

V-LASER



TREATMENT PARAMETERS

Long-Pulsed

532nm KTP & 1064nm Nd:YAG

Vascular Lesions
Benign Pigmented Lesions
Skin Rejuvenation
Hair Removal

532nm · 1064nm · Genesis

Main Screen

Guide Beam
To adjust brightness of aiming beam

Load Parameter
To load saved parameters

Save Parameter
To save parameters

Information
To check the information of the laser system

Pulse Count
To check or to reset the number of pulses fired

Mode
To select a mode (532nm, 1064nm or Genesis)



Up & Down
To adjust parameter figures

Contact Cooling
To adjust contact cooling temperature

Standby / Ready
To change status indicates (standby or ready)

Loading Parameter



Press "Load"



Select a parameter
Press "✓"

Saving Parameter



Press "+" "-" to adjust parameter



After entering name of parameter,
Press "Enter"

Replacing Cartridge



Press the buttons of the both sides down sides at once



Remove the installed cartridge
towards the sapphire window

	Tips for Appropriate Parameter Managing When Making Vascular Treatments
• Wavelength (nm)	<ul style="list-style-type: none"> • 532nm : Thin blood vessel, pink blood vessel • 1064nm : Thick and deep blood vessel, dark blue, purple
• Spot Size (mm)	<ul style="list-style-type: none"> • Small Spot Size : Thin blood vessel • Large Spot Size : Blue, Purple, Thick blood vessel, Flushing
• Fluence (J/cm ²)	<ul style="list-style-type: none"> • High Energy : Small diameter, pink blood vessel • Low Energy : Large diameter, blue and dark blood vessel
• Pulse Duration (ms)	<ul style="list-style-type: none"> • Short Pulse Duration : Small diameter, pink blood vessel • Long Pulse Duration : Large diameter, blue and dark blood vessel
• Cooling Temperature (°C)	<ul style="list-style-type: none"> • Normally 5°C-15°C / Dark skin : 5°C • Before/after treatment cooling of lesion important
• Repetition Rate (Hz)	<ul style="list-style-type: none"> • Recommend not to go over 2Hz for safe protection of skin

Treatment Information : Vascular Lesions

Prior to Treatment	Use of Anesthetic Cream	<ul style="list-style-type: none"> • Optional
	Use of Cooling Gel	<ul style="list-style-type: none"> • Apply as thinly as possible on the surface of the skin
	Eye Shield for Patient	<ul style="list-style-type: none"> • Must do
	Safety Goggle	<ul style="list-style-type: none"> • Must do
	Test Shot	<ul style="list-style-type: none"> • Proceed test shot with the least available fluence, adjust parameter while considering LTI (Laser Tissue Interaction) and Ending Point.
Treatment Process	Contact Cooling	<ul style="list-style-type: none"> • Requires contact cooling before and after treatment • approximately 10-15 °C ★MUST DO★
	Treatment Method	<ul style="list-style-type: none"> • Press the hand piece on to the lesion (maintain 90° angle) • Do not press the vascular lesion too hard • If gel gathers above the sapphire window, clean up • If bubbles form in between cooling gel, remove bubbles • Do not treat the same place more than once • Observe the skin while making treatment, recommend smaller spot size for thinner blood vessels and to not apply too much pressure on the lesion
	Ending Point	<ul style="list-style-type: none"> • Reduce pulse width or increase fluence to check on appropriate ending point • Vascular lesion color change or disappears right after • Bruises or reddening
Post Treatment	Skin Reaction	<ul style="list-style-type: none"> • May show signs of reddening or bruises
	Post Treating	<ul style="list-style-type: none"> • Cooling care • For burns, use contact cooling of hand piece to make it calm down (do not use ice)
	Warning for Patients	<ul style="list-style-type: none"> • No Sauna, No chemical-composition make up for 5-7 days
Treatment Numbers	Treatment Gaps	<ul style="list-style-type: none"> • 4-6 weeks

Parameters : Vascular Lesions _ 532nm

Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)
Telangiectasia	532nm	3-	8-9	12	1.5	15-20
		4-	10-	10-	1	
Diffuse Redness		10	5-7	10-	3	
Acne Redness		5	6-	5-	1	

