

# DERMAV Vascular Conditions

## HOW TO USE THIS GUIDE:

The settings on this Guideline Sheet are suggested settings based upon a range of testing performed. These suggested settings are considered safe starting points and may require modification by the practitioner based upon the patient's treatment history, skin type, sun exposure and other factors. Your individual experience using the system and the patient's treatment history will play a role in determining the proper setting to achieve both safety and efficacy. You will notice that there a variety of applications and treatment techniques you should consider based upon the patient.

## CLINICAL ENDPOINTS:

Please review the parameter suggestion and suggested **CLINICAL ENDPOINTS** and **COMMENTS** for the targeted application. It is suggested that you perform a test pulse to determine safe operation. If the described CLINICAL ENDPOINT is not achieved, you may consider a simple change to the Various Sub-Pulse (VSP) modes before changing other settings. Your treatment goal should be to reach the proper clinical endpoint using the lowest fluence possible.

**532 nm**

532 nm

Indication	Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session	
Global Diffuse Redness	Rosacea	I-IV	12	Sub-Micro	10	5~6	1	15/15/0	1	4	3~5
	<ul style="list-style-type: none"><li><b>CLINICAL ENDPOINTS:</b> Level 1 endpoint (see chart below). Spot treatment is recommended with uniform coverage with 18% overlap for best results.</li><li><b>COMMENTS:</b> Sub-micro is often used when vessels are small enough where the skin appears pink and individual vessels are difficult to see. Larger more visible vessels will likely respond better to Sub-Milli pulse mode. If subjects report having sensitive skin, higher cryogen cooling settings may be beneficial (such as 20/20/0ms). Average # of pulses should be approx.300 shots for a full face.</li></ul>										
	Sensitive Skin	I-IV	12	Sub-Micro	10	5~6	1	20/20/10	1	4	3~5
	<ul style="list-style-type: none"><li><b>CLINICAL ENDPOINTS:</b> Sensitive is descriptive of subjects that have tendency to swell (edema) or darker skin than usual. Level 1 endpoint.</li><li><b>COMMENTS:</b> When using 12mm spot avoid overlap more than 15%. Average # of pulses should range between 100-200 shots for a full face.</li></ul>										

**532 nm**

Indication	Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
Poikiloderma (mostly brown)	I-IV	12/14	Sub-Micro	10	5	1	0/0/10	1	3	3~5
<ul style="list-style-type: none"> <li><b>CLINICAL ENDPOINTS:</b> Level 2 endpoint. Heavily pigmented skin will exhibit slight darkening of the pigment. Diffuse redness is expected.</li> <li><b>COMMENTS:</b> Uniform overlap when using freehand spot treatment is critical as "skip areas" can be evident. Skip areas can be addressed in follow up visits. IntelliTRAK may be used to assist with treatment uniformity.</li> </ul>										
Poikiloderma (mostly red)	I-IV	12/14	Sub-Milli	10	5~6	1	15/15/0	1	3	3~5
<ul style="list-style-type: none"> <li><b>CLINICAL ENDPOINTS:</b> Level 2 endpoint.</li> <li><b>COMMENTS:</b> Same as above.</li> </ul>										

## VASCULAR ENDPOINT LEVELS:

- Level 1:** localized redness, no greying, no purpura
- Level 2:** Transient grey immediate post / slowly disappears
- Level 3:** Transient grey to deep grey / delayed purple.

**Note:** If endpoint is not evident, consider increasing fluence by 0.5J/cm<sup>2</sup> after test pulse modes.

Indication	Skin type	Wave-length	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm²)	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
Angioma	I-IV	532	3/5	Sub-Milli	5	10	Single	10/10/10	1	3	1~
Angioma (raised bleb)	I-IV	1064	5	Single Sub-Milli	15	130	Single	15/15/20	1	3	1~

- **CLINICAL ENDPOINTS:** Level 3 endpoint. Surrounding skin should not change.
- **COMMENTS:** With proper settings only the angioma will change to a darker color and surrounding skin should not be affected. If surrounding skin changes consider lowering your fluence.

