

# LD-207U

Little Doctor®

## Ultrasonic Nebulizer LD

*Instruction Manual*

## Inhalator ultradźwiękowy LD

*Instrukcja obsługi*

ENG

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## NEW TECHNOLOGY FOR PRODUCING AEROSOL

LD-207U is a nebulizer, which utilizes the latest MESH – technology of obtaining aerosol: using the mesh membrane and low-frequency ultrasonic generator.

In comparison with usual ultrasonic nebulizers, use of MESH-technology provides several advantages:

- Compact size of the device;
- Use a wide range of medicines, including hormones, antibiotics, antiseptics, and mineral water;
- Residual volume of inhalation solution is reduced to almost zero, which allows us to save expensive medicines;
- Product can operate as from the wall outlet adapter, and from 2 normal batteries or accumulators;
- Operation of the unit is almost silent and inhalation therapy can be carried out even sleeping children;
- During inhalation you can tilt the appliance of 45° from the vertical axis.

## GENERAL INFORMATION

The ultrasonic nebulizer LD is designed for treatment and prevention of respiratory diseases of trachea, bronchus, lung with aerosol of WATER solutions of medicines in hospitals and at home.

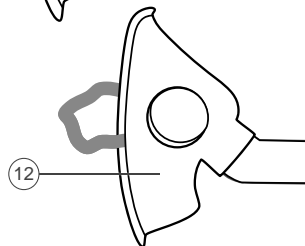
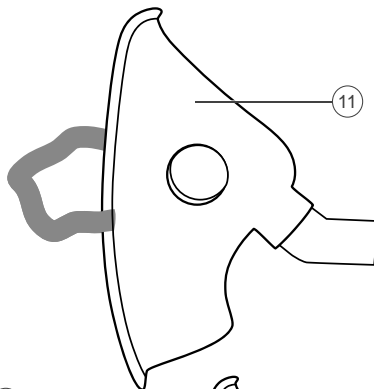
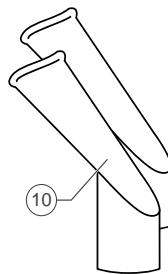
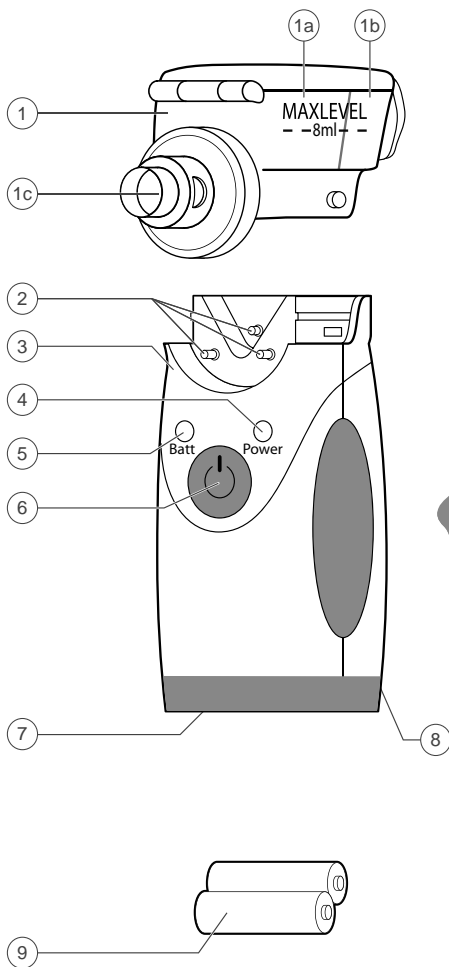
This manual is intended to assist the user in the safe and efficient operation of the ultrasonic nebulizer LD.


The device should be used in accordance with the rules contained in this document, and should not be used for purposes other than those described here. It is important to read and understand the entire instruction manual.

Functionally, the device consists of a chamber with an ultrasonic aerosol generator with mesh membrane and the main unit with a compartment for the batteries. The key On/Off and LED indicators are located on the main body of the device.