Parameters : Vascular Lesions _ 1064nm

Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)
Cherry Angioma	1064	3	150-	10-	1	15-20
Dark Circle		5	90-	20-	1	
Vein		4-6	150-	20-	1	
Telangiectasia		3-	150-	10-	1	
Venous Lake		5	90	20-	1	

Treatment Information : Pigmented Lesions

Prior to Treatment	Use of Anesthetic Cream	<ul style="list-style-type: none"> • Must do
	Use of Cooling Gel	<ul style="list-style-type: none"> • Must do • Use with spot size smaller than 10mm and for dark skin • Not recommended to use gel for partial treatment
	Eye Shield for Patient	<ul style="list-style-type: none"> • Must do
	Safety Goggle	<ul style="list-style-type: none"> • Must do
	Test Shot	<ul style="list-style-type: none"> • Proceed test shot with the least available fluence, adjust parameter while considering LTI (Laser Tissue Interaction) and Ending Point. • When adjusting fluence, adjust to 1.0-0.2J/cm²
Treatment Process	Contact Cooling	<ul style="list-style-type: none"> • Requires contact cooling before and after treatment - approximately 10-15 °C ★MUST DO★
	Treatment Method	<ul style="list-style-type: none"> • Press the hand piece on to the lesion (maintain 90° angle) • Be especially careful with curved areas • If gel gathers above the sapphire window, clean up • If bubbles form in between cooling gel, remove bubbles • When treating vascular freckles, treat in 2 weeks interval • When treating pigmentation, irradiate 2-3 times on the lesion with Diffuse Redness mode, cool down, then use pigmentation (Lentigine, Melasma) mode 1 time • As the number of times you receive treatment increases, reduce pulse width • When treating color pigmentation receive treatments every three weeks
	Ending Point	<ul style="list-style-type: none"> • Darkening color change • Reddening
Post Treatment	Skin Reaction	<ul style="list-style-type: none"> • Reddening disappears in 2-3 days • If scab forms after treatment, it falls off in about 10 days
	Post Treating	<ul style="list-style-type: none"> • Cooling care, sunblock
	Warning for Patients	<ul style="list-style-type: none"> • No Sauna, No chemical-composition make up for 5-7 days
Treatment Numbers	Treatment Gaps	<ul style="list-style-type: none"> • Around 3-4 weeks

Parameters : Pigmented Lesions

Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)
Freckles	532	3-5	9-	3	1.5	5-10
Melasma / PIH		10	5-	10-20	2	
Solar Lentigines		5	10-	10-	1	
Poikiloderma		8	7-12	8-15	2	

Parameters : Warts

Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)
Warts 1	532	4	20-	10-20	1	5-15
Warts 2	1064	4	220-	20	1	

Treatment Information : Skin Rejuvenation

Prior to Treatment	Use of Anesthetic Cream	<ul style="list-style-type: none"> • Optional
	Use of Cooling Gel	<ul style="list-style-type: none"> • Not required
	Eye Shield for Patient	<ul style="list-style-type: none"> • Must do
	Safety Goggle	<ul style="list-style-type: none"> • Must do
	Test Shot	<ul style="list-style-type: none"> • Must do
Treatment Process	Contact Cooling	<ul style="list-style-type: none"> • Not required
	Treatment Method	<ul style="list-style-type: none"> • Make treatment while maintaining 3-4cm distance from skin surface to the hand piece • There is possibility of burn, so take caution of skin surface temperature • Tightening 1 <ul style="list-style-type: none"> ▪ Recommended for the first 1-2 treatments of skin rejuvenation ▪ Use moving method to irradiate 300-400 shots on the whole face • Tightening 2 <ul style="list-style-type: none"> ▪ Recommended to irradiate around 400 shots ▪ Recommended to use with Genesis • Genesis <ul style="list-style-type: none"> ▪ Irradiate around 5000-6000 shots ▪ Take special caution with patients with freckles, recommended to use irradiate only 2000 shots
	Ending Point	<ul style="list-style-type: none"> • Reddening due to temperature change on skin surface
Post Treatment	Skin Reaction	<ul style="list-style-type: none"> • Reddening, hot flush, swelling
	Post Treating	<ul style="list-style-type: none"> • Cooling care and sun block
	Warning for Patients	<ul style="list-style-type: none"> • Not recommended to smoke or drink alcohol for 3-6 days
Treatment Numbers	Treatment Gaps	<ul style="list-style-type: none"> • 2-4 weeks

