Technology is adopted in accordance with Capacity Pulse Scanning and Recording Technology, so that two beams of different wavelength of lights (660nm glow and 940nm near infrared light) can be focused onto human nail tip through perspective clamp finger-type sensor. Then measured signal can be obtained by a photosensitive element, information acquired through which will be shown on two groups of LEDs through process in electronic circuits and microprocessor.

2.Precautions for use

- *Operation of 18705 may be affected by the use of an electrosurgical unit (ESU).*
- *The 18705 must be able to measure the pulse properly to obtain an accurate SpO2 measurement. Verify that nothing is hindering the pulse measurement before replying on the SpO2 measurement.*
- Do not use the 18705 in an MRI or CT environment
- Do not use the 18705 in situations where alarms are required. The device has no alarms.
- Explosion hazard: Do not use the 18705 in an explosive atmosphere.
- The 18705 is intended only as an adjunct in patient assessment. It must be used in conjunction with other methods of assessing clinical signs and symptoms.
- Check the pulse oximeter sensor application site *frequently* to determine the positioning of the sensor and circulation and skin sensitivity of the patient.
- Do not stretch the adhesive tape while applying the pulse oximeter sensor. This may cause inaccurate readings or skin blisters.
- Before use, carefully read the manual.
- The 18705 has no SpO2 alarms, it is *not for continuous monitoring*, as indicated by the symbol.
- Prolonged use or the patient's condition may require changing the sensor site periodically. Change sensor site and check skin integrity, circulatory status, and correct alignment at least every 4 hours.

3.Inaccurate measurements

- *Do not sterilize the device using autoclaving, ethylene oxide sterilizing, or immersing the sensors in liquid which may cause inaccurate readings. The device is not intended for sterilization.*
- Significant levels of dysfunctional hemoglobin's (such as carbonxy- hemoglobin or met hemoglobin)
- Intravascular dyes such as indocyanine green or methylene blue
- SpO2 measurements may be adversely affected in the presence of high ambient light. Shield the sensor area (with a surgical towel, or direct sunlight, for example) if necessary.
- Excessive patient movement
- High-frequency electrosurgical interference and defibrillators
- Venous pulsations
- Placement of a sensor on an extremity with a blood pressure cuff, arterial catheter, or intravascular line
- The patient has hypotension, severe vasoconstriction, severe anemia, or hypothermia
- The patient is in cardiac arrest or is in shock
- Fingernail polish or false fingernails may cause inaccurate SpO2 readings.
- Follow local ordinances and recycling instructions regarding disposal or recycling of the device and device components, including batteries.

4.Technical Specifications

4.1 Display type: OLED display
SPO2 display range: 0-99%
PR display range: 30-254 BPM
PR display mode: bar graph
Data update time: < 15 s

4.2 LED Wavelengths
Red: 660nm
Infrared: 940nm

4.3 Battery life
Two AAA 1.5V alkaline batteries could be continuously operated as long as 30 hours.

4.4 Resolution: ±1% for SPO2 and ±1BPM for Pulse rate

4.5 Measurement Accuracy:
SPO2: 70%--99%, ±3%; ≤70% no definition.
PR: 30—235 BPM, ± 2 bpm during the pulse rate range of 30-99 bpm and 2% during the pulse rate range of 100-254 bpm

4.6 It is equipped with a function switch, through which the Oximeter can be powered off in case no finger is the Oximeter longer than 8 seconds.

4.7 Outline dimension:

6. Product Intended Use

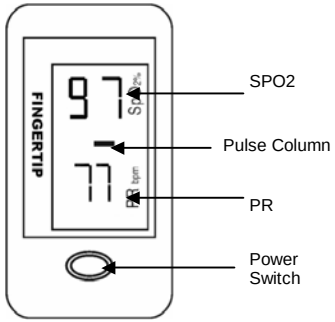
Intended Use:
Fingertip Pulse Oximeter 18705 is a portable non-invasive, spot-check, oxygen saturation of arter (SpO2) and pulse rate of adult and pediatric patient at home, and hospital (including clini internist/surgery, Anesthesia, intensive care and etc). Not for continuously monitoring.
The 18705 requires no routine calibration or maintenance other than replacement of batteries.

7. Operation Instructions

7.1 Installing two AAA batteries into battery cassette before covering its cover.
7.2 Open the clamp as illustrated in the picture below
7.3 Plug one of fingers into rubber hole of the Oximeter (it is best to plug the finger thoroughly) be the clamp
7.4 Press the switch button once on front panel.
7.5 Your finger do not tremble during the Oximeter is working. Your body is not recommended in
7.6 Read correspondent datum from display screen.
7.7 Two display modes.
After turn on the Oximeter, each time you press the power switch, the Oximeter will swit display mode, there are 2 display modes shown as follows
When you press the power switch for a long time (more than one second), the brightness of the C changed by degrees, there are 10 levels on brightness; the default level is level four.

When your finger is plugged into the Oximeter, your nail surface must be upward.

8. Brief Description of Front



Patient pulse quality signals are indicated as such by bar graph. The bar is graded as 10 levels, if two to three level, the pulse signal is inadequate.

