

# User's Manual



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Doc. No. WT-UM-07



■ Index	2
■ Component	3
■ Notice	4
■ Component name	5 ~ 6
■ LCD Explanation	7 ~ 9
■ Emergency Explanation	10
■ How to use	11 ~ 17
■ Caution	18
■ Maintenance	19
■ Check Point	20
■ Safety of Laser	21
■ How to Clean	22
■ Require attention after treatment	23
■ USER Symbol	24 ~ 25
■ Contact Information	26

## Components

This device is provided as below. And, it should be installed by technician who trained about this device.



Arm



Hand piece



Main unit



Protection Goggles for doctor 2ea



Protection Goggle for patient



Foot Switch

PASTELLE is laser using Nd:YAG and it is used as target of treatment skin pigment and rejuvenation.

➡ Because this manual includes important information to safely and properly use Pastelle laser, please read and understand this instruction.



All people who in laser operating area should wear safety goggles which is certificated, and the place should be condemned warning mark at entrance of operating room.

- Warning 1.** Do not touch the device and its connections because high voltage is used for the device. It can be caused an electric shock in that case.
- Warning 2.** Laser should not be exposure directly to the eyes and skin because the laser emits the visible and invisible ray. Wear the protective glasses before operating the device.
- Warning 3.** Combustible anesthetic is liable to cause ignition by laser, be careful that patient is not burned. (Note: Use nonflammable gas anesthetic for anesthetizing, and they are halothane and enflurane gas generally)
- Warning 4.** Laser can be generated onto unexpected place by reflecting and scattering, so do not use mirror or lustrous metal together with laser which can reflect and scatter the laser beam.
- Warning 5.** The smoke caused from the device during operation can have a bad effect on body, if you use the device for a long time, it is better to use the smoke evacuator together.
- Caution 1.** Power supplier should be used the independent 220V, 60Hz, and it should be a stable one by ground connection.
- Caution 2.** Do not use or keep the device in the place which has much dust and moisture, in the place reflected by direct rays, or in the place at under 10 degrees & more than 40 degrees Celsius.
- Caution 3.** Do not use to the patient who is on treatment or has allergy.

**1. Laser Arm**

It is the device to transmit the laser into the required place.

**2. Hand piece**

It releases the laser through the Arm on the skin.

**3. LCD and Touch pad**

LCD shows the present condition of device, and Touch Panel is a controlling part of device.

**4. Emergency Switch (Reset button)**

It can stop the device working in the unexpected situation.

**5. Key Switch**

It controls the power by ON/OFF and it protects the device being defected by outsiders.



**1. Fan**

It maintains the constant temperature of internal device and laser module.

