

VA-306 USER

MANUAL

IPL System



Thank you for choosing our products. Please read this user manual before operating the machine and keep it for others who will use the machine.

Pay Attention to Warnings, Cautions and Notes

- ☀ **WARNING** Warning means that not following instructions properly or ignoring them completely can endanger patients and/or operators.
- ☀ **CAUTION** Attention means that not following instructions properly or ignoring them completely can damage the unit.
- ☀ **NOTE** Notes provide additional information



WARNING

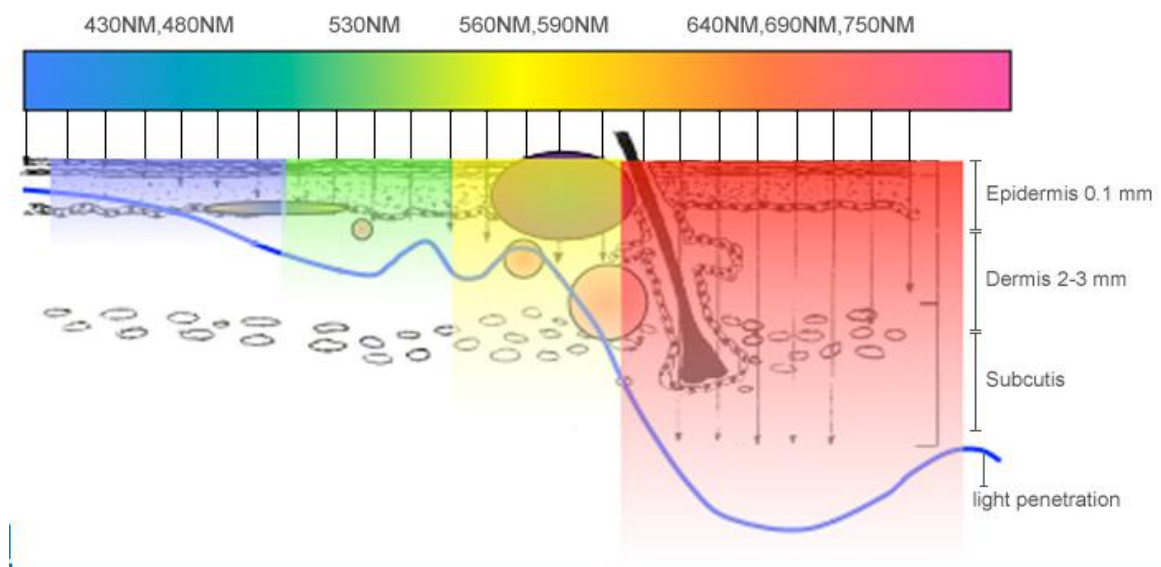
Read the user's manual prior to operation!

Chapter 1 Equipment Overview

1.1 The Principle of E-light/IPL System

IPL refers to intense pulsed light, the hand-held flashgun (Xenon lamps) can produce an intense, visible, broad-spectrum pulse of light with spectral range of 400 to 1200 nm. When used with interchangeable cutoff filters, it can be used against several conditions. Cooling is used to protect the skin in contact with the device.

IPL devices should only be used on **light to medium skin tones**, and work best on darker hair.



Clinical Application : Hair Removal, Photorejuvenation (e.g. the treatment of skin pigmentation, sun damage, and thread veins) as well as to alleviate dermatologic diseases such as acne.

1.2 Machine Display



- ① Touch Schreen
- ② Emergency Stop
- ③ Key Switch

- ④ IPL/SHR/E-light/SSR Handpiece
- ⑤ Handpiece Holder
- ⑥ Handpiece Connector



9 Foot Switch Connector

11 Power Cord Connector

13 Water level Window

10 Power Switch

12 Ventilation Cap

14 Water Filling/Drainage Nozzle

1.3 Package Contents

Confirm that the package contains the following items, contact us immediately if you find any lost and damaged parts inside the package.



WARNING

Use accessories offered or suggested by manufacturers!