# PARTS LIST

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№ POSITION ON THE SCHEME	NAME	DESCRIPTION
1	Inhalation chamber	Removable camera with a mesh membrane to form an aerosol inhalation solution LD-N060. <i>Expendable material.</i>
1a	Compartment for medicine	Compartment for inhalation solution.
1b	Compartment for water	Compartment for hot water.
1c	Mesh membrane	Transforms the inhalation solution into an aerosol.
2	Electrodes	Provide contact between the main unit and the inhalation chamber.
3	Main unit	Main unit of the device.
4	Indicator POWER	The green LED On / Off power unit. ON – power is turned on, or Off – off.
5	Indicator BATT	The yellow LED battery discharge. Flashes – Low charge. Light – the batteries are discharged.
6	Key 	Key On/Off.
7	Compartment for batteries	Compartment for batteries.
8	Socket for power supply	Socket for power supply.
9	Batteries	Batteries AA (LR6), for power supply of the device. <i>Expendable material.</i>
10	Mouthpiece	Inhalation mouthpiece LD-N023. <i>Expendable material.</i>
11	Adult mask	Adult inhalation mask LD-N041. <i>Expendable material.</i>
12	Child mask	Inhalation child mask LD-N040. <i>Expendable material.</i>

## PRECAUTIONARY MEASURES

**Important!** To avoid damage, do not touch the mesh membrane with hands, do not perform any cleaning objects, alcohol or solvents.

**Important! Not allowed to use inhaled solutions containing ether, oil or suspended solids (suspension), including herbal teas and herbal infusions. All types of standard inhalation solution in liquid form for inhalation therapy, produced by pharmaceutical companies, natural mineral waters are recommended for use.**

- Solutions for inhalation have to be prepared under sterile conditions from 0,9% sodium chloride as a solvent. You should not use tap water or even boiled water as inhalation means Cookware, which is preparing the solution, previously should be disinfected by boiling.
- Character of inhalation (through the mouth using a mouthpiece or nose with a mask), duration (usually no more than 10-15 minutes) and frequency, and used inhalation solutions should be determined by YOUR DOCTOR.
- Children should use the device under adult supervision.
- If you are not using the device for a long time, remove the batteries.
- Do not place the device in water, drain, or in the shower. Do not use while bathing.
- If the device does not work, see «Troubleshooting. Detection and correction».
- Use only accessories that are designed for LD-207U and described in this manual.
- Do not insert foreign objects into the holes in the device.

**THIS DEVICE IS NOT INTENDED FOR INHALATION ANESTHESIA AND ARTIFICIAL LUNG VENTILATION**

## SAFETY INFORMATION

### **CAUTION:**

- Never use this device when ambient temperature is over 40°C. For more operating environment requirements, please refer to the section - MAIN TECHNICAL CHARACTERISTICS.
- Do not shake the nebulizer during operation.
- Avoiding any strong shock on the main unit and its components, e.g., falling on the ground.
- Never dismantle the device or attempt to repair any part or component.
- This device is for human use only.
- Always use optional accessories as stated in this Instruction Manual only.
- The device and its parts and components and optional accessories shall only be discarded in accordance with the relevant local regulations. Inappropriate disposal may cause environmental pollution.
- Prior to use, make sure the device and its parts and components (e.g. mouthpiece and mask) are correctly assembled as per this Instruction Manual.

### **RISK OF ELECTRIC SHOCK:**

- Never use the device in case the power cord is wet.

- Never plug in or unplug from the power socket with wet hands.
- Do not immerse the main unit into water or other liquids.
- Protect it against water or other liquid splashes. In case it contacts with any splash, disconnect the power supply and mop up with gauze or other soft adsorbing materials.
- Never use the device in humid environment such as bathroom.
- When connected to power supply, check the supply voltage at power socket is correct and make sure your plugging in will not cause overload.
- Disconnect it from power supply after the use of this device and never leave an energized device aside.
- Clean the device only after disconnecting it from power supply.

