

Veterinary Laser Therapy Device

User Manual

(TooLas)



Please read the user manual thoroughly before attempting to operate this device.



Warning: This laser device is intended for animal use only! Under no circumstances should this laser system be used as a medical device for human treatment.

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1. Glossary of Terms and Abbreviations

Term	Definition
Continuous Wave, Continuous Emission, or Continuous Mode	Uninterrupted laser emission
Pulse, Pulsed Emission, or Pulsed Mode	Intermittent laser emission; key parameters include interval time (see Duty Cycle) and repetition rate (see Pulse Frequency))
Pulse Frequency	Number of pulses per second
Hertz (Hz)	Unit of measurement for pulse frequency (pulses/second)
Joule (J)	Unit of measurement for emitted energy
Watt (W)	Unit of measurement for laser power


Abbreviations	Terms
AC	Alternating Current
cm	Centimeter
cm ²	Square Centimeter
CW	Continuous Wave
EMC	Electromagnetic Compatibility
MHz	Megahertz
Hz	Hertz
ISO	International Organization for Standardization
J	Joule
LCD	Liquid Crystal Display
LSO	Laser Safety Officer
LTCZ	Laser Treatment Control Zone
m	Meter
m ²	Square Meter
MPE	Maximum Permissible Exposure
nm	Nanometer
NOHD	Nominal Ocular Hazard Distance
OD	Optical Density
RF	Radio Frequency
s	Second
V	Volt


2. Safety Instructions

This section provides safety instructions and safety-related statements for the safe and effective operation of the laser therapy device. Additional guidelines, statements, and agreements are provided throughout this manual. All guidelines, warnings, cautionary statements, and agreements must be followed when using this device.

2.1 Conventions Used in This Manual

Various warnings, cautions, recommendations, and notes are used throughout this manual. The explanations and corresponding symbols are illustrated as follows:

 **Warning:** Indicates a specific or potential hazard. Ignoring or compromising this warning may result in serious injury. The warning symbol is yellow.


 **Caution:** Refers to possible issues related to device use or misuse. It describes precautions or potential problems that may arise during the use of the laser device. The caution symbol is black and white.

Recommendation: Provides optimal guidance for operators to ensure best usage practices.


Note: Provides necessary explanations of related terms or operations, as well as descriptions of expected or unexpected conditions.

2.2 Laser Safety

Operation of this laser system is permitted only after completing the relevant training courses and achieving proficiency.

 **Warning:** This laser device is intended for animal use only! Under no circumstances should this laser system be used as a medical device for humans.

2.3 Laser Safety Officer (LSO)

 **Warning:** At least one person must be designated as the Laser Safety Officer (LSO) for each device. The LSO is responsible for providing training on all operations and safety procedures, as well as supervising the site to prevent laser safety incidents.

2.4 Laser Training

 **Warning: Operation of this device is prohibited without proper training.**

For information on additional available training options, please contact Tootoo Meditech Co., Ltd. at +86-755-28306385.

2.5 Laser Treatment Control Zone (LTCZ)

Choose a well-ventilated and safe location to install and place the laser device. If the laser device is used in a multifunctional area, a separate designated sub-area must be

established within the multifunctional space for device operation. This sub-area should be shielded from other areas by certified barriers or curtains. Appropriate partitions should be installed to create a “single-entry, light-tight” room that meets the above requirements.

Warning: When using the laser, the laser safety sign (see Figure 1) must be posted outside the treatment room door or outside the barrier.



Figure 1

Warning: When selecting laser barriers or curtains to create a temporary work area, only certified materials with protection levels meeting or exceeding laser safety requirements shall be used. The intended usage environment must be carefully reviewed and considered.

2.6 Fire and Explosion Hazards

Warning: Do not operate the laser system near flammable or explosive materials to avoid risk of fire or explosion.

Warning: Never direct the laser beam at flammable objects. A fire extinguisher should be readily available in the vicinity for emergency use.

Warning: When cleaning the laser system with flammable liquids such as alcohol, wait until the liquid has completely evaporated before powering on the device to prevent ignition.

2.7 Safety Features

All personnel operating this laser system shall receive training and be familiar with the following laser safety features.

2.7.1 Emergency Stop Button

The emergency stop button (see Figure 2) is located at the right rear side of the laser system screen. In case of an emergency, press this button immediately to cut off all power to the device.



Figure 2

2.7.2 Password Entry

The laser system requires a login password. The default password is 1234 (see Figure 3).



2.7.3 Laser Emission Status

When the laser system is in use, the laser emission status is divided into four stages: Standby, Warming Up, Ready, and Emitting. When the system reaches the “Ready” stage, a red indicator light will appear on the handpiece. An audible signal will sound during laser emission.

2.7.4 Idle Protection

If no operation is performed while the system is in the “Ready” state, it will automatically return to “Standby” after 100 seconds.

2.8 Laser Safety Goggles

Warning: During laser treatment, all personnel within the Laser Treatment Control Zone (LTCZ) must wear laser safety goggles.

Warning: Animals undergoing laser treatment must wear laser safety goggles or fully opaque eye shields to prevent eye injury.

The laser system safety goggles are shown below (see Figure 4):



Figure 4

3. System Setup

Caution: The device must be powered off before moving the laser system.

3.1 Placement

Choose a well-ventilated and secure location to place the laser system (for details on the Laser Treatment Control Zone, see Section 2.5).

- ❖ The placement area should be within 1.8 meters of a power outlet, and the outlet must be properly grounded.
- ❖ The placement surface must be flat and level.
- ❖ If the system is positioned against a wall on either side, leave at least 10 cm of clearance to ensure proper heat dissipation.
- ❖ Do not store flammable or explosive materials near the placement area.
- ❖ A fire extinguisher must be available nearby.

3.2 Unpacking and Initial Setup

Step 1: Open the packaging box and carefully remove the laser therapy device. When lifting the device, hook your fingers through the handle and gently pull upward. Place the device horizontally on the operating table (see Figure 5).



Figure 5

Step 2: Check that all components are complete and undamaged. If any issues are found, please contact after-sales support or your sales representative immediately.

Step 3: When connecting the external power supply to the laser therapy device, ensure that the red dot on the adapter plug aligns with the red dot on the device's power socket (see Figures 6 and 7).