Item	Quantity	Specification
Machine	1	-----
IPL Handpiece	1	
IPL Optical Filter	5	
Funnel	1	-----
Power Cable	1	EU
Key	2	-----
Goggles	1	-----
IPL Protective Eyewear	1	400nm-1200nm
Foot Pedal	1	-----
Handle holder	1	-----

Accessory List



IPL Filters



IPL/E-light/SHR Handle



Protective goggles



IPL Protective goggles



Water Adding/Draining Funnel



Foot Pedal



Key

1.4 Technical Specifications

System	IPL/E-light/SHR/SSR
Power	2000W
Wavelength	480/530/590/640/690-1200nm
Pulse Energy	1-50 J/cm ²
Spot Size	15X50mm/12X30mm
Width of pulses	1-10ms
Frequency	1--10HZ
Laser Bars	10 Bars (Germany Dilas/Coherent)
Display	10.4 Inch True Color LCD Screen
Cooling Level	1-5 Levels (-10 ° C - 5 ° C)
Cooling System	Semiconductor + Water circulation + air radiator cooling with condenser
Electrical Requirements	100/ 110V, 50~60HZ or 230~260V, 50~60HZ
Working time	Continuously 18 hours without stop

Chapter 2 Safety

VA-306 is designed for safe and reliable treatment when use it properly. Authorized personnel and maintenance technician and other users should fully understand the safety information provided in this chapter.

2.1 Responsibilities of User

Before each treatment, the user must check the functional performance of the device in order to avoid any risk of harm to patients or other persons. If the device is used in together with peripheral units, the User's Manuals for the peripheral units must also be read thoroughly and understood.

1) Safety precautions

A. Upon switching on the system, the processor first undergoes a self-diagnostic program. The processor will then examine the system automatically and continuously during the entire treatment procedure.

B. Use the **Emergency Stop Switch** (red button) to turn the power off in case of an emergency.

C. Remove the **Key** when not in use to prevent unauthorized access to the device.

2) Safety Warning

- Verify environment voltage is consistent with equipment, don't use alter-mating current more than 240V.
- Don't operate the equipment in hot or humidity environment, avoid electric shock or fault.
- Make sure that all trained personnel are familiar with the system controls and have a good knowledge of how to shut down the system instantly.
- It's better to operate the equipment in a dry space, don't use it outside the room.

- Only use accessories provided by VIVALaser.
- Turn the power off before cleaning and maintenance.
- Don't use the equipment when the operator is sick or ill.
- Don't use the equipment if skin have trauma.
- Pregnant women are forbidden to use it.
- Never use the modified or remolded equipment.

3) Environment Requirements

Working temperature	+15 - 30°C
Relative humidity	30%-80%
Atmospheric pressure	86Kpa-106Kpa
Power supply	230V/AC±10%,10A; 115V/AC±10%,50/60Hz,20A

2.2 User Training

The VA-306 requires special expertise and care in its handling and using. Only persons who have received appropriate handling training on the device, taking into consideration of operating instructions, and who are familiar with its therapeutic effect and possible risks are permitted to use the laser unit.

Untrained or unqualified operating personnel are not permitted to operate the VA-306 under any circumstances whatsoever. VIVA LASER TECHNOLOGY CO., LTD. offers comprehensive training courses for the diode laser. Each user must have read and understood the User's Manual completely prior to starting the VA-306.

Patient's safety mainly depends upon a well-trained operators and a suitable treatment room. The attending operators must inform the patient all inherent risks with the use of this device. The success of the treatment depends largely on the user's experience and knowledge of the operator.

2.3 Optical Safety

All personnel (including the patient) must wear the protective glasses;. The goggles / glasses provided with this unit are manufactured specifically for the wavelength produced by the VA-306 unit. Do not substitute treatment / safety glasses with other types of tinted eyewear which may not meet the specific safety requirements of the unit.



This device may cause thermal injury if used improperly. Medical personnel must familiarize themselves with the devices safety instructions and operational procedures prior to use.

2.4 Electrical and equipment safety

The unit uses 220V±10%, 50/60Hz or 110V±10%, 50/60Hz single-phase power supply. Its capability should be no less than 2000W. Use a 10A (220V ± 22%, 50/60Hz); 20A (110V ± 11%, 50/60Hz) single-phase three-wire outlet at an international level. This device connects the ground through three lines, connecting the ground well is important to the operation safety.

The high voltage inside the device is very dangerous. Electricity may remain in some components; therefore, it is not advised to open the cover. This will result in an electrical shock.