## INSTALLATION OF BATTERIES

The set of nebulizer includes two AA batteries (LR6). Included batteries are designed to verify the operability of the device, and their service life may be shorter than service life of new batteries.

To install batteries, open the battery compartment cover by pressing a finger on the latch cover (Figure 1). Insert the batteries observing the polarity (Figure 2) Close the battery compartment cover by pushing your finger until click. New batteries, depending on the type and capacity, can provide work an average of 4 days (when using for 20 minutes per day).

When the WATT indicator is flashing, the nebulizer may work for another 10 minutes. If the WATT lights continuously, it means that the level of charging is too low. Nebulizer stops working. Replace all batteries with new ones.

- Do not leave used batteries inside the device.
- To power the device recommend purchasing alkaline batteries type AA (LR6) or rechargeable Ni-MH type.
- Do not use saline batteries such as R6.

## USE THE DEVICE WITH POWER SUPPLY

Use a power supply (sold separately) with the following specifications:

Output voltage :  $3V \pm 5\%$

Current consumption : at least 500 mA

Plug:



Polarity : "minus" – the internal contact

Outside diameter: :  $3,5 \pm 0,1$  mm

Inner diameter :  $2,1 \pm 0,1$  mm

Length :  $9 \pm 0,3$  mm

Slot for the source: is located on the back side of the device (Fig. 3)

To use the device with power supply, connect the plug to the power supply unit and plug the power supply plug into the power outlet and touch the key . Finished the measurement turn off the device by touching the key , unplug the power supply from the wall outlet and disconnect the power supply connector from the device.

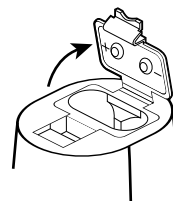


Fig.1

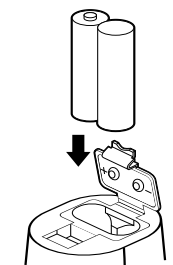


Fig.2



Fig.3

## USE OF THE DEVICE

**Important!** Before using the device for the first time it is necessary to make a full cleaning, as described in item 1 of section «Care, storage, repair and recycling»

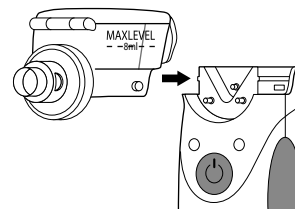


Fig.4

1. Insert the inhalation chamber into the slots at the top of the main unit until it clicks (Fig. 4).


**Attention!** Keep the electrodes of the device and inhalation chamber clean otherwise nebulizer may not work.

**Important!** The service life of a mesh membrane of inhalation chamber is about six months when using three times a day.

2. Open the cover of of inhalation chamber, lifting the latch (Figure 5). Fill the solution into the medicinal compartment (Figure 6). The maximum capacity of the compartment for drugs – 8 ml (up to the mark MAXLEVEL), minimum – 0.5 ml. In order to maintain the temperature of the warm solution, complete compartment for water with hot water.(Fig. 6) It is recommended to fill the water heated to 80°C. Close the cover of inhalation chamber, lowering the latch.

**Do not use excessive force when opening and closing the latch (This will increase the life of an inhalation chamber).**

Make sure the lid is closed tightly, and inhalation solution will not pour out from the inhalation chamber.

3. Place the adapter on the mouthpiece inhalation chamber, while tabs on the inhalation chamber should fall into the holes on the adapter.
4. Place the mouthpiece (Figure 7) or mask (via an adapter for masks) (Figure 8).
5. To start the procedure of inhalation, touch the key  POWER indicator will turn green.

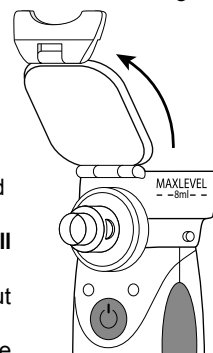


Fig.5

**Attention!** If inhalation chamber is empty when power is on, the POWER indicator will illuminate for one second, then the device automatically turn off.

It is possible that after the power is on, the nebulizer will spray the inhalation solution for one second, then pauses for 0,5 seconds. It is the normal operation of the device, however, after this pause, the device must spray inhalation solution continuously.