**2. Interlock Connection**

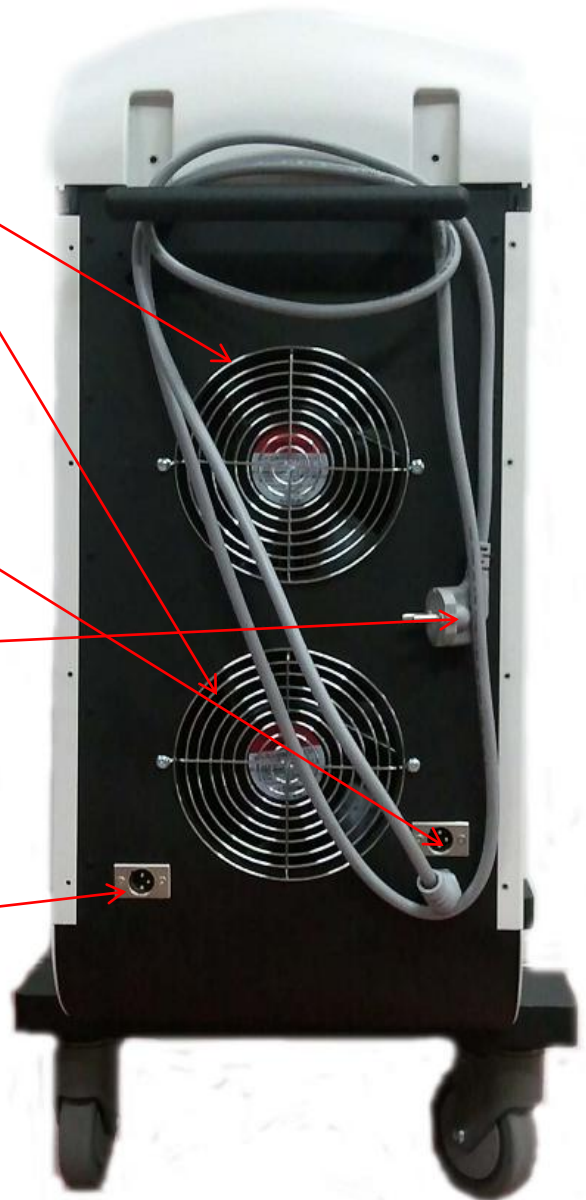
It is an external interlock equipment

**3. Power Supply Cable**

It is a cable for AC220~230V which supplies power to the device

**4. Connection to the Foot Switch**

It connects to the Foot Switch which controls the generating of laser.





No	Title	Function
1	LOAD	Loading the set-up parameter
2	SAVE	Saving the present set-up parameter
3	User Mode	Check using time, amount of used, etc
4	Engineer Mode	Engineer operation function
5	STAND-BY / READY	Turning to stand-by mode
6	RESET	Count zero function
7	Calibration	Auto Calibration for energy
8	Fluence	Function of choosing Fluence
9	Frequency	Function of choosing Frequency(1~10Hz)
10	Spot Size	Function of choosing Spot Size(2~10mm)



No	Title	Function
11	Aiming Beam	Brightness control of aiming beam
12	Up	Increase of Fluence( $\text{cm}^2$ ), Frequency(Hz), Spot Size(mm)
13	Down	Decrease of Fluence( $\text{cm}^2$ ), Frequency(Hz), Spot Size(mm)
14	1064nm	Function of choosing 1064nm Mode
15	532nm	Function of choosing 532nm Mode
16	Genesis	Function of choosing Genesis Mode (1064nm Quasi-Long pulse Mode)
17	PTP	Function of choosing PTP Mode (Photoacoustic Twin Pulse Mode)





No	Title	Function
1	Rename	Change name of saved Data
2	Delete	Delete of saved Data
3	EXIT	Go out on Main screen
4	UP	Function of up saved Data
5	Down	Function of down saved Data
6	Check	Function of check saved Data

## Explanation of Term

- Emergency Switch : It stops the operation of device when the unexpected situation occurred.
- Key Switch : It supplies power to the system attached on all parts of device.  
(It prohibit the other person's touch)
- Foot Switch : It is used for operating the device at the selected processing mode.

## Additional Information

- Dimension : 400 X 805.2 X 871mm (W X D X H : without arm)
- Laser classification : Class 4
- Weight : 60 kg
- Laser wavelength : 1064nm & 532nm
- Laser Max Energy : 2.0J

All people who are in application area of the device should wear the certificated safety **goggles**, and there should be warning mark on the entrance of the place.

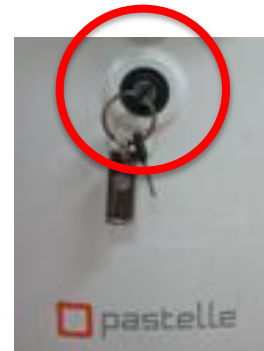
## Preparation before use

- Be connect to 220V consent.
- Be connect footswitch to the back of machine
- Be sure to connect between interlock of connection part which is located a the back and entrance hole and be regulate the access.
  - ※ Note : When it's connected of foot switch, it should be push into the hole to the end perfectly.
- Be sure to step the locking devices which is on the wheels to fix it.
  - ※ Note : Please make sure the distance whether it's possible to reach the emergency button before the fixing or not.
- After sterilizing of hand-piece tip, be attached it before operation.