Figures 6



Figures 7

- ⚠ **Caution:** Incorrectly inserting the external power cord may damage the plug.
- ⚠ **Warning:** Do not replace the power supply provided by the manufacturer.
- ⚠ **Warning:** Do not immerse the power supply in water or allow it to become wet.
- ⚠ **Caution:** Using this power supply with other devices may cause damage to the device or the power supply.
- ⚠ **Caution:** Avoid dropping the power supply.

⚠ Caution: Do not disassemble, open, crush, bend, puncture, tear, or burn the power supply.

Step 5: After using the device, if it needs to be stored back into the packaging box, place it with the screen facing the protective foam. Gently lower the device into place, ensuring that the optical fiber cable is not bent (see Figure 8).



Figure 8



3.3 Transmission System Connection

Caution: The optical fiber is a component sensitive to contamination.



Non-professionals must not plug, unplug, disassemble, or replace the fiber connector on the handpiece at will. Contamination of the fiber port by foreign particles may result in reduced laser output power, shortened service life, or system damage.



Caution: If the fiber must be disconnected, always use a dust cap to prevent contamination of the output port.

Caution: Do not excessively bend the fiber. The minimum allowable bending radius is 40 mm.

The laser system is delivered with a pre-connected laser transmission assembly. If replacement is necessary, please follow the steps below. On-site replacement must not be performed by anyone other than authorized service personnel from our company.

Step 1: Loosen the metal fiber connector (Port 1) until it is fully detached. Gently pull the fiber out of the device, taking care to prevent contamination (see Figure 10).

Step 2: After removing the fiber, unplug the finger switch cable (Port 2) from the device (see Figure 9).



① Laser Emission Port

Figure 9

② Finger Switch

Step 3: Attach dust caps to the removed fiber and finger switch cable to protect them from contamination (see Figure 10).



Figure 10

Step 4: Remove the new assembly from the protective foam packaging.

Step 5: Insert the finger switch connector into the finger switch port and tighten it securely (see Figure 11).



Figure 11

Step 6: Remove the dust cap from the fiber connector.

Step 7: Insert the fiber connector into the finger laser emission port and tighten it securely.

3.4 Fiber Management

The rear of the main unit is equipped with a fiber reel and a handpiece holder. After treatment, the operator should wind the fiber clockwise around the reel for three to four loops,

ensuring the fiber remains loose to avoid tension. The handpiece should be placed on the holder for convenient storage and transportation (see Figure 12).




Figure 12

4. Device Description

The laser system consists of a laser generator and a laser emission assembly. Operators can select built-in treatment programs (Laser Therapy Mode / Intelligent Mode) or customize the system's output power and treatment time (Surgical Mode / Expert Mode) via the software. Once the operator has selected the desired treatment program, the prescribed steps must be followed (see Section 5 for details).

4.1 4.1 Indications

The laser system emits visible and near-infrared light, utilizing photothermal effects and photobiomodulation (PBM) to heat local tissues. This can temporarily relieve mild muscle and joint pain, muscle spasms, and stiffness associated with arthritis. Additionally, the system can promote muscle contraction and temporarily enhance local blood circulation (for animal use only).

 | **Warning: This laser system is for animal use only!**

4.2 Contraindications

Laser therapy is prohibited in the following situations:

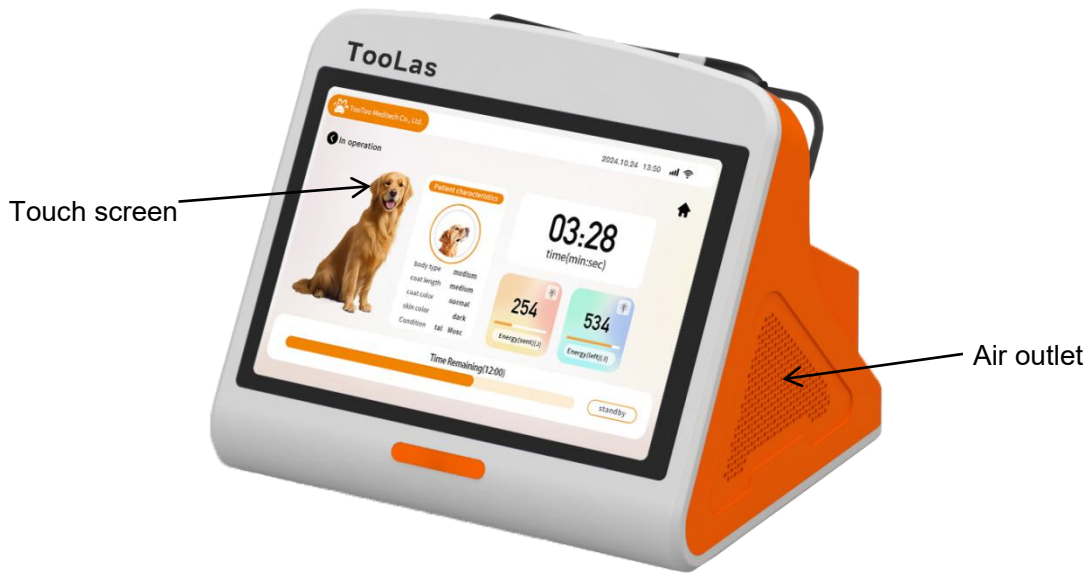
- ❖ **Bleeding:** Do not irradiate any bleeding area with the laser. For wounds or trauma, laser treatment should only be performed after hemostasis is achieved.
- ❖ **Eyes:** Avoid direct irradiation. Laser exposure can cause irreversible damage to the retina. Under no circumstances should the laser be directed at the eyes, even when wearing protective goggles. During laser treatment, the animal, operator, and all assisting personnel must wear laser safety goggles at all times.
- ❖ **Testicles:** Do not irradiate the animal's testicles with the laser.
- ❖ **Injection Sites:** Do not apply laser directly to areas where drugs or vaccines have been recently injected.
- ❖ **Malignant Tumors:** Do not use the laser on known primary or secondary malignant tumor sites. Treatment of melanomas and sarcomas should be conducted under veterinary supervision.
- ❖ **Pregnancy:** Do not irradiate pregnant animals with the laser.
- ❖ **Animals with Heart Disease:** Avoid using laser on the sympathetic ganglia, vagus nerve, and heart regions in animals with heart conditions, as laser therapy may significantly affect nerve function in these areas.