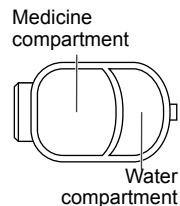


Fig.6

### INHALATION


For effective inhalation need to calm down, relax and sit up straight If you make inhalation in bed, then put a pillow under your back so that the back was as straight as possible Inconvenient posture and irregular breathing can lead to blockage the part of the lung and certain areas of the respiratory tract.


**Important!** Each patient is recommended to use an individual mouthpiece and / or mask.

Take a comfortable position and start inhalation. Breathing should be smooth, breathe slowly and deeply to spray deep into the respiratory tract.



**Important!** During inhalation do not close the holes (Figure 9). This will reduce the efficiency of the device.


If you want to stop the procedure, press the  to turn off the power. POWER indicator will go out. If inhalation solution used in full, the unit will automatically turn off.

**Attention!** If during inhalation device does not turn off automatically after a full inhalation solution is used, turn off the power by touching the key . See «Troubleshooting. Detection and correction» to determine the cause of the problem».

During the procedure, you can tilt the inhaler (at an angle of up to 45 °relative to the vertical axis). However, make sure that the inhalation solution contact with mesh membrane. Nebulizer may function normally for a while after changing the device's angle.

If the angle of tilt of the inhaler does not allow the inhalation solution to be in contact with the mesh membrane, it will work properly for about 10 seconds and then turns off (time depends on the type of inhalation solution).

When inhalation solution remains slightly, tilt the device to yourself. It allows to use inhalation solution completely. Do not shake the nebulizer during use. It may cause automatic shutdown.




At the end of inhalation, turn the unit off by touching the key , the POWER indicator will turn off. Remove the inhalation chamber from the device by touching the key PRESS on the back side of nebulizer and pushing forward the inhalation chamber (Fig.10).

Clean the unit as described in item «CARE, STORAGE, REPAIR AND RECYCLING». When using the adapter for a mask, after inhalation the condensate can form in its widest part.

### MEMBRANE CLEANING MODE

The membrane cleaning mode is intended for automatic membrane cleaning from drug residues and other deposits.

To turn on the membrane cleaning mode:

1. Pour min 8 ml of distilled water into the container for medicinal solution.
2. When the device is off, press and hold the  button for about 5 sec, until the WATT indicator lights up. Release the  button. After about 3-5 seconds, WATT indicator will start flashing. The device is in the membrane cleaning mode while WATT indicator is flashing.
3. The device will turn off automatically after 10 minutes. To forcefully turn off the membrane cleaning mode, briefly press the  button.

It is recommended to clean the membrane at least once a month if the device is used on a daily basis, or when the aerosol performance decreased or is absent.