## How to use

### 1. Power on

1.1 Turn Key switch and turn on the machine

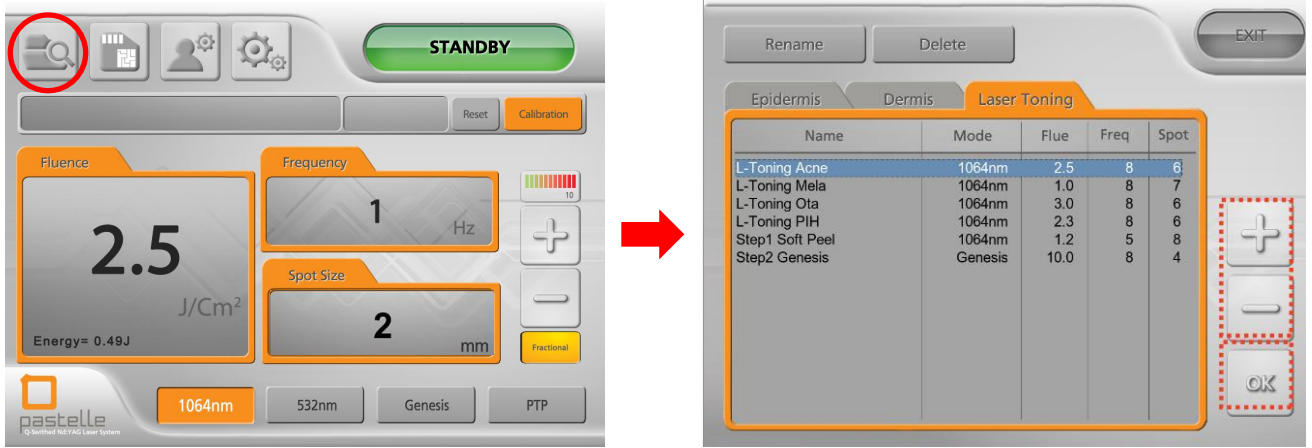


1.2 After booting become standby condition as following picture

※ Note : It would better to press the monitor button using nail better than finger tip.



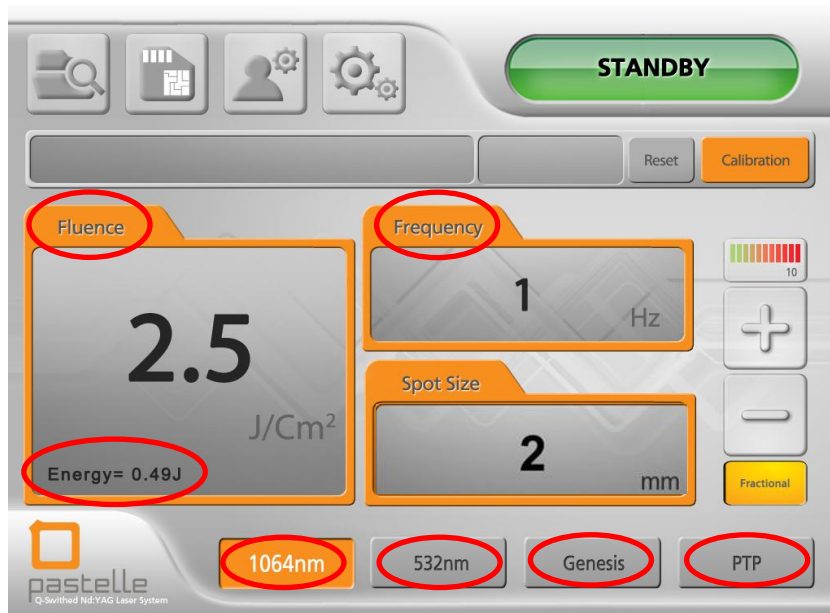
## 2. Select Indication and Setting



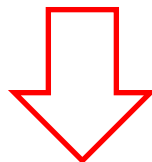
2.1 Press the red point in the above picture and will see a picture like right one which is written indications to treat indications.

2.2 Besides written indications, setting energy using Fluence, Frequency, 1064 & 532 & Genesis based on Energy like below picture.

- In case of Spot size, adjust spot size as turning a hand-piece.



2.3 Possible to save extra setting energy with new name . By pressing red point circle in the below picture to save a file new indication.