Use laser therapy with caution or avoid it in the following situations:

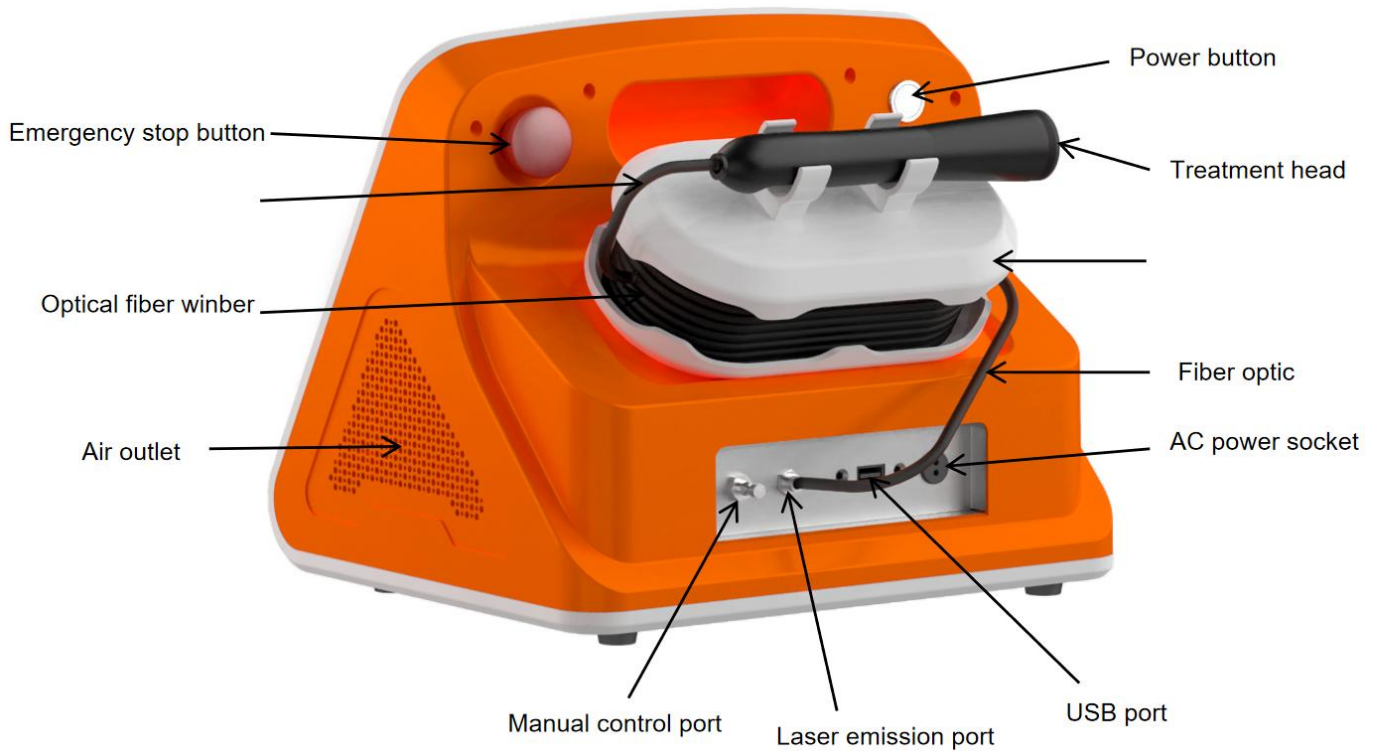
- ❖ **Photosensitizing Medications:** Animals undergoing treatment with photosensitizing medications should be treated with caution.
- ❖ **Epiphysitis (Growth Plate Inflammation):** When treating epiphysitis with laser therapy, start with a low power setting to avoid overstimulation or potential side effects.

4.3 Laser System Diagram

The main unit of the laser system consists of the laser emission module, hardware control system, cooling system, display system, and wireless transmission module (including 4G and Wi-Fi modules). Detailed interface information is shown in Figures 12 and 13.



Figures 12



Figures 12

4.4 Emission Components

Warning: Only accessories and optical fibers provided by the manufacturer of this laser system are permitted for use.

Warning: If any part of the transmission system becomes overheated or emits smoke, immediately power off the laser system, stop operation, and contact customer service for assistance.

The laser emission assembly includes replaceable treatment heads, a handpiece, and a flexible optical fiber. There are two modes of laser emission control: one is via the finger

switch on the handpiece (Figure 14), and the other is via the wireless footswitch (Figure 15). The emission mode can be changed in the “Settings” menu.



Figure 14



Figure 15

Warning: Do not operate the laser system without a treatment head attached.

If continuous pressure on the finger switch is required during the entire treatment, this setting can be adjusted in the “Settings” menu. To remove the treatment head, turn it counterclockwise. To install the treatment head, turn it clockwise (see Fig. 16).

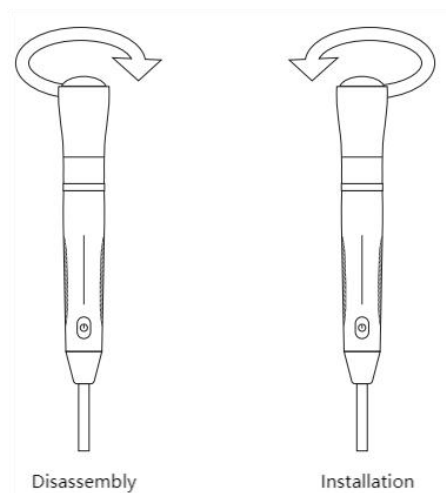


Figure 15

4.4.1 Treatment Heads

The following lists the various treatment heads included in the laser emission assembly, along with their usage instructions.



Non-contact Treatment Head

The non-contact treatment head is suitable for non-contact applications or precise treatment of soft tissues (such as wound care or dermatitis treatment). Using the non-contact treatment head helps to avoid secondary infections. During treatment, the operator should irradiate the treatment area and its important surrounding tissues evenly by moving the head in a “painting” or “serpentine” pattern.



Contact Treatment Head

The contact treatment head is suitable for applications that require direct contact with soft tissue during treatment. It is not recommended for use on open wounds, non-intact skin, or sensitive areas. The head should be held perpendicular to the skin and must not be applied at any other angle. During treatment, the head should be moved evenly over the target area and its important surrounding regions in a “painting” or “serpentine” motion.



ENT Treatment Head(optional)

The ENT treatment head is specially designed for laser therapy of animals’ ear, nose, and throat conditions, providing a non-invasive and efficient treatment solution. It effectively reduces inflammation and pain, promotes tissue repair, improves local blood circulation, and accelerates wound healing. Suitable for pets and other animals, it treats a variety of ENT diseases including otitis externa, otitis media, rhinitis, sinusitis, and pharyngitis. Its non-invasive and painless nature significantly reduces animal discomfort, while its simple operation and high safety make it an essential tool in veterinary clinical treatment. Additionally, the device is easy to maintain and allows treatment plans to be adjusted based on the specific condition of different animals, offering precise and gentle rehabilitation support for animal health.