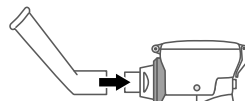


Fig.7

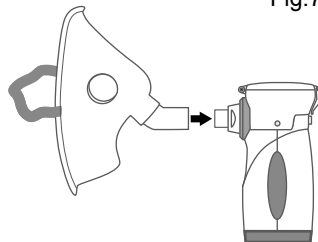


Fig.8

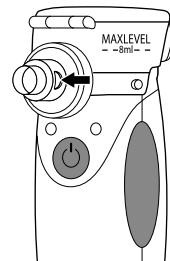


Fig.9

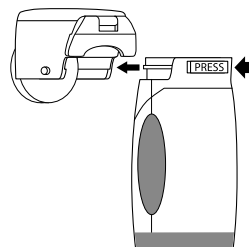


Fig.10

## CARE, STORAGE, REPAIR AND RECYCLING

1. After inhalation with any medicine solution is recommended to spray clean water for 1-2 minutes to clean the mesh membrane of residual medicines. DO NOT clean the membrane with items (towels, rags, cotton buds and so on)!
2. Carry out regular cleaning of the device and all accessories. All accessories of the device is recommended to wipe 3% hydrogen peroxide with 0.5% solution of detergent (eg washing powder) Then to wash thoroughly under running water inhalation chamber and a reservoir for medical solution. Mouthpieces allow processing of boiling for 10 minutes or autoclaving at temperatures up to 150 °C. After treatment, wipe all parts with a soft cloth. Keep the device with installed adapter for the mouthpiece to prevent damage of the mesh membrane.
3. The device should be protected from direct sunlight and strikes.
4. Do not store or use the device in the vicinity of heaters and open flames.
5. Protect the device from contamination.
6. Do not touch the device with aggressive solutions.
7. If necessary, carry out repairs only in specialized organizations.
8. The life of this product is 5 years from the date of transfer to the consumer. Consumables – 1 year from the date of transfer to the consumer. On the expiry of the life, you should periodically consult specialists (the qualified service organization) to check the technical condition of the device and, if necessary, for its recycling in accordance with applicable disposal regulations in your area.

The manufacturer not set specific conditions of utilization.

## WARRANTY OBLIGATIONS

The following LD product is covered by warranty for the period specified in the warranty card. Warranty does not cover consumables (inhalation chambers, masks, mouthpieces, pipes and so on).

Warranties are issued warranty certificate when selling the device to the customer. Addresses of organizations performing warranty service are specified in the warranty card.

## COMPLETE SET

1. Main unit – 1 pc.
2. Consumables:
  - 2.1. Inhalation chamber – 1 pc.
  - 2.2. Adapter for mouthpiece – 1pc.
  - 2.3. Adapter for mask – 1pc.
  - 2.4. Mask inhalation LD-N040, children – 1 pc.
  - 2.5. Mask inhalation LD-N041, adult – 1 pc.
  - 2.6. Mouthpiece inhalation LD-N023 – 2 pcs.
3. AA batteries, 1.5 V – 2 pcs.
4. Manual – 1 pc.
5. Handbag – 1 pc.
6. Warranty Card – 1 pc.
7. Package – 1 pc.




## MAIN TECHNICAL CHARACTERISTICS




Model	LD-207U
Type	Ultrasonic
Power supply	2×AA batteries or Adapter (AC-DC 3V1A)
Rated Power	2W
Ultrasonic Frequency	140 kHz
Safety level	Type BF, ClassII
Nebulizing Rate	≥0.2ml/min
Max./Min. Liquid Volume	8ml/0.5ml
Average particle size of aerosol (MMAD)	Approximately 5µm
Range of aerosol particles, mkm	<5 – 40% <10 – 90%
Low Battery Indicate	2.2V±0.2V
Nebulizing Head Life	180 hours
Battery Life	90 minutes supplied by two AA Alkaline Battery
Automatic Shutdown	Automatic shutdown without liquid
Noise level, not more, dB	Below 50
Power supply, V	2,8-3
Source of power supply (sold separately):	
Output voltage,V	3 ± 5%
Load current, minimum mA	500
Plug:	
Polarity	“minus” – internal contact
External diameter, mm	3,5 ± 0,1
Inner diameter, mm	2,1 ± 0,1
Length, mm	9 ± 0,3
Operating Temperature and humidity/ Air pressure	+10°C~+40°C, ≤ 85% R.H/ 700hPa to 1060hPa
Storage Temperature and humidity/ Air pressure	-10°C~+40°C, ≤ 85% R.H/ 500hPa to 1060hPa
Pollution Degrees	Degrees 2
Overvoltage Category	Category II
High Altitudes (m)	2000m
Device weight (without package), not more, g	300
Overall dimensions of main unit with inhalation chamber, mm	65 x 45 x 120
Accessories	Adult mask, Child mask, Mouthpiece, Instruction manual, Gift box, Warranty card, 2×AA batteries, Adapter (optional).

### Year and month of production

Indicated on the device case in the serial number in the form of «AYYMM207XXXX» where YY is the year and MM is the month of production.