Facial vessels (nasal)	I-IV	532	8	Sub-Milli	10	7	Single	15/15/10	1	3	1~
Facial vessels (large)	I-IV	532	8	Sub-Milli	15	8	Single	15/15/10	1	3	1~
Facial vessels (fine)	I-IV	532	8	Sub-Micro	10	7	Single	15/15/10	1	3	1~

- **CLINICAL ENDPOINTS:** Level 2 endpoint. Increase cryogen settings if darker skin is of a concern. A global full-face treatment pass should be completed prior to the spot treatment on vessel lines.
- **COMMENTS:** Linear facial vessel treatments respond better following a Global Redness treatment. Treat globally first and then target individual vessels with spot treatments.

Leg veins (fine red)	I-III	532	8	Sub-Micro	15-20	8	Single	15/15/10	1	3	1~
	IV	1064	8	Sub-Milli	15-20	130	Single	15/15/10	1	3	1~
Leg veins (thick red)	I-III	532	8	Sub-Milli	15-20	8	Single	15/15/10	1	3	1~
	IV	1064	8	Single	15-20	110	Single	15/15/10	1	3	1~
Leg veins (purple)	I-III	532	8	Single	15-20	9	Single	15/15/10	1	3	1~
	IV	1064	8	Single	30-40	90	Single	15/15/10	1	3	1~

- **CLINICAL ENDPOINTS:** Level 3 endpoint. Increase cryogen settings if darker skin is of a concern

Leg veins (small red)	IV+	1064	8	Sub-Milli	15-20	110	Single	15/15/10	1	3	1~
	IV+	1064	8	Single	20-25	110	Single	15/15/10	1	3	1~
Leg veins (blue)	IV+	1064	8	Single	30-40	90	Single	15/15/10	1	3	1~

- **CLINICAL ENDPOINTS:** Level 2 endpoint. Vessels will turn deep purple without any visible trauma to the skin. If epidermal trauma is noted, reduce fluence and apply cold compress bag on the skin before continuing.
- **COMMENTS:** Longer pulse duration such as this are uncomfortable for the subject. Cold compress bags can help with discomfort. Additional post spray cooling may be helpful.

Periorbital vein (blue)	I-VI	1064	8	Single	15	60	Single	15/15/20	1	3	1~
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- **CLINICAL ENDPOINTS:** Level 2 endpoint

# DERMAV Vascular Conditions

532 nm

Indication		Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
Port-Wine Stain	Light Pink	I-IV	12	Sub-Micro	10	5~7	2	15/15/10	1	6	3~5
	Deep purple	I-IV	12	Sub-Milli	10	5~7	2	15/15/10	1	6	3~5
	Resistant to prior DV Tx	I-IV	10	Sub-Milli	10	7.5	2	15/15/10	1	6	3~5
	Purpuric	I-IV	8	Single	2	5	2	15/15/10	1	6	3~5

- CLINICAL ENDPOINTS:** Level 3 endpoint. Vessels in PWS will turn dusky gray immediately post treatment. Traditional dark purpura is not a proper endpoint.

532 nm

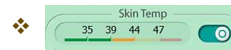
Indication		Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
Bruising	Purple	I-IV	10	Sub-Milli	10	6	Single	15/15/10	1	2	1~
	Yellow	I-IV	10	Sub-Micro	10	6	Single	15/15/10	1	2	1~

- CLINICAL ENDPOINTS:** Level 1. No obvious immediate change, slight redness to follow - may be delayed - wait 5 min before consecutive passes.

532 nm

Indication	Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
Hypertrophic scar (raised red)	I-IV	10	Sub-Milli	5	6	1	15/15/10	1	4	3~4
	<ul style="list-style-type: none"> <li><b>CLINICAL ENDPOINTS:</b> Level 3 endpoint</li> <li><b>COMMENTS:</b> Purpuric treatments are not required to obtain results.</li> </ul>									
Non-hypertrophic (flat red)	I-IV	10	Sub-Milli	10	6	1	15/15/10	1	4	3~4
	<ul style="list-style-type: none"> <li><b>CLINICAL ENDPOINTS:</b> Level 2 endpoint</li> </ul>									

# DERMAV Skin Revitalization



Skin Temp mode can be utilized.