Fiber Optic Needle Cutting Head(optional)

The fiber optic needle cutting head is a high-precision medical accessory designed specifically for animals. It combines laser therapy with minimally invasive surgical functions. Through a slender fiber optic probe, laser energy is precisely delivered to deep tissues, enabling cutting, vaporization, or coagulation of pathological areas. It is suitable for minimally invasive procedures such as the removal of proliferative tissues and tissue repair. This device features precise operation, minimal trauma, and rapid recovery, effectively reducing damage to healthy tissues.

4.4.2 Treatment Head Specifications








The following table lists the beam divergence angle and Nominal Ocular Hazard Distance (NOHD) for each treatment head. According to ANSI Z136.3, NOHD is defined as the distance along the laser beam axis from the laser to the human eye, beyond which the irradiance or radiant exposure is not expected to exceed the appropriate Maximum Permissible Exposure (MPE) during normal operation. When the distance exceeds the NOHD, the beam intensity will be below the MPE.

Treatment Heads	Beam Divergence Full Angle		NOHD(m)	NOHD (ft)
	radian	Degree		
Non-Contact Treatment Head	0.8148	47	0.4	1' 4"
Contact Treatment Head	0.2258	13	1.1	3' 8"

5 Device Operation

5.1 Safety Precautions

5.2 During laser treatment, all personnel within the Laser Treatment Control Zone (LTCZ) must wear laser safety protective eyewear.

-  **WARNING:** The laser safety goggles must have an optical density (OD) > 5.0 and be rated for laser emission wavelengths of 810nm and 980nm. Only the goggles provided with the laser system should be used.
-  **WARNING:** All individuals within the LTCZ must wear the manufacturer-provided laser safety goggles at all times.
-  **WARNING:** Never stare directly at the laser treatment head attached to an operating device, even while wearing protective goggles.
-  **WARNING:** Never aim the laser directly at the eyes.
-  **WARNING:** Do not direct the laser beam toward anything other than the intended treatment area. Direct or reflected exposure to the laser beam may cause serious injury, including corneal and/or retinal damage, and can result in permanent blindness in one or both eyes.
-  **WARNING:** If the laser beam accidentally irradiates the eyes or skin and injury is suspected (e.g., direct eye exposure), seek medical attention immediately.
-  **WARNING:** Failure to follow all safety instructions and warnings may result in **hazardous laser radiation exposure** to everyone within the Laser Treatment Control Zone (LTCZ).
-  **WARNING:** Failure to comply with the operational procedures outlined in this manual may result in exposure to harmful laser radiation.
-  **WARNING:** Avoid using flammable solvents, anesthetics, or oxidizing gases such as nitrous oxide (N₂O) and oxygen. Under oxygen-rich conditions, the heat generated during normal laser operation may ignite certain materials such as cotton or wool.
-  **WARNING:** Do not use the laser for treatment until any alcohol-based cleaning solutions have completely evaporated. Failure to do so may result in the ignition of alcohol vapors or residues by the laser.

5.2 Treatment Information

To operate the laser system correctly, strict laser safety measures must be followed, and the operator should have a thorough understanding of the interaction mechanisms between the laser and biological tissues. Additionally, a comprehensive knowledge of the laser's wavelength, frequency, as well as the characteristics and anatomical structure of the target tissue is essential.




Recommendation: Appropriate diagnosis and treatment planning should be performed by certified professionals or under their direct supervision.

5.2.1 Preset Programs

- ❖ The preset programs are set to CW (Continuous Wave) mode.

- ❖ Penetration depth is determined by a combination of spot size, tissue type, power, and wavelength.
- ❖ Mastery of veterinary anatomy and the principles of laser-tissue interaction is essential to ensure treatment safety and effectiveness.

5.2.2 Patient Preparation

-  **Warning:** Do not allow any reflective objects to enter or block the laser path during laser emission. Direct or indirect exposure to the laser beam can cause corneal and retinal damage, potentially leading to blindness.
-  **Warning:** Do not pre-treat the tissue (e.g., with heat packs or wet compresses) before laser treatment. The tissue to be treated must be dry and at normal temperature before laser application.
-  **Warning:** Ensure that any alcohol on the device has completely evaporated/dried before laser emission.

When performing laser treatment on animals, the following guidelines should be followed:

- ❖ The treatment area must be exposed.
- ❖ The treatment area should be clean, free of surface dirt or oils. Prior to treatment, the area should be cleaned to remove any local sprays, ointments, or lotions.
- ❖ The thermal effect may vary depending on the color of the fur and skin pigmentation. Dark pigments (such as melanin) absorb laser energy more strongly, resulting in a more pronounced thermal effect. If the animal experiences discomfort or the temperature in the fur area becomes too high, the following measures should be taken:
 1. Increase treatment distance: appropriately increase the distance between the laser handpiece and the skin to reduce energy density and minimize thermal effects.
 2. Increase handpiece movement speed: move the laser handpiece more quickly to avoid excessive energy concentration in one area and prevent thermal injury.
 3. Reduce output power: adjust the laser device's output power according to the animal's response to reduce the intensity of the thermal effect.

5.2.3 Treatment Precautions

- ❖ Pay attention to any surface thermal discomfort.
- ❖ Always keep the laser beam perpendicular to the skin surface.

5.2.4 Contact Technique

- ❖ Operation can be performed using either contact or non-contact methods.
- ❖ Continuously move the handpiece in a grid scanning pattern to cover a larger treatment area.

5.3 Laser Treatment Procedure

When using this laser system for treatment, professional techniques and understanding of relevant precautions are required.

5.3.1 Considerations for Skin Color and Other Pigmentation

Operators should select the appropriate settings based on the patient's actual skin color to optimize treatment efficacy.