## SYMBOL EXPLANATION

-  BF type product
-  Important: Read the instruction
-  Protection class II

 Manufacturer  
 0123 Compliance with the Directive 93/42/EEC  
 Representative in the EU

The revision date of this Operation manual is indicated at the last page in the EXXX/YYMM/NN format, where YY is the year, MM is the month, and NN is the revision number. Technical specifications are subject to change without prior notice in order to improve operational properties and quality of the product.

## TROUBLESHOOTING. DETECTION AND CORRECTION

At occurrence of any problems when using the device, refer to the table below for possible causes of failure.

Problem	Cause	Recommended steps
The intensity of aerosol formation is very low	No contact between inhalation solution and mesh membrane for more than 10 sec.	Change the angle of inclination of nebulizer so that the inhalation solution contacts with mesh membrane.
	MESH membrane of inhalation chamber is clogged. Use not recommended Medicines with high viscosity.	Clean the inhalation chamber as described in section "CARE, STORAGE, REPAIR AND RECYCLING". If after cleaning the problem persists, replace the inhalation chamber to a new chamber.
	Electrodes of nebulizer and inhalation chamber are contaminated.	Wipe and re-power on.
	LED Watt blinks, charge level of batteries is inadequate.	Replace all the batteries and re-power on
After power on, indicator POWER lights for one second, and then turned off	Inhalation chamber is empty	Pour the inhalation solution in to the inhalation chamber.
	No contact between inhalation solution and mesh membrane.	Change the angle of inclination of nebulizer so that the inhalation solution contacts with mesh membrane.
	Electrodes of nebulizer and inhalation chamber are contaminated.	Wipe and re-power on
Light POWER is not on and medicine is not sprayed	Batteries are inserted incorrectly	Insert the batteries observing polarity and again turn on power.
	Low battery charge	Replace all the batteries and re-power on

Problem	Cause	Recommended steps
Light POWER is on, but medicine is not sprayed	LED WATT light continuously: very low battery charge.	Replace all the batteries and re-power on.
	Breakdown of MESH membrane of inhalation chamber.	Replace the inhalation chamber to the new chamber.
	Electrodes of nebulizer and inhalation chamber are contaminated.	Wipe and re-power on.
	MESH membrane of inhalation chamber is very contaminated.	Clean the inhalation chamber as described in section "CARE, STORAGE, REPAIR AND RECYCLING". If after cleaning the problem persists, replace the inhalation chamber to a new chamber.
Nebulizer turns off during use	Finished inhalation solution.	Pour the inhalation solution in to the inhalation chamber.
	No contact between inhalation solution and mesh membrane for more than 10 sec.	Change the angle of inclination of nebulizer so that the inhalation solution contacts with mesh membrane.
	The nebulizer was shaken during use.	Hold the nebulizer in your hand straight, do not shake it.
Inhalation solution stems from inhalation chamber	Breakdown of MESH membrane of inhalation chamber or aging of the seal of the inhalation chamber.	Replace the inhalation chamber to the new chamber.

## CERTIFICATION AND STATE REGISTRATION

This unit manufacturing is certified according to international standard ISO 13485. Unit comply with the requirements of European Directive MDD 93/42/EEC, international standards EN 980, EN 1041, EN 1060-1, EN 1060-3, EN 10601-1-2, ISO 14971, EMC (IEC 60601-1-2/A1, CISPR 11/A2 (Group 1, Class A), IEC 61000-3-2, IEC 61000-3-3/A2).

**✉ Complaints and requests should be addressed to:**

Little Doctor Europe Sp. z o.o.  
 57G Zawila Street, 30-390, Krakow, Poland  
 Service phone: +48 12 2684748, 2684749

**Manufactured under control:**

Little Doctor International (S) Pte. Ltd., Yishun Central P.O. Box 9293 Singapore 917699

**Manufacturer:**

Little Doctor Electronic (Nantong) Co. Ltd., No.8, Tongxing Road Economic & Technical Development Area, Nantong 226010, Jiangsu, PEOPLE'S REPUBLIC OF CHINA