9. Product Accessories

9.1 One Lanyard
9.2 Two batteries
9.3 One instruction manual

10. Battery Installations

10.1 Put the two AAA batteries into battery cassette in correct polarities.
10.2 Push the battery cover horizontally along the arrow shown as below:

Notes: Battery polarities must be correctly installed. Otherwise, damage might be caused to devic
Please put or remove batteries in right order, or is likely to damage the device bracket

Problems	Possible reason	Solution
SpO2% or pulse rate can not be shown normally	1. Finger is not plugged correctly 2. Patient's SpO2value is too low to be measured	1.Retry by plugging the finger 2. There is excessive illumination 3. Measure more times, If you can make sure about no problem existing in the product. Please go to a hospital timely for exact diagnosis
SpO2% or pulse rate is shown unstably	1. Finger might not be plugged deep enough 2. Excessive patient movement	1. Retry by plugging the finger 2. Be calmness.
The Monitor can not be powered on	1.No battery or low power of battery 2.Battery might be installed incorrectly 3. The Monitor might be damaged	1. Please replace battery 2. Please reinstall the battery 3. Please contact with local customer service centre
Indication is suddenly off	1. The Oximeter is automatically powered off when no signal is detected longer than 8 seconds 2. The batteries power is too low to work	1. Normal 2. Replace the battery
"Error3" or "Error4" Displayed on screen	1. Err 3 means the red emission LED is damaged. 2. Err 4 means the infra-red emission LED is damaged.	1. Check the red emission LED 2. Check the infra-red emission LED
Error 6	Err 6 means the crystal is failure	Change the crystal
"Error7" displayed on screen	Err 7 means all the emission LED or reception dioxide is damaged.	Check the emission LED and reception dioxide.

15. Declaration

Guidance and Manufacture's declaration – electromagnetic emissions-
For all EQUIPMENT and SYSTEMS

Guidance and Manufacture's declaration - electromagnetic emission		
Guidance and Manufacture's declaration – electromagnetic environment specified below. The customer of the user of the *Pulse Oximeter (18705)* should assure that it is used in such and environment.		
Emission test	**Compliance**	**Electromagnetic Environment – guidance**
RF emissions CISPR 11	Group 1	The pulse Oximeter (18705) uses RF energy only for very low and is not likely to cause interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The pulse Oximeter (18705) is 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	Not Applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-2	Not Applicable	

Guidance and Manufacture's declaration – electromagnetic immunity-
For all EQUIPMENT and SYSTEMS

Guidance and Manufacture's declaration - electromagnetic immunity			
Guidance and Manufacture's declaration – electromagnetic environment specified below. The customer of the user of the *Pulse Oximeter (18705)* should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance Level**	**Electromagnetic Environment – guidance**
Electrostatic Discharge (ESD) IEC 61000-4-2	+/- kV contact +/- 8kV air	+/- kV contact +/- 8kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3A/m	3A/m	Power frequency magnetic fields should be at levels characteristics of a typical location in a typical commercial or hospital environment.

Guidance and Manufacture's declaration – electromagnetic immunity-
For all EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Guidance and Manufacture's declaration - electromagnetic immunity

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is absorption and reflection structures, objects and people.

Field strengths from fixed transmitters, such as base station for radio (cellular/cordless) telepho mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an ele site survey should be considered. If the measured field strength in the location in which the Pu (18705) should be observed to verify normal operation. If abnormal performance is observe measurements may be necessary, such as reorienting of the relocating the Pulse Oximeter (187(B Over the frequency range 150 kHz to 80 MHz, fields strengths should be less than 3 V/m

Recommended separation distances between portable and mobile RF communications eq the EQUIPMENT or SYSTEMS -
For all EQUIPMENT and SYSTEMS that are not LIFE-SUPPORTING

Recommended separation distances between portable and mobile RF communications equipment and *Pulse Oximeter (18705*		
The *Pulse Oximeter (18705)* is intended for use in electromagnetic environment in which disturbances are controlled. The customer or the user of the *Pulse Oximeter (18705)* can electromagnetic interference by maintaining a minimum distance between portable and communications equipment (transmitters) and the *Pulse Oximeter (18705)* as recommended belc to the maximum output power of the communications equipment.		
Rated maximum output power of transmitter (W)	**Separation distance according to frequency of transmitter (m)**	
	80 MHz to 800 MHz $d = \left[\frac{3.5}{E_1}\right]\sqrt{P}$	800 MHz to 2 $d = \left[\frac{7}{E_1}\right]\sqrt{P}$
0.01	0.1167	0.2334
0.1	0.3689	0.7378
1	1.1667	2.3334
10	3.6893	7.3786
100	11.6667	23.3334
For transmitters rated at a maximum output power not listed above, the recommended sepratatic in metres (m) can be estimated using the equation applicable to the frequency of the transmitte the maximum output power rating of the transmitter in watts (W) according to the transmitter man		

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 absorption and reflection from structures, objects and people.

16. Symbol Definitions

Symbol	Definition
	The equipment type is BF
	Refer to user manual before application
	Hemoglobin saturation
	Heart rate (BPM)
	Low power indication
	Serial No
	No for continuous monitoring