired temperature unit, the device will be properly set and ready for use.

#### 5) Viewing the memory results

The last 12 measurement results.

When the device is switched off, press the "SCAN" button so that the symbol "---M" appears on the screen, which will allow you to view the measurement results saved in the memory. Pressing again the "SCAN" button will display subsequent measurement results. Press the "POWER" button to exit the result viewing mode and switch off the device.

### 5. INDICATION OF BATTERY LEVEL AND BATTERY REPLACEMENT

**LOW battery level:** Low battery symbol will appear in the bottom corner of the display, when the charge level of the battery will drop to the minimum level. In this case, you should replace the batteries as soon as possible. However, the device can be still used for a short time (Fig. 6.1).



Fig. 6.1

#### Battery change:

Remove the battery cover, take out the used batteries. Insert two new batteries, paying attention to their polarity.



### 6. IMPORTANT SAFETY NOTES

In order to ensure the correct use of the product, you should always observe safety rules for measurements.

- Before using the infrared thermometer for the first time, place the batteries in the battery compartment, paying attention to their polarity.
- Clean the sensor every time after using the thermometer and keep it clean. Use a swab, to clean the sensor, slightly moistened with 70-80% isopropyl alcohol, then wipe the sensor.
- Clean the device before and after use with a soft, clean and soaked cloth with 70-80% isopropyl alcohol.
- Store the thermometer in a dry place, do not immerse it in water or in other liquids.
- Do not expose the thermometer to high temperatures for a longer time and avoid exposing it to sunlight, dust and impurities.
- Do not store the thermometer with pointed objects.
- Do not touch the sensor with your fingers.
- Do not disassemble the thermometer by yourself.
- Do not use a thermometer if the skin on the forehead is damaged.
- The temperature measurement should be carried out in a rest state. Never take measurements directly after physical exercises or after bathing. After returning from the walk, wait at least 30 minutes.
- If you have any problems with the product, its configuration, maintenance or indicate accuracy, contact the distributor in your country.
- The fall or shock of the product may cause changes in its operation. In this case, please contact the distributor in your country.
- The product should be used only with the accessories recommended by the manufacturer.
- Do not take measurements if the product is exposed to a strong electromagnetic field or static electricity.

If the following circumstances occur, it is recommended to make at least three measurements, and the highest result should be considered as the most reliable:

- Infants under 3 months old.
- Children under 3 years old with weakened immune system.
- If you use an infrared thermometer for the first time. If you do not obtain accurate and permanent readings, repeat the measurements several times

**Remember:**

- Using the cleaning methods others, than those specified in the instructions may cause the failure of the infrared thermometer.
- Contraindications: do not point the LED to the scar or the area of the skin, which is affected by diseases. Patients with injuries and those taking anti-inflammatory medications for the treatment of skin should not take measurement. Do not point the thermometer sensor against the exposed skin directly to sunlight or heat from a heating device (eg a fireplace), a skin treated with hiloterapy, or a skin that is on air flow from the air conditioner.
- Do not perform service / maintenance while using the device.
- The user of the device is the patient or his guardian. Patient / guardian takes measurement and cleans the thermometer and its accessories in accordance with the instructions.
- Remove the batteries if the device will not be used for more than three months. Failure to comply with this recommendation may lead to fluid leakage, warming up or disintegration of the battery, and as a result, damage to the device.
- The device is not suitable for sterilization. The device is not intended for work in the OXYGEN ONCENTRATION area.
- Remove the device, batteries, accessories and packaging after use in accordance with the applicable regulations on waste disposal.
- Check the condition of the device before each use. Do not use a damaged product. Continuous use of a damaged device may result in injury, getting incorrect results or serious danger.
- The device should not be disassembled, repaired or modified by yourself.



- Keep the thermometer away from children and household animals.
- The temperature measurement should be carried out under the care of adult. You must not allow your child to remove the battery cover, remove and eventually, swallow the battery.

**NOTE: swallowing the battery may be fatal. If the battery is swallowed by a child, immediately contact your doctor.**

**7. ERROR MESSAGES**

Symbol	Meaning
	The measured temperature is higher than 43 °C (109.4 °F)
	The measured temperature is lower than 33 °C (91.4 °F)
	The environment is out of the operating temperature 10-40 °C (50-104 °F)

**8. FREQUENTLY ASKED QUESTIONS CONCERNING MEASURING TEMPERATURE ON THE FOREHEAD**

**1) What is the temperature measured on the forehead?**

The temperature on the forehead corresponds to the temperature under the skin (within the arteries). It is the best way to measure body temperature because measurement errors and time delay does not influence on the result, as in the case of the oral or rectal method.

**2) How to measure the temperature on the forehead correctly?**

The thermometer should be directed towards the center of the forehead at a distance of 5-10 cm. Nothing should cover the measurement area (hair, wig, hat, bandages). Otherwise the results can be incorrect. Press the button "SCAN" to get a result.

**3) Why the temperature measurement on the forehead is more accurate than the measurement in ear?**

In the case of measurement on the forehead, the forehead area is scanned at an angle the temperature released by the flow of arterial blood under the skin, and we do not need to worry about the correct position during the measurement. The measurement is delicate and non-invasive. The measurement in the ear is less accurate because the position of the probe in the wire the auditory influence has an effect on the accuracy of the measurement.