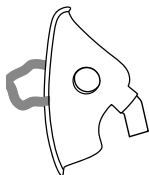
**Distributor in Europe:**

Little Doctor Europe Sp. z o.o.  
57G Zawila Street, 30-390, Kraków, Poland  
Sales Office phone: +48 12 2684746, 12 2684747, fax: +48 12 268 47 53  
E-mail: [biuro@littledoctor.pl](mailto:biuro@littledoctor.pl)  
[www.LittleDoctor.pl](http://www.LittleDoctor.pl)

**Authorized Representative in the EU:**

Little Doctor Europe Sp. z o.o.  
57G Zawila Street, 30-390, Kraków, Poland

## ACCESSORIES FOR NEBULIZER LD-207U \*



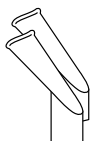
**Adult inhalation mask LD-N041**

- Designed for use with ultrasonic nebulizer LD
- Made of PVC
- For individual use
- Package Quantity - 1 pc.



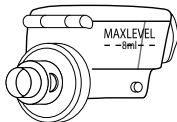
**Child inhalation mask LD-N040**

- Designed for use with ultrasonic nebulizer LD
- Made of PVC
- For individual use
- Package Quantity - 1 pc.



**Inhalational mouthpiece LD-N023**

- Designed for use with ultrasonic nebulizer LD-250U, LD-207U
- Made of plastic
- For individual use
- Package Quantity - 2 pcs.



**Nebulizer Chamber LD-N060**

- For ultrasonic nebulizer LD-207U
- Package Quantity - 1 pc.

\* Sold separately.

## MANUFACTURER'S DECLARATION

### Guidance and manufacturer's declaration – electromagnetic immunity

The model LD-207U Mesh Nebulizer is intended for use in the electromagnetic environment specified below. The customer or the user of the model LD-207U Mesh Nebulizer should assure that is used in such an environment.


Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6kV contact ±8kV air	±6 kV contact ±8 kV air	Floor should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines	±2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode	±1 kV differential mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec	<5% UT (>95% dip in UT) for 0.5 cycle 40% UT (60% dip in UT) for 5 cycles 70% UT (30% dip in UT) for 25 cycles <5% UT (>95% dip in UT) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the LD-207U Mesh Nebulizer Equipment requires continued operation during power mains interruptions, it is recommended that the LD-207U Mesh Nebulizer Equipment be powered from an uninterruptible power supply or a battery.
Power frequency magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

Conducted RF IEC 61000-4-6	3Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the LD-207U Mesh Nebulizer Equipment, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.5 GHz	3 V/m	

$$d = \left[ \frac{3.5}{V_r} \right] \sqrt{P}$$

$$d = \left[ \frac{3.5}{E_r} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$$

$$d = \left[ \frac{7}{E_r} \right] \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$$

Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).<sup>b</sup> Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,<sup>c</sup> should be less than the compliance level in each frequency range.<sup>d</sup> Interference may occur in the vicinity of equipment marked with the following symbol: 

Note 1 At 80MHz and 800MHz, 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.

<sup>a</sup> Field strength from fixed transmitters, such as base stations for radio 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 Model LD-207U Mesh Nebulizer is used exceeds the applicable RF compliance level above, the Model LD-207U Digital Blood Pressure Monitor should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Model LD-207U Mesh Nebulizer.

<sup>b</sup> Over the frequency range 150KHz to 80MHz, field strength should be less than 3 V/m.



Recommended separation distances between portable and mobile RF communications equipment and the LD-207U Mesh Nebulizer.

The LD-207U Mesh Nebulizer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the LD-207U Mesh Nebulizer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the LD-207U Mesh Nebulizer as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter (m)		
	150 kHz to 80 MHz $d = \left[ \frac{3.5}{V_1} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[ \frac{3.5}{E_1} \right] \sqrt{P}$	800 MHz to 2.5 GHz $d = \left[ \frac{7}{E_1} \right] \sqrt{P}$
0.01	0.117	0.117	0.233
0.1	0.369	0.369	0.738
1	1.167	1.167	2.333
10	3.689	3.689	7.379
100	11.667	11.667	23.333



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