Do not open the control or rear panel even if the unit is switched off. Only authorized personnel may repair or maintain the unit. Tampering with the unit will void its warranty.

Chapter 3 Installation

3.1 Installation Requirements

The system can be installed in hospitals, medical clinics and beauty salons, little preparation is needed before installation.

The system should be installed and commissioned by professional and technical personnel authorized by our company.

Please read the entire safety requirement in Chapter 2 before installation.

3.2 Installation Instruction



WARNING

1. Running water or mineral water is not allowed.
2. Keep the ventilation loosen all the time!
3. Only personnel trained by the distributor are authorized to operate this device.
4. Any manipulation to the system may cause damage to the device and will void its warranty.

Quick Start Guide

Follow these steps for a quick start with the machine.

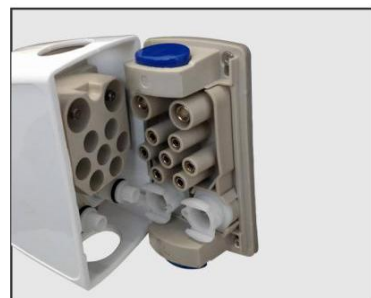
1. Carefully unpacking, place the machine in a preselected position.



2. Take out the handpiece holder, and install it in the corresponding position, make sure the connection is tight enough.



3. Connect handpiece with the machine.



4. Unscrew the ventilation tap (vent) at the back of the machine. Water can be filled in only when the vents are loosened. Keep the vent unscrewed all the time.



Quick Start Guide

Follow these steps for a quick start with the machine.

5. Add distilled or purified water with funnel. observe water viewing window, stop adding water when water level reaches the H level.



6. Foot pedal installation.



7. Plug in the power cord.



8. Insert the key, switch the machine on.



3.2 Relocation, Transportation and Storage

3.2.1 Relocation

If the device is moved to another room.

1. Turn the device off;
2. Put the handpiece back to holder;
3. Pull out the power cable;
4. Relocate the unit (Avoid tilting the device).

3.2.2 Transportation and Storage

1. The cooling water in the device must be drained before transportation and storage.

2. The device should be placed vertically in the packing box during transportation.

3. There is waterproof and soft gasket material in the outer packing box of the instrument and handle with care. The markings such as "Handle with care", "No wetness", "up" labels should be put on the box.