### 3. Laser procedure



3.1 If you finish selecting of treatment, push the STANDBY button as left picture.

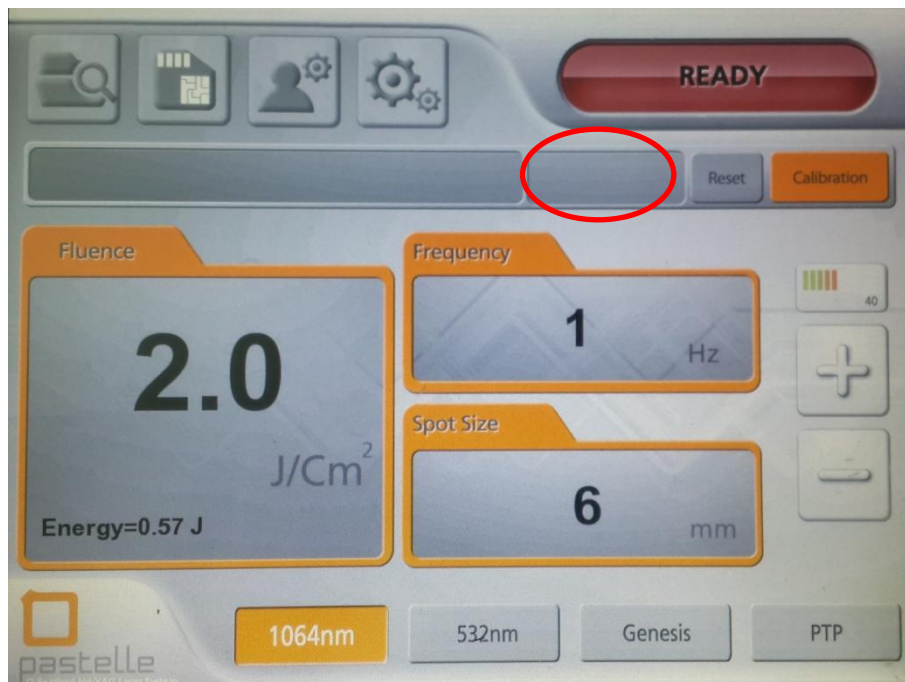


3.2 If you push the STAND BY button, you can see this screen what can confirm spot size. And then ,you confirm the spot size and arrange shooting laser to skin.



3.3 Be shot the guide beam to the treatment region as left picture, and then step on the foot switch.

3.4 According to shot during treatment , it is counted as below. If you push the reset button of right, shot counter number will be reset.