5.3.2 Treatment Techniques

- ❖ During treatment, it is essential to closely monitor the patient's comfort level. The laser typically provides a soothing warmth sensation. If the patient has limited perception of temperature changes or does not respond to increased heat, proceed with caution and consider performing the treatment at a lower power setting. If the patient experiences any discomfort, immediately reduce the power output or pause the treatment.
- ❖ Treatment should be performed directly on exposed skin; avoid operating through fabrics or bandages.
- ❖ Ensure the treatment area is clean, free of surface dirt or oils.
- ❖ Treatment may be performed using either contact or non-contact techniques. Refer to section 4.4.1 for recommended usage methods of the various treatment heads.
- ❖ It is recommended to clean the treatment head with 75% ethanol solution.
- ❖ To achieve the optimal dosage, maintain the treatment head perpendicular to the skin.
- ❖ Continuously move the treatment head at a speed of 3–10 cm/s.
- ❖ Ensure the treatment dose is evenly distributed over the treatment area by first moving the treatment head horizontally to cover the entire region, then moving it vertically back and forth (see Figure 17 for detailed operation) to fully cover the area.
- ❖ Treatment may be combined with stretching exercises or low-intensity physical activity.

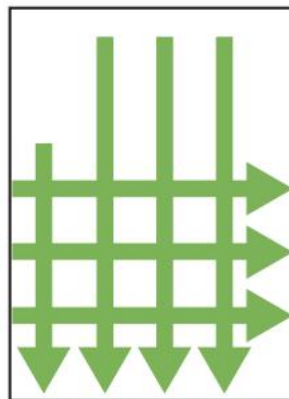


Figure 17

5.3.3 Dosage

During treatment, laser energy is measured in joules. This value is displayed on the touchscreen treatment interface and is calculated as power (watts) multiplied by treatment time (seconds). Laser therapy is applied to the scanned treatment area.

General guideline is that the total dosage for one area ranges from 4 to 15 J/cm² (the actual dose depends on the specific area, condition, and body type). The laser system's treatment prescription is intelligently and automatically matched based on the diagnosis.

Generally, the delivered dose reaches the injured tissue or joint site (excluding energy lost during transmission).

5.4 Alarm Information

Alarm types include: Emergency Stop Alarm, Overcurrent Alarm, and Overtemperature Alarm.

5.4.1 Operation Error (Emergency Stop Alarm)

If an operational error occurs, such as accidentally pressing the emergency stop switch, the laser system will display an error message to alert the operator. Upon such errors, the system will either remain in or return to Standby mode, displaying relevant information describing the fault. Correct the error and restart the laser system to clear the fault and continue operation.

5.4.2 System Error (Overcurrent Alarm)

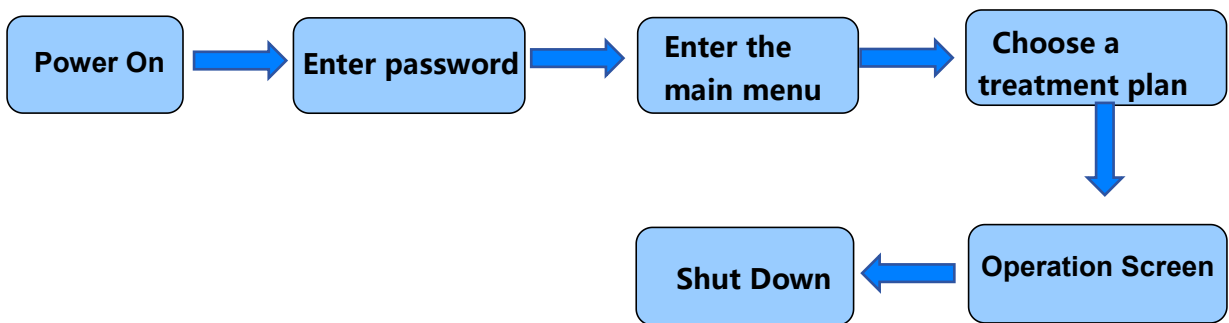
To prevent hazards caused by excessive laser power, the system continuously monitors the current of the semiconductor diodes to ensure they stay within factory-calibrated limits. If a current exceeding the upper limit is detected—resulting in an output over 20% above the selected power—the laser emission will stop, an error message will be displayed, and the system will return to Standby mode.

5.4.3 Cooling Issue (Overtemperature Alarm)

If the laser system is outside the operating temperature range, the laser system will not enter or maintain the emission state. If the temperature exceeds the safety limit:

An error message will appear: "Laser temperature out of range." Press the exit key to return to Standby mode. Ensure that the ambient temperature is within the device's operating range of 10°C to 35°C (50°F to 95°F).

5.5 Equipment Operation Procedure



5.5.1 Power On

Press the power button located on the back of the device. Wait for the system to initialize, then enter the password.



Figure 18

5.5.2 Main Menu

After entering the default password (1234), click "Confirm."The system will display safety warnings; click "Next" to enter the main menu.

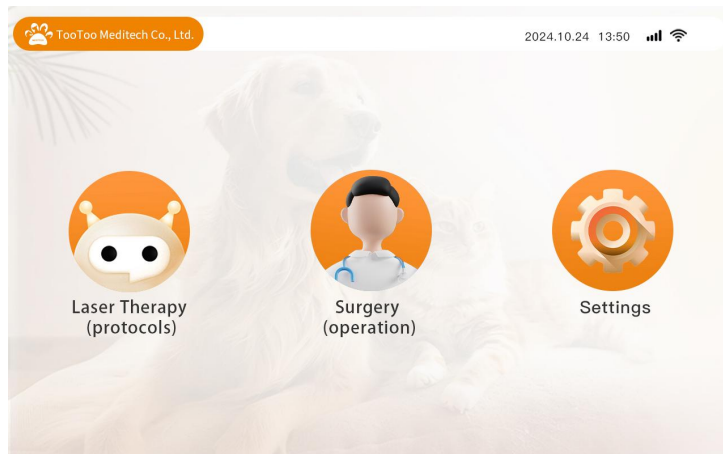


Figure 19

5.5.3 Settings



Figure 20

The software allows the operator to configure the aiming beam, volume, and light emission mode (finger switch/foot switch). Changes can be confirmed by sliding the toggle next to the selected setting and clicking "Save."

- ❖ **Aiming Beam:** This is a guiding beam (red light) that provides a visual indicator of the treatment area for the operator.
- ❖ **Volume:** Sets the device's alert sounds during laser emission. Volume levels can be adjusted to Low, Medium, or High.
- ❖ **Light Emission Mode:** The laser activation method can be set to either **foot switch** or **finger switch**. In **Continuous Mode**, the operator can choose between **Single Activation** or **Sustained Activation**. (Note: Continuous Mode is applicable only when using the finger switch.)
- ❖ **3W Warning:** When enabled, a warning popup will appear if the input power exceeds 3W. This feature is disabled by default.
- ❖ Click the **"Save"** button to save selected settings.
- ❖ Click **"Restore Defaults"** to reset all settings to their default values.