4. Storage environment

Temperature scope: -15°C --- +30°C

Relative humidity scope: 30%-80%

Atmospheric pressure : 86kpa – 106kpa

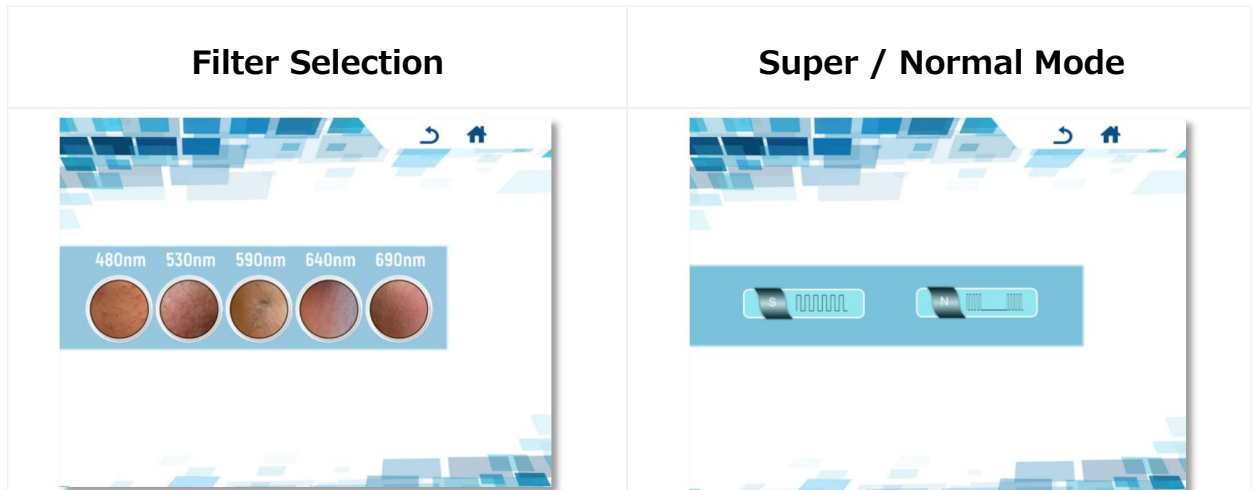
Chapter 4 Operation



WARNING

- 1.High voltage: please ensure that all panels are secured prior to operation.
- 2.Place handpiece in the handpiece holder when at standby mode.
- 3.All personnel in the treatment room must wear filtered protective glasses.
- 4.Make sure the patient is wearing protective goggles prior to treatment.
- 5.Avoid directly eye contact with laser during the treatment even if wearing the protection glasses.
- 6.Do not place the treatment head beyond treatment area.

4.1 IPL Working Interface



SUPER MODE=SHR/OPT



Notes: 7 8 9 18 19 20

Belong to monitoring systems, the machine will alarm when lower than the safe range.

NORMAL MODE=IPL/OPT



Notes: 8 9 10 19 20 21

Belong to monitoring systems, the machine will alarming when lower than the safe range.

Chapter 5 Clinical Guidance

5.1 Safety Precaution for Treatment

WARNING

1. Only professional personnel with appropriate training may operate this device. Unauthorized use or abuse in the hands of a novice may cause thermal injury to oneself or others and may cause irreparable damage to the unit.
2. Comprehensive consultation for specific conditions of clients must be carrying out prior to treatment.
3. Back to stand by status when the treatment finished.

4.All the personnel must avoid directly eye contact with laser beam under any circumstance.

5.2 Treatment Instructions for IPL/E-light/SHR

5.2.1 Contraindications

- ✦ Malignant or pre-malignant pigmented lesion;
- ✦ Known photosensitivity;
- ✦ Pregnancy;
- ✦ Use of anticoagulation medication;
- ✦ Presence of active acne, deep acne pits or picks;
- ✦ Bacterial or viral infection; Impaired immune system;
- ✦ Have used isotretinoin in the past 12 months;
- ✦ Scleroderma (Accutane);
- ✦ Diabetes;
- ✦ Other syndrome which is not suitable for the treatment.

WARNING

IPL system should be used with special attention to safety. Please read all warnings and safety precautions before use and strictly follow them when using IPL system.

✦ **DO NOT** use IPL Dark Skin, tattoos, dark brown or black spots (such as dark freckles, birthmarks, moles or warts). These areas may absorb too much light energy which could cause skin swelling, temporary blisters, or could change the color of skin. Refer to the Chart to determine if skin tone in the intended treatment area is suitable for use with the IPL system. Test each different area of skin intended to treat. Some areas are darker than others.

- ✦ **DO NOT** use on or around the eyes, eyebrows or eyelashes. Doing so can cause serious and permanent eye injury.
- ✦ **DO NOT** flash Light the identical treatment spot multiple times during the same session.
- ✦ **DO NOT** use on damaged skin, including open wounds, cold sores, sunburns, or areas where you have had a skin peel or other skin resurfacing procedures within the last 6-8 weeks.
- ✦ **DO NOT** use on irritated skin, including rashes or swollen skin. These conditions can make the skin more sensitive to the light treatment. Wait for the affected area to heal before using.
- ✦ **DO NOT** use if the skin is sensitive to light. In order to determine if you can use, perform a test on a small patch of skin and wait 24 hours to determine if there are any adverse reactions before using more broadly.
- ✦ **DO NOT** use if you are or may be pregnant, or are breast-feeding. The IPL system has not been tested on pregnant women. Hormonal changes could increase skin sensitivity and the risk of skin injury.








5.2.2 Treatment Scope

- ④ Facial red blood streak (angiotelectasis), remove the red face symptom;
- ④ Shrink pore, eliminate or decrease the Acne Scar.
- ④ Thicken the skin collagen ,recover the skin elasticity ;
- ④ Remove or eliminate freckle, age spot, etc. ;
- ④ remove or eliminate pigment sediment caused by sunburn, whiten the skin.
- ④ Remove hair, which can function on hair shaft and hair follicle. No matter of the hair color. The System can remove effectively even for white hair.