Indication	Wavelength (nm)	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass (Total Shots)	Interval (week)	Session
<b>IntelliTONE (Clear)</b>	532	12	Single	0.3	0.8	10	OFF	painting (1000 shots)	3	3~5
<b>IntelliTONE (Smooth)</b>	1064	12	Single	0.3	3~5	10	OFF	painting (1500 shots)	3	3~5

- **CLINICAL ENDPOINTS:** The objective is to raise the temperature of the skin to a tolerable level by heating the chromophores absorbed by the specific wavelength. The target endpoint is diffuse redness but not painful for the subject. The temp sensor can be set to alert the user when specific temperatures have been achieved and stop the laser at temperatures to avoid injuring the skin. Reduce fluence to 3J/cm<sup>2</sup> if the rate of heating is too fast or increase size of treatment zone.
- **COMMENTS:** 1064 nm should be used first as deeper heating should be 1st pass followed by the 532 nm pass which is more superficially absorbed. Circular motions produce more uniform coverage. It is suggested to target only a small area at one time to better control the heating and comfort for the subject.

## ❖ IntelliTONE : For all skin types

- It is a gentle skin revitalization technique which combines quasi-long pulse 532 nm and 1064 nm (2 wavelengths sequentially in the same session) with gentle fluence, applying multiple passes with a painting technique. L532 nm smoothly improves the overall roughness of skin texture and uneven skin tone. The following step, L1064 Genesis Toning, delivers gentle heat to the dermal layer for new collagen regeneration.

## 532 nm

Treatment	Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
<b>A.R.T (mostly pigment)</b>	I-IV	14	Sub-Micro	10	4	2~4	0/0/10	1-2	3	3~5
<b>A.R.T (mostly vascular)</b>	I-IV	12	Sub-Milli	10	5	2~4	15/15/0	1-2	3	3~5

- **CLINICAL ENDPOINTS:** The endpoint for treatments is diffuse redness and slight pigment darkening. Patient may report the skin feels hot/warm. If subjects feel too much heat, consider adding 10msec of post-spray.
- **COMMENTS:** VSP modes listed below are starting points. S-Milli and S-micro may be changed to achieve proper endpoint response.

<b>A.R.T (pigment &amp; vascular)</b>	I-III	12/14	Sub-Micro	10	5	2~4	15/15/0	1	3	3~5
		14	Sub-Milli	10	4	2~4	0/0/10	1-2	3	3~5

- **CLINICAL ENDPOINTS:** Desired endpoint is diffuse redness and slight pigment darkening
- **COMMENTS:** This is a multi-pass treatment for ST I-III. Each treatment pass is performed using the desired rep rates to cover the skin uniformly. Skin reaction will determine number of passes.



Before



Immediately after

532 nm

35

39

44

47

Skin Temp

Skin Temp mode can be utilized.

Indication	Skin Type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
Lentigo (small)	I-III	3/5	Single	5	4	1	0/0/5	1	4	1-2
	IV	3/5	Single	5	3~4	1	0/0/5	1	4	1-2
	<b>CLINICAL ENDPOINTS:</b> Level 1 endpoint (see below). Pigment will darken slightly immediate post and become darker at 24 hours. Fluence settings over 5 j/cm2 will likely cause purpura. If no Level 1 response, consider changing to Lentigo (large) setting									
Lentigo (large)	I-III	8	Sub-Micro	5	4	1	0/0/5	1	4	1-2
	IV	5	Single	0.5	3~4	1	0/0/5	1	4	1-2
	<b>CLINICAL ENDPOINTS:</b> Level 1 endpoint. Pigment will darken slightly immediate post and become darker at 24 hours.									
Global diffuse pigment	I-IV	12	Sub-Micro	10	4	4	0/0/10	1	4	2-3
	<b>CLINICAL ENDPOINTS:</b> Level 1 endpoint.									
Seborrheic Keratosis (thick)	I-III	5	Single	10	14~16	1	0/0/10	1	4	1-2
	<b>CLINICAL ENDPOINTS:</b> Level 3 endpoint.									

PIGMENT ENDPOINT LEVELS:



- **Level 1:** slight darkening delayed over ~ 5 mins.
- **Level 2:** immediate darkening. Slight greying.
- **Level 3:** immediate grey / white.

*Note: If endpoint is not evident, consider increasing fluence by 0.5J/cm<sup>2</sup> after test pulse modes.*

- A thin crust will form on treated pigmented areas on the face which will flake off within 5 days.
- When combining spot pigment treatment with a full-face rejuvenation technique in the same session, please do the full-face treatment first and then follow with the spot pigment treatment.(When spot pigment is treated first, additional energy would be absorbed by the treated pigment area.)
- **POST CARE:** Apply hydrocortisone (1%