**The temperature results depend on the method of measurement.**

Measurement method	Normal temperature range	Temperature range with fever
Forehead	35.0 ~ 38.0 °C (95.0 ~ 100.4 °F) NOTE: For some adult people the measurement temperature result can be below 35.0 °C (95.0 °F).	Temperature is 0.6 ~ 0.8 °C (1.0 ~ 1.5 °F) higher than the normal range. We recommend to use the infrared thermometer to determine the normal temperature range.

**RANGE OF BODY TEMPERATURE**

Body temperature means internal temperature of body. Normal temperature means that of a healthy person and has little change within short range. Temperature of a person measured in the evening is normally 0.5°C (16.9°F) higher than in the early morning and is also affected by the environment, time and activeness. The chart below shows the average of normal changes. Refer to it to found out the personal normal temperature range.











Normal temperature range by each part of body

Armpit	34.7-37.3°C (94.5-99.1°F)
Mouth	35.5-37.5°C (95.9-99.5°F)
Rectum	36.6-38°C (97.9-100.4°F)
Ear	35.8-38°C (96.4-100.4°F)
Normal temperature by age	
0-2 age	36.4-38°C (97.5-100.4°F)
3-10 age	36.1-37.8°C (97-100°F)
11-65 age	35.9-37.6°C (96.6-99.7°F)
Above 65 age	35.8-37.5°C (96.4-99.5°F)

**9. TECHNICAL SPECIFICATION**

Model	Diagnostic NC300
Measuring Range	Forehead 34,0°C -43,0°C ( 93,2°F -109,4°F) Ambient 0,0°C -100,0°C ( 32,0°F -212,0°F)
Accuracy	±0,2°C /0,4°F 34,0°C -34,9°C (93,2°F - 94,82°F) ±0,2°C /0,4°F 35,0°C -42,0°C (95,0°F -107,6°F) ±0,2°C /0,4°F 42,1°C -43,0°C (107,78°F -109,4°F )
Measurement time	1 second; The recommended time between the measurements in the same place is 2 sec.
Measurement distance	5-10 cm from the forehead
Resolution	0,1°C /0,2°F
Automaic Power-off	after 60 sec
Memory	12 measurements
Fever alarm	Yes (from 37.8 °C)
Operating conditions	10.0 - 40.0 °C (50.0 - 104.0 °F) Relative humidity ≤80% Atmospheric pressure: 86 - 106 kPa
Storage Environment	-25.0 - 55.0 °C (-13.0 - 131.0 °F) Relative humidity ≤95% Atmospheric pressure: 86 - 106 kPa
Battery	2 x AAA
Protection against electric shock	Internally powered medical device
Classification	Type BF
Dimensions device	138mm length x 35mm width x 38 mm height
Weight (with batteries)	76 g
Additional function	Backlit display
IP classification	IP22: Protection against access to dangerous parts. Finger test done (with a diameter of 12 mm and 80 cm long). Protection against foreign solids with a diameter of 12.5 mm and more. Protection against vertical precipitation of a drop of water at the device inclined to 15 °C. The vertical droplet fall should not affect harmful to the device when it tilts in both sides up to 15 °C.
Expected product life	5 years
Contents of a package	infrared thermometer, 2 x AAA batteries, carrying case, instruction for use

## SYMBOLS

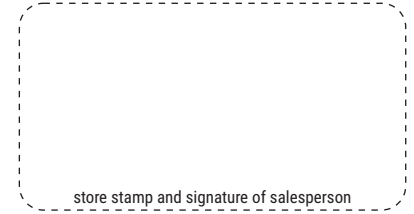
 LOT	LOT Number
	Type BF
	Year of production
	Manufacturer
Rev.	Last updated
	Catalog number
	Warnings
	Protect against the sun
	Protect against humidity
	Power supply
	Read the instruction for use

Manufacturer reserves the right to make changes to specification.

The information about the electromagnetic compatibility can be found on the website: [diagnosis.pl/normy/nc300](http://diagnosis.pl/normy/nc300)



Waste product and batteries should be taken to the waste collection point. The product contains ingredients that hazardous the environment. Correct utilization of the device allows you to save valuable resources, to avoid negative impact on health and on the environment, that can be endangered by inappropriate waste handling. If you have doubts, where to return the used product, contact the manufacturer.



## WARRANTY CARD

DEVICE NAME .....

MODEL .....

SERIAL NUMBER .....

DATE OF SALE .....

### WARRANTY TERMS

- Diagnosis S.A. grants a warranty:
  - 24 months for Diagnostic NC300 ThermometerHardware defects revealed during the warranty period will be rectified free of charge within 21 days. The term runs from the date of delivery of the equipment to the service center.
- The purchaser shall be entitled to replace the equipment for a new one, free of defects, when:
  - the repair has not been made within the time limit set in item 1 an authorized service center found
  - an irreparable manufacturing defect
  - during the warranty period, 4 repairs were effected, and the equipment still shows defects that prevent its use in accordance with its intended purpose.The concept of repair shall not include operations related to equipment check and cleaning.
- The warranty shall not cover: batteries, products with illegible or damaged serial number, damage due to the operation and storage inconsistent with the user manual, ingress of liquids or foreign bodies, overvoltage of mains, repairs by unauthorized persons and random events.
- Faulty equipment should be delivered by the buyer to the address of the main service center or one of the Authorized Service Centers (listed in the appendix).
- The warranty for the sold consumer goods shall not exclude, restrict, or suspend the powers of the buyer resulting from non-conformity of the goods with the contract.
- The only basis for the warranty rights shall be the warranty card with the date of sale, stamp and signature of the salesperson. If the card is not completed, filled in wrongly, with traces of corrections and entries made by unauthorized persons, illegible as a result of damage - it shall be invalid.



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