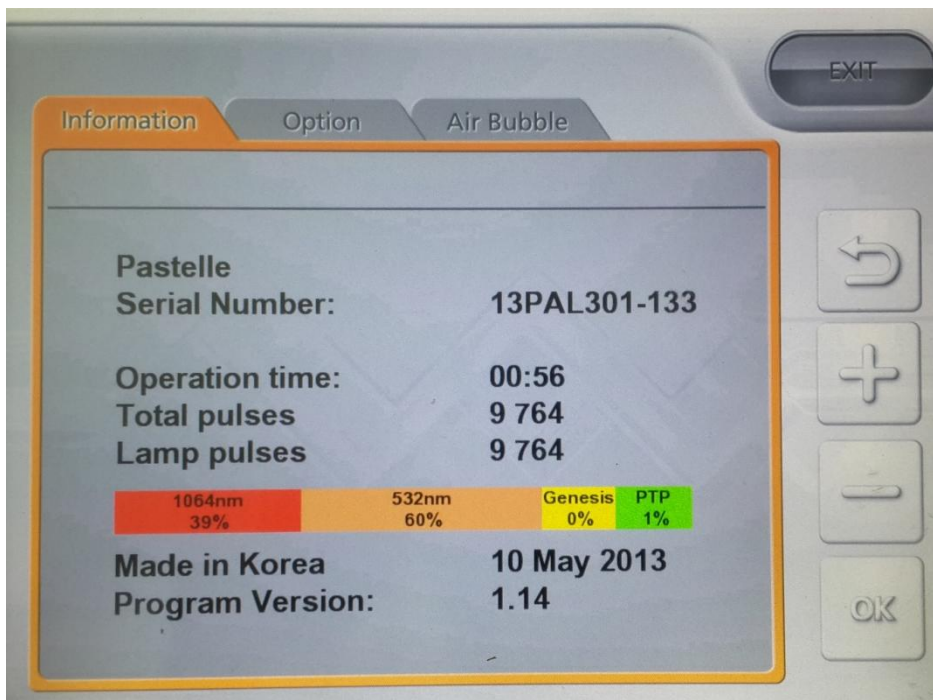




## 4. Laser information and setting

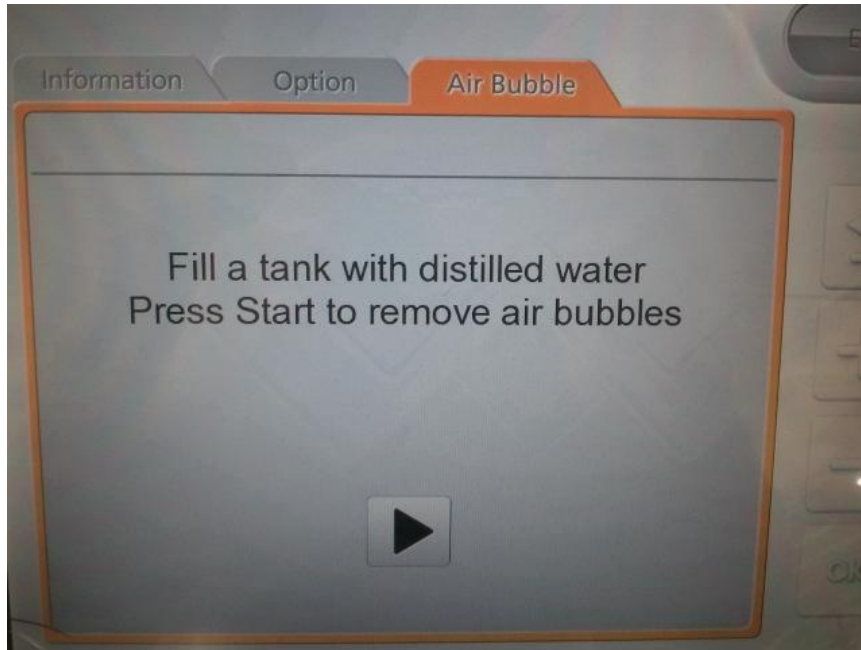


4.1 You can see information such as model of device, S/N, pulse, Date of made, version, usage on this page, as below picture.

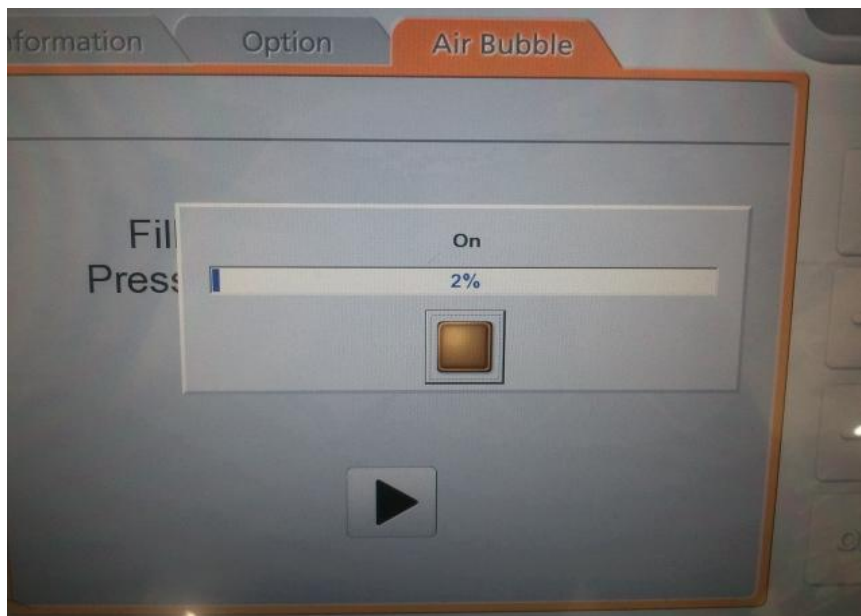




4.2 As below picture, can adjust degree of % on option part, select ON/Off of spot size caution or Rename& Delete buttons. And you can distinguish parameter value according to Fluence and Energy.



4.3. Air bubble function is removing of air in water pump what contains distilled water.



## 1. General Attention

- (1) Do not operate the laser without a skilled doctor. Check the laser whether work or not before operation.
- (2) Call a specialist when the laser comes unusual signal or trouble.
- (3) Do not put or remove any components in the unit.
- (4) Check the laser before use when do not use it for a long time.