Parameters : Skin Rejuvenation

Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature	Pass
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)	-
Tightening	1064	10	35	30	1	5	2-3
Genesis		8	7-	0.3	10	-	2-3

Treatment Information : Hair Removal

Prior to Treatment	Use of Anesthetic Cream	<ul style="list-style-type: none"> Optional
	Use of Cooling Gel	<ul style="list-style-type: none"> Not required
	Eye Shield for Patient	<ul style="list-style-type: none"> Must do
	Safety Goggle	<ul style="list-style-type: none"> Must do
	Test Shot	<ul style="list-style-type: none"> Make 1-2 test shots before treatment Adjust fluence to 1.0-0.2J/cm²
Treatment Process	Contact Cooling	<ul style="list-style-type: none"> Requires contact cooling before and after treatment - approximately 10-15 °C
	Treatment Method	<ul style="list-style-type: none"> Recommended to shave 1-2 days before treatment For dark skin, recommended to reduce fluence and increase pulse duration If gel gathers above the sapphire window, clean up Be especially careful with curved areas Beware not to irradiate continuously or overlap on the same spot It is possible for hair or other materials to stick onto the sapphire window, so be aware. (continue treatment while removing with alcohol swab) There is possibility of burn, so take caution of skin surface temperature 2 rounds maximum
	Ending Point	<ul style="list-style-type: none"> Burning of normal hair, fine hair or appearance of erythema, edema around pores
Post Treatment	Skin Reaction Post Treating	<ul style="list-style-type: none"> Swelling or Reddening Cooling care
	Warning for Patients	<ul style="list-style-type: none"> No Sauna, No chemical-composition make up for 5-7 days Must apply sun block
	Treatment Gaps	<ul style="list-style-type: none"> 4-8 weeks
Treatment Numbers	Treatment Numbers	<ul style="list-style-type: none"> 3-5 times










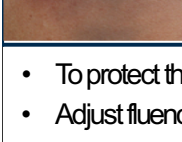
Parameters : Hair Removal

Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature	Pass
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)	-
Hair Removal	1064	6	90	15	1	5-15	2~3

Korean User Group Parameters




Lesion	Wavelength	Spot Size	Fluence	Duration	Frequency	Temperature	Pass
	(nm)	(mm)	(J/cm ²)	(ms)	(Hz)	(°C)	-
Telangiectasia	532	3	10	3	1	15-20	1
	532	5	11.5	10	1	15-20	1
	532	8	6	10	1.5-	15-20	2
Venulectasia	532	5	8.6	7	1	15-20	1
Diffuse redness	532	10	6	10	1.5-	15-20	3-5
Rosacea	532	8	6.6	10	1-	15-20	3
	532	10	7.6	10	1-	15-20	1
Rosacea w papules	Step1. 532	10	5	20	1.5-	15-20	3
	Step2. Genesis	10	5	0.3	8-	15-20	3-5
Pigmentations (local)	532	3	10	3	1	5-10	1
Pigmentations (entire face)	532	5	10	10	1.5-	5-10	3-5
	532	6	7	8-10	1.5-	5-10	3-5
Poikiloderma	532	7	10	15	1	5-10	1
Acne redness	532	4	4	7	1	5-10	2
	532	6	6	4	1	5-10	2
Face Tone Up	532	10	5.5-6	15	1.5-	5-10	2-3
Inner Lift	1064	10	25	30-40	1.5-	5-10	2-3
Hair removal _ beard	1064	6	40-80	15	1-	5-10	1

LOW DOSE PARAMETERS

Example	Lesion	Mode (nm)	Fluence (J/cm ²)	Frequency (Hz)	Spot Size (mm)	Duration (ms)	Cooling (°C)
	Cherry Angiomas	1064	130– 170	1-2	3	8– 30	5-10
	Spider Angioma		100– 150	1-2	3	15– 40	5-10
	Facial Telangiectasia		90– 130	1-2	4-5	15– 50	5
	Reticular Vein		110– 160	1-2	5	35– 60	5-10
	Spider Vein – Leg		110– 170	1-2	4-6	15– 30	5-10
	Venous Lake		70– 130	1-2	4– 6	20– 50	5-10
	Cherry Angiomas	532	10– 14	1-2	3– 5	6– 15	5-10
	Facial Telangiectasia		7– 10	1-2	4– 6	8– 15	5
	Nose Telangiectasia		7– 10	1-2	5	8– 15	5-10
	Bruising		10	1-2	6	10	5