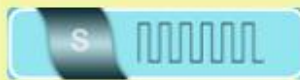
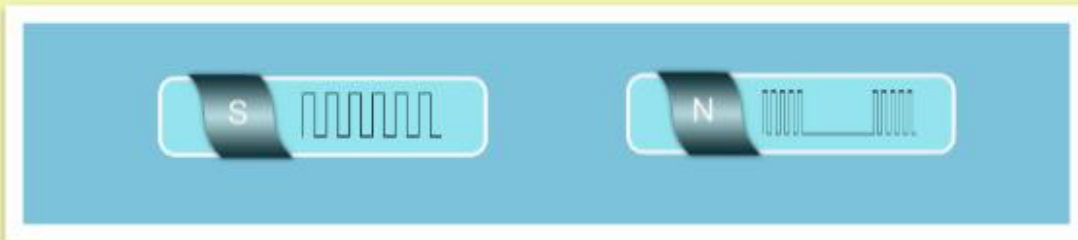
5.2.3 Features of effective operation

1. Hair removal effective features : Skin has a hot, prickled and burned process. The skin will be reddish, and there will be red pimples around deep and coarse hair follicles (generally it will disappear within 12 hours). Hair will grow in 3 days, and after a week hair will fall off on their own.
2. Hair removal effective features : Skin has a hot, prickled and burned process. The skin will be reddish, and there will be red pimples around deep and coarse hair follicles (generally it will disappear within 12 hours). Hair will grow in 3 days, and after a week hair will fall off on their own.
3. Spots removal effective features : The color of spots becomes deep and the surrounding skin is reddish.

5.3 Treatment procedure

Select Filter				
430nm	560nm	640nm	690nm	755nm
				
Wavelength(nm)	Functions			
480	Acne, pimple treatment			
530	Pathology of the pigment: Speckles, age spot, sun-induced freckles and all kinds of pigments sourced from cosmetics			
590	vascular lesions removal			
640	Hair removal for yellow skin			
690	Hair removal for white skin			

Select Treatment mode



super hair removal mode for fast hair removal, mainly used for big area like chest, arm or leg.



Normal Mode, usually for small area treatment, like lip hair removal armpit

Choose S enter into SHR mode



Choose N enter into E-light mode



Parameter selection principle

Attention: The default parameter is suitable for most people. When it comes to people with Darker skin color, the operator can add the voltage or Pulse Duration to higher the treatment energy.

People whose skin color is thinner (sensitive skin type), the operator can lower the voltage or Pulse Duration and pulse interval to find the proper treatment parameter.

NOTE: Always start with lower energy and increase gradually to avoid side effect.

Darker Skin	Lower energy, longer pulse delay
Whiter Skin	Higher Energy, Shorter Pulse Delay
Darker Hair/Pigmentation	Lower energy, longer pulse delay
Light Hair /Pigmentation	higher energy, shorter pulse delay
Thinner Vascular	Increase the pulse duration lightly
Thicker Vascular	Increase the pulse duration
Small target area	Reduce pulse duration.
Big target area	Increase pulse duration.

480nm Filter - Acne Treatment

Parameter selection principle

Skin Color	Darker skin should go with longer Pulse Duration, longer pulse delay time, and lower energy.
Skin Sensitivity	sensitive skin should go with lower energy

530 nm Filter - Freckle Removal & Skin Rejuvenation

Freckle Removal: Melanin will absorb the light and convert it into heat energy, in this process, pigmentation molecules blasting and been cleaned by phagocytic cells, then excreted through the metabolism. This process is also effective for short-term stains.

Skin Rejuvenation: Collagen can effectively absorb the spectrum of 530nm. Selective absorption of heat causes collagen to accumulate. The aggregation of collagen is very effective in treating fine wrinkles

RF energy plays a very important role in skin rejuvenation treatment, so the energy should higher than doing the hair removal treatment, and when doing the normal hair removal treatment, operator could adjust the RF energy according to the skin conditions. Generally, 1-20 is okay for the treatment.

Parameter selection principle

Skin Color	The darker the skin, the longer the Pulse Duration, the longer the pulse delay time, the lower the treatment energy.
Skin sensitivity	The more sensitive the skin, the lower the treatment energy

590 nm Filter- Vascular Lesions Removal

The treatment goal of removing red blood silk is to convert the absorbed light into heat energy, effectively cauterize the capillary wall, and thicken the capillaries.