5.5.4 Protocol Selection

Select treatment protocols based on the **Laser Therapy Mode (Smart Mode)** or **Surgical Mode (Expert Mode)**.

➤ **Laser Therapy Mode (Smart Mode)**

1) Select Species

Various animal species are available to choose from, such as horse, dog, cat, bird, rabbit, turtle, snake, lizard, etc., as illustrated.



Figure 21

2) Select Patient Characteristics

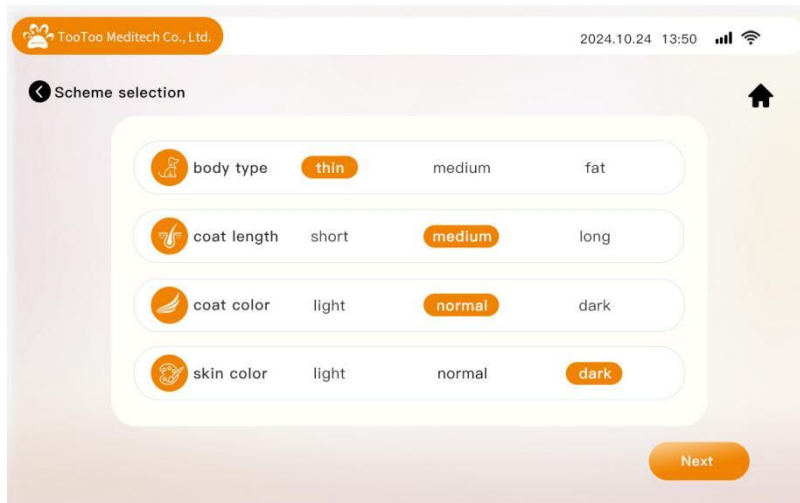


Figure 22

After selecting a species (e.g., Canine), the Patient Characteristics interface will prompt the user to input specific attributes that may affect light absorption or penetration to the target tissue. These include body size, hair length, hair color, and skin color.

The default settings are configured to represent median values for all options. Operators should adjust each parameter according to the actual body size, hair length, hair color, and skin color of the patient to optimize therapeutic outcomes.

Click “Next” to proceed to the treatment protocol selection.

3) Select Treatment Protocol



Figure 23

After selecting the treatment protocol, click “Next” and follow the treatment prompt to wear protective eyewear (see Figure 24). Click “Start Treatment” to enter the treatment interface.

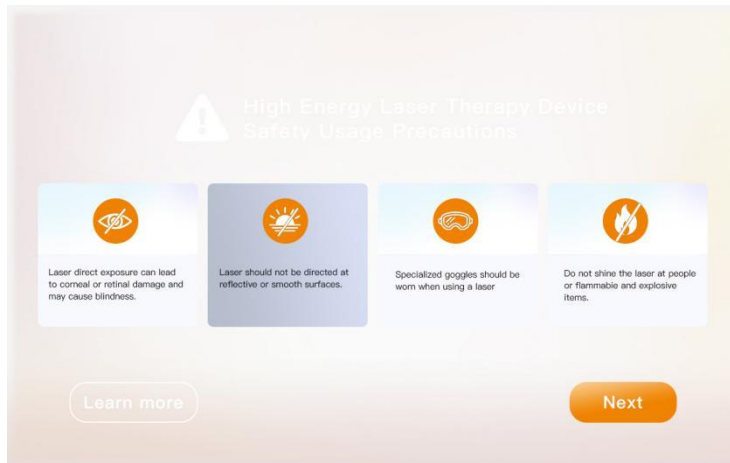


Figure 24

4) Operation Screen (Protocol Mode)

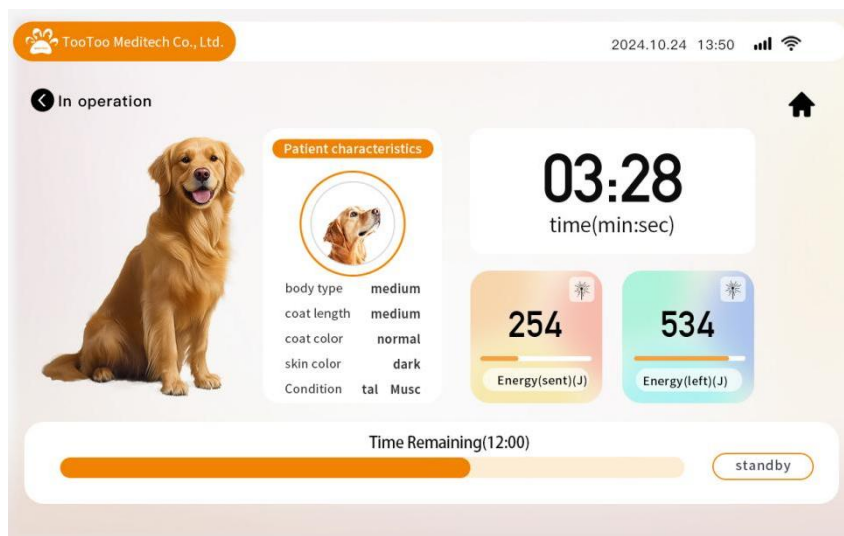


Figure 25

When using a preset protocol, parameter modification is not allowed by the user.

➤ Surgical Mode (Expert Mode)

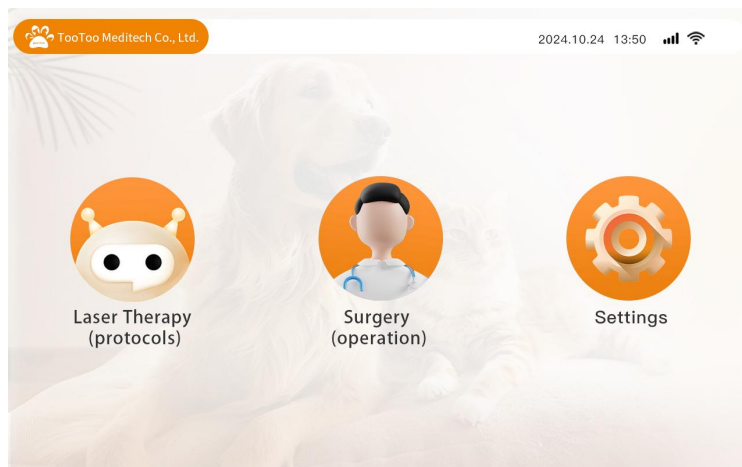


Figure 26

Click “Expert Mode (Surgical)” on the main menu to enter the operation interface. The system will be in “Standby” mode at this time.