## 2. Individual Attention

- (1) Do not see the laser hole directly and use the laser except for dermatology treatment.
- (2) While the laser works, all people attending treatment wear the protect goggle.
- (3) Do not use the laser in the flammable anesthetic or volatility matter area.
- (4) Use the laser carefully due to high voltage inside.
- (5) Make a space approx 20cm between unit and wall.
- (6) Use an anesthesia cream which use for laser treatment.
- (7) Do not touch the unit with wet hand.

# Maintenance

- 1) If device is dirty with dusts and garbage, clean it with soft and dried patch.  
(Don't use strong chemistry solution such as thinner and benzene)
  
- 2) After operating, clean the tip of hand piece with soft patch which is wet by ethyl alcohol.
  
- 3) If device is not used for a long time or needs the following service, please contact Overseas A/S Team(+82-70-7836-6966).
  - Inside material of device
  - Error of laser launch
  - Exterior break down of device

If the device is regarded as defective, please contact Overseas A/S Team (+82-70-7836-6966) immediately. Don't try to repair the device by yourself.

# Check Point

## **1. When the device doesn't give any particular response.**

- 1) Please check the power code connected to power or not.
- 2) Please check the main power is too low or not.

(Check the voltage level of the wire, and connect power code to the other place)

- 3) Please check the key switch and emergency switch to make sure it will work well.
- 4) Please request the service in case that CPU board is not supplied with the power, because it may be damage of key switch, emergency switch, or CPU board.

## **2. When the laser beam is not generated despite of stepping on the foot switch.**

- 1) Please check the device is on ready mode.
- 2) Please check the foot switch cable is connected to the connection devices. An error message is shown up on screen.

# Laser Safety

## Safety Management of Laser Operating Room

- Laser surgery room should be screened the windows to block the outside, and installed the door signs about lasers are in use.
- Laser surgery room ventilation should be maintained well.
- Check the safety before operating the laser and operate in the proper order.
- Specified the parameter values just before the laser operation.
- Wear the protective glasses during operating the device.
- Do not use the combustible anesthetic gas.
- Do not use mirror or lustrous metal together with laser which can reflect and scatter the laser beam.
- Install the interlock equipment before operating.
- Laser can cause fatal harm to human, so trained doctor only should use.
- Check the Stand-by or Ready state before using.

# Clean Method




- 1) Clean a hand-piece lens every after use.
- 2) Put a hand-piece right side up.
- 3) Clean dusty on the lens using cotton swab moistened with alcohol.
- 4) Clean a hand-piece tip using a soft fabric moistened with alcohol.








## Notice After Treatment

1. It is possible for simply shower or washing face on the day of operating, but it's better to wash a couple of days after the day. If you need to wash your face, gently sprinkle water on your face by making enough foam by soap, and then gently massage. When you clean the water, do not rub or press the skin.
2. Avoid heavy exercise such as swimming, sweaty exercise which enough to wet shirt, or sauna.,
3. Make-up is available after scab forms. However, it would be better not to do if possible.
4. A scab generally peels away around 7~10days. In case of taking off the scab constrainedly or being in soaked condition due to sauna, scab part becomes red and moreover pigment builds up after a few days. So it is better to remain it until it falls off naturally.
5. To prevent pigmentation, surely put on sunscreen whenever cloudy day or indoors during the daytime. By applying sun block on your face, avoid side effects such as aging of the skin or pigmentation.

## Used symbol

No.	Standard	Description	Symbol
1	EN60825-1	<p>The warning sign regarding an output power and a direct exposure Each Class IV laser product shall have affixed a warning label and an explanatory label bearing the words:</p>	 <p>INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION CLASS 4 LASER PRODUCT Output: &gt; 500 mW, λ=10600 nm IEC 60825-1:2007</p>
2	EN60825-1	<p>The warning sign regarding an output power and a direct exposure.</p> <p>Each Class 3R laser product shall have affixed a warning label and an explanatory label bearing the words:</p>	 <p>LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT Output: 1 mW, λ=650 nm IEC 60825-1:2007</p>
3	EN60825-1	<p>Hazard symbol.</p> <p>This symbol is intended to alert the operator to the danger of exposure to hazardous visible and invisible radiation.</p>	



No.	Standard	Description	Symbol
4	EN60825-1	Laser Aperture	
5	EN60601-2-22	Emergency switch indication.	
6	EN60601-1	Protection ground connection indication.	
7	EN60601-1	Power ON	
8	EN60601-1	Power Off	

## Contact Information



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