Parameter Selection Principle

Skin Color	The darker the skin tone, the longer the Pulse Duration, the longer the pulse delay time, the lower the treatment energy.
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Skin Sensitivity	The more sensitive the skin, the lower the treatment energy
Blood Capillary	The smaller the capillaries, the shorter the Pulse Duration, the shorter the pulse delay time, the higher the energy and the fewer pulses.

640 nm&690nm Filter- Hair removal

- ☉ 640 nm is for yellow skin and darker hair removal.
- ☉ 690 nm is for white skin and lighter hair removal
- ☉ For IPL treatments, an average of 8–10 treatments are required to remove most visible hair.

The filter maximizes and selectively targets the hair melanin. The light travels through the skin until it strikes the hair shafts or hair follicle. The follicle is usually where the highest concentration of melanin is located. As the light is absorbed, the bulb and most of the hair shaft are heated, destroying the hair-producing papilla. It is also claimed that heat conversion occurs directly in the darker capillaries that bring blood to the follicle.

At any one time, not all hair follicles are 'active', and only active hair follicles can be affected by the treatment. 'Inactive' hair follicles can be treated as they become 'active' over time.






Parameter selection principle

Skin Color	The darker the skin, the longer the pulse delay time, the lower the treatment energy.
Hair Color	The darker the hair color, the shorter the Pulse Duration; Conversely, the lighter the longer.
Density of hair	The thicker the hair, the shorter the pulse delay time,

	the higher the treatment energy.
Hair Thickness	The thicker the hair, the longer the Pulse Duration, the lower the treatment energy

Note: The area to be treated should be clean shaven and free of sunburn. Treatment sessions are usually 4 to 6 weeks apart.

Recommended IPL/SHR/E-light Treatment Parameter

Recommended Parameters for IPL					
Skin Color	Intensity(Voltage)	Pulse Numbers	Pulse Duration	Pulse Interval	Shots Interval
					
IPL-480nm					
White	290	3	5ms	15ms	2000ms
Yellow	270	3	5ms	20ms	2000ms
Brown	240	3	6ms	25ms	2000ms
Black	230	3	6ms	25ms	2000ms
IPL-530nm					
White	300	3	5ms	15ms	2000ms
Yellow	280	3	5ms	20ms	2000ms
Brown	260	3	6ms	25ms	2000ms
Black	250	3	6ms	25ms	2000ms
IPL-590nm					
White	300	3	5ms	15ms	2000ms
Yellow	280	3	5ms	20ms	2000ms
Brown	260	3	6ms	25ms	2000ms
Black	240	3	6ms	25ms	2000ms
IPL-640nm					
White	320	3	5ms	15ms	2000ms
Yellow	290	3	5ms	20ms	2000ms
Brown	270	3	5ms	25ms	2000ms
IPL-690nm					
Skin Color	Intensity(Voltage)	Pulse Numbers	Pulse Duration	Pulse Interval	Shots Interval
White	290	3	4ms	15ms	2000ms
Yellow	270	3	4ms	20ms	2000ms
Brown	240	3	5ms	25ms	2000ms
Black	230	3	5ms	25ms	2000ms

Chapter 6 Maintenance

This section describes daily maintenance of the Laser treatment system that can be carried out by the client. Only personnel trained and/or approved by the manufacturer are authorised to maintain the inner workings of this device. Any manipulation to the system may cause damage to the device and will void any warranty. Do not do any other maintenance work not described in this chapter.



Before any maintenance work turn the power off and unplug device. Failure to turn off the power may cause an electric shock, damage to the device and bodily injury. Never tempt to remove the back panel or device casing. Unauthorized tampering with the internal system of the devices will automatically void the warranty.

6.1 Cleaning the Main Host

The main host casing or body must be clean with a soft damp cloth. A mild detergent may be used but be cautious, do not let the liquid sip into the machine.

6.2 Refilling the Water Supply

Observe the water level through the water viewing window at the rear of the unit. The water level is best maintained within the midpoint of this

window. Distilled water can be added by following the instructions seen in “Section3.2 Installation”.

6.3 Environmental Protection

When at the end of the service life of equipment accessories, please dispose properly in line with local environmental laws and regulations.