1) Operation Screen – Standby Mode

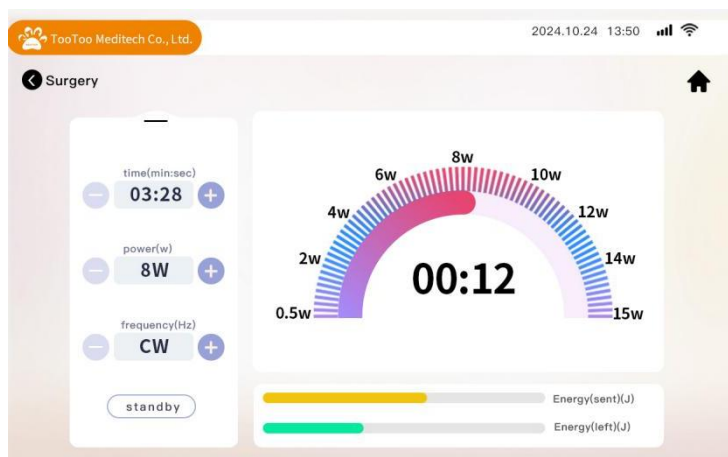


Figure 27

In standby mode, the operator can adjust the treatment time, power, and pulse frequency.

Time: Click the “+” or “-” buttons to set the desired laser treatment time. The selected time will be displayed in minutes and seconds in the time window.

Power: Click the “+” or “-” buttons to adjust the laser power. You can also drag the curved slider bar to change the power level.

Pulse Frequency: Click the “+” or “-” buttons to adjust the laser pulse frequency. The selected frequency will be shown in the pulse frequency window.

2) Operation Screen – Ready

Click "Standby." When the device is ready, an indicator light will appear.

Press the finger switch to start laser emission. Press the finger switch again to stop emission.

3) Operation Screen – Emission

- ❖ During laser emission, the system will display real-time treatment parameters, including power, pulse frequency, and elapsed time.
- ❖ Press the finger switch once to pause laser emission; press again to resume.
- ❖ To stop the laser emission completely, press and hold the finger switch or click the “Stop” button on the screen.

6. Maintenance



Warning: Do not disassemble the device. Any damage caused by unauthorized disassembly will be the customer's responsibility.

6.1 Cleaning



Warning: Disconnect the main power supply before cleaning.



Warning: Always wear protective goggles and gloves when cleaning and disinfecting the device.



Warning: Do not use the treatment head before the alcohol used during cleaning has completely evaporated, as this may cause the laser to ignite the alcohol solution.

Note: Do not clean the lens inside the handpiece, as this may damage the lens during laser emission.

Recommendation: Clean the contact treatment head before each treatment.

Recommendation: It is advised to perform cleaning on a table to prevent the treatment head from falling to the ground.

6.2 Troubleshooting

If your laser system has issues, please first check the following common problems.

6.2.1 No Power to the Laser System:

Ensure the power cord is properly connected and plugged into a functioning power outlet.

6.2.2 Scratches on the Treatment Head:




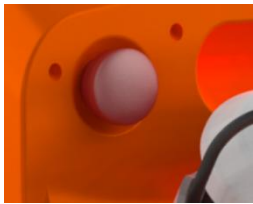
Minor scratches on the treatment head may occur due to normal use and will not affect laser therapy effectiveness.

If scratches become deep, the treatment head should be replaced.

To minimize scratches, it is recommended to clean the treatment head with 75% ethanol and a soft microfiber cloth. Do not use a dry cloth for cleaning.


6.2.3 Power Supply Issues:

If there are power supply problems (e.g., no power), please contact support for troubleshooting to determine whether the power supply needs replacement.

No.	Fault	Cause Analysis	Solution	Fault Location
1	After pressing the foot switch, the screen does not light up.	Power adapter connector not properly installed	Check the power adapter port alignment; align the red dot with the red dot when connecting	
2		Power adapter power cable not properly connected	Check if the power cable is firmly plugged in	
3		Power adapter damaged (adapter indicator light is off)	Replace the power adapter	
4		Emergency stop button pressed	Rotate the emergency stop button to release it	

6.3 Calibration Check Procedure

If the device requires maintenance, please contact our after-sales service personnel.

 **Warning:** Always wear laser safety goggles and follow all laser safety guidelines when performing the laser calibration check procedure.

7. Specifications and Accessories









7.1 Device Specifications

Model Name	Veterinary Laser Therapy Device
Model Number	TooLas
Device Classification	
Laser Classification	Class 4 laser device according to IEC 60825-1.
Electrical Safety	Class I, Type B device in accordance with EN/IEC 60601-1.
User Interface	
Touchscreen	10.1-inch , 1280 × 800pixel
Sound Pressure Level	50-75 dB
Mechanical Specifications	
Size	25 cm (L) × 28 cm (W) × 28 cm (H)
Weight	4.1 kg (Main unit)
Environmental Conditions	
Operating Temperature	15°C to 40°C
Storage Temperature	0°C to 70°C
Cooling Method	Forced air cooling
Optical Specifications	
Maximum Output Power	15W
Wavelengths	808nm±20nm , 980nm±20nm
Guide Light	650nm±20nm
Operating Modes	Continuous and pulsed
Pulse Duration (50% duty cycle)	1, 2.5, 5, 25, 50, 250ms
Pulse Frequency	2, 10, 20, 100, 200, 500Hz
Electrical Specifications	
Input Voltage	100-240VAC, 50/60Hz, 150W, 12DC
Output Voltage	≤10A

7.2 Accessories

All accessories are optional and will be shipped based on customer selection. Actual items may differ from the images shown; the final delivered products shall prevail.

Warning: Do not use accessories that are not provided by our company. Any damage or malfunction caused by unauthorized accessories will not be covered by our warranty or liability.

Item	Description	Illustration
Handpiece Assembly	Laser transmission handle	
Treatment Head – Non-contact	Non-contact treatment head	
	Contact-type treatment head	
	ENT Treatment Head (Optional)	
	Fiber-Optic Needle Cutting Tip (Optional)	
Foot Switch	Wireless Foot Switch (Optional)	
Safety Goggles	Laser Safety Goggles	
Power Supply	Power Adapter	

7.3 Electromagnetic Compatibility (EMC)


The laser system has been tested and complies with the requirements of EN 60601-1-2 for electromagnetic compatibility (EMC). The following pages list the tests performed and the corresponding test levels. Guidance and manufacturer's declarations are also provided regarding the proper use of the device. The usage recommendations (listed in the rightmost


column of the tables below) are not mandatory but are strongly advised for the user, operator, installer, or assembler of this product:


Special precautions regarding EMC must be taken when using this device. The device must be installed and operated according to the EMC information provided in this manual.