- To protect the epidermis, apply a cooling gel to the patient's face.
- Adjust fluence and pulse duration according to patient's skin type.
- Make sure the cooled tip is in good contact with the patient's skin, particularly on curved areas such as jaws & nose.
- When treating blood vessels, look for endpoint (blood vessel lesion darkening, coagulating or disappearing). If it does not disappear, reduce pulse duration or increase energy gradually until end point is reached.
- Size of blood vessel, colour, depth, can have an effect on cooling time.
- When treating small blood vessels on 1064nm, do not overlap pulses. **NO NOT PULSE STACK.**
- Observe changes of skin during treatment, to avoid over-treatment or burning.
- 532nm is appropriate for pigmented lesions, Nevus, Telangiectasia, Poikiloderma and diffuse redness.
- Facial telangiectasia should first be treated with 532nm, then 1064nm if needed.
- 1064nm is appropriate for Reticular veins, Nodular veins and Nevus.

Pigmentation

Example	Lesion	Mode (nm)	Fluence (J/cm ²)	Frequency (Hz)	Spot Size (mm)	Duration (ms)	Cooling (°C)
	Lentigines (face)	532	10.0– 12.0	2.0	3–4	5–10	10
	Lentigines (body)		8.0– 10.0	2.0	4–5	5–10	10
	Dyschromia (red / brown)		5.0– 7.0	2.0	10	10–15	10

- Cooling 15– 20°C; ensure the sapphire window makes full contact with the patient's skin.
- To protect the epidermis, apply a cooling gel to the patient's face.
- Adjust energy and pulse duration according to patient's skin type.
- Perform a test pulse before treatment, and adjust the energy value accordingly.
- Use of ultrasound gel is recommended when treating pigment on 532nm.
- For darker phototypes and darker pigmentation, it is recommended that you increase the pulse duration and decrease energy.
- Erythema may appear after laser treatment. It should disappear in 1– 2 days.
- Observe changes of skin temperature during treatment, to avoid over treatment or burning.
- In the case of any or damage to tissue, cool the tissue immediately, and treat as required (use the sapphire window, NOT ice).
- Required endpoint is a slight darkening of the pigment.
- After treatment for PIH, a crust will appear. It should fall off within a week.

Genesis and Skin Tightening

Lesion	Mode (nm)	Fluence (J/cm ²)	Frequency (Hz)	Spot Size (mm)	Duration (ms)	Pulse Count
Face Rejuvenation	Genesis	5.0	10	6-8	0.3	1,000– 2,000
Scars		5.0	8.0	10	0.3	50–200
Fungus		5.0	8.0	10	0.3	50–200

- Adjust the energy and pulse duration according to the patient's skin type.
- Continually observe the patient's skin reaction.
- Take into account the patient's skin phototype, and take extra caution when treating over hair bearing regions.
- Avoid treating the same areas for a prolonged period.
- Endpoint is erythema and edema

Hair Removal – best for phototypes III – IV

Lesion	Mode (nm)	Fluence (J/cm ²)	Frequency (Hz)	Spot Size (mm)	Duration (ms)
Coarse Hair	1064	30– 50	1.0	8	30
Applied Area	<ul style="list-style-type: none"> • Axillar (MF) • Upper Lip (MF) • Cheek (M) • Bikini Line 				
<ul style="list-style-type: none"> • Cooling 5°C • Patient should be advised to shave 1-2 days prior to treatment. • Peri-follicular oedema immediately after treatment indicates appropriate energy was used. 					
Fine Hair	1064	50– 75	1.0	8	10
Applied Area	<ul style="list-style-type: none"> • Fine Hair: Arms/ Legs (F) • Fine Lip: Upper Lip (F) 				
<ul style="list-style-type: none"> • Patient should be advised to shave 1-2 days prior to treatment. • Follicle will not swell up; end point is burning of hair and edema around follicle. 					
Normal Hair	1064	40– 60	1.0	8–10	20
Applied Area	<ul style="list-style-type: none"> • Hair line (MF) • Arms/ Legs (MF) • Chest (M) • Back (M) 				
<ul style="list-style-type: none"> • Patient should be advised to shave 1-2 days prior to treatment. • Follicle will not swell up; end point is burning of hair and edema around follicle. 					