Portable and mobile RF communications equipment may affect the performance of this device.

Only use the power cord supplied with this product, or a manufacturer-approved substitute.

 **Warning:** Use of unspecified accessories, sensors, or cables may result in increased or decreased electromagnetic emissions or susceptibility.

 **Warning:** The device or system should not be used in close proximity to or stacked with other equipment. If such use is necessary, it must be verified that the system operates correctly in the intended configuration.

 **Note:** Before performing laser treatment, all EMC guidance provided in this manual must be followed. Simultaneous operation of other medical devices should be tested to ensure electromagnetic compatibility and mutual coexistence.

7.3.1 Table: Guidance and Manufacturer’s Declaration – Electromagnetic Emissions

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should ensure that it is used in such an environment.

Emission Test	Compliance	Electromagnetic Environment – Guidance
RF Emissions CISPR 11	Group 1	The device uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF Emissions CISPR 11	Group 2	The device must emit electromagnetic energy to perform its intended function. Nearby electronic equipment may be affected.
RF Emissions CISPR 11	Class A or B	A
Harmonic Emissions IEC 61000-3-2	Class A, B, C, D or N/A	A
Voltage Fluctuations/Flicker Emissions IEC 61000-3-3	Complies or N/A	Complies
RF Emissions CISPR 14-1	Complies	Not suitable for interconnection with other devices.
RF Emissions CISPR 15	Complies	Not suitable for interconnection with other devices.

7.3.2 Table: Guidance and Manufacturer’s Declaration – Immunity – For Equipment That Is Not Life-Supporting

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should ensure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Electrostatic Discharge (ESD) EN/IEC 61000-4-2	±6 kV contact discharge ±8 kV air discharge	Complies	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical Fast Transients/Bursts (EFT) EN/IEC 61000-4-4	±2 kV on power supply lines ±1 kV on I/O lines	Complies	Mains power quality should be that of a typical commercial or hospital environment.
Surge EN/IEC 61000-4-5	±1 kV line-to-line ±2 kV line-to-ground	Complies	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 EN/IEC 61000-4-11	>95 % Dip for 0.5 Cycle 60% Dip for 5 Cycles 30 % Dip for 25 Cycles >95 % Dip for 5 Seconds	Complies	Mains power quality should be that of a typical commercial or hospital environment.
Power Frequency Magnetic Field (50/60 Hz) EN/IEC 61000-4-8	3A/m	Complies	Mains power quality should be that of a typical commercial or hospital environment.

7.3.3 Table: Guidance and Manufacturer’s Declaration – Immunity – For Equipment That Is Not Life-Supporting

The device is intended for use in the electromagnetic environment specified below. The customer or the user of the device should ensure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment – Guidance
Conducted RF EN/IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	(V1)Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the device, including cables, than the recommended separation distance calculated using the equation applicable to the transmitter frequency. Recommended separation distance: D = (3.5 / V _i) × √P (80 MHz to 800 MHz) D = (7 / E _i) × √P (800 MHz to 2.5 GHz) where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.
Radiated RF EN/IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	(E1)V/m	d is the recommended separation distance in meters (m). The field strength of fixed RF transmitters is determined by an electromagnetic site survey and should be below the compliance level in each frequency range. Interference may occur near equipment containing a transmitter.

7.3.4 Table: Recommended Separation Distances


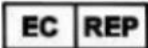








The equipment is intended for use in an electromagnetic environment where radiated RF disturbances are controlled. To avoid electromagnetic interference, the purchaser or user should maintain the minimum separation distance between portable and mobile RF communication equipment (transmitters) and the equipment according to the maximum rated output power of the communication device.









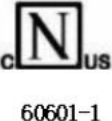
Below is the recommended separation distance table between portable and mobile RF communication equipment and equipment that is not life-supporting.

Maximum Output Power (Watts)	Separation Distance (m) 150 kHz to 80 MHz	Separation Distance (m) 80 MHz to 800 MHz	Separation Distance (m) 800 MHz to 2.5 GHz
0.01	0.1166	0.1166	0.2333
0.1	0.3689	0.3689	0.7378
1	1.1666	1.1666	2.3333
10	3.6893	3.6893	7.3786
100	11.666	11.666	23.333

8. Label

8.1 Explanation of Symbols

Symbol	Title	Description
	Manufacturer	Indicates the manufacturer of the medical device, according to EU Directives 90/385/EEC, 93/42/EEC, and 98/79/EC.
	Authorized Representative in the European Community	Indicates the authorized representative within the European Community.
	Manufacture Date	Indicates the date the medical device was manufactured.
	Catalogue Number	Indicates the manufacturer's catalogue, model, or reference number to identify the medical device.
	Serial Number	Indicates the manufacturer's serial number to identify a specific medical device.
	Caution	Indicates important warnings and precautions that users must follow due to the nature of the medical device.
	Type B Applied Part	Indicates parts of the medical device that come into physical contact with the patient to perform its intended function.
	Waste Electrical and Electronic Equipment (WEEE) - Unsorted Municipal Waste	Indicates the device must not be disposed of as unsorted municipal waste.
	Laser Warning	Class 2 and higher intensity laser warning label.
	Remote Interlock Connector	Indicates the remote interlock connection port.

Symbol	Title	Description
	Footswitch	Indicates the connection port for the footswitch.
	Fiber Optic Connector	Indicates the connection port for the fiber optic cable.
	Emergency Stop Switch	Button used to terminate laser emission and shut down the device in emergencies.
	Fuse	Identifies the fuse holder or its location. Note: Not user-serviceable.
	Protective Earth (Grounding)	Identifies the terminal for protective earth to prevent electric shock in case of a fault. Note: Located inside the device.
	Consult Instructions for Use	Indicates that the user should consult the instructions before operating the device.
	Power On/Off	Press to turn the device power on or off.
	USB Port	USB connection port for software upgrade and backup/restore.
	Nemko-CCL Safety Mark	Indicates compliance with electrical safety certification requirements (Nemko-CCL) in the USA and Canada (60601-1).

Effective Date: 2025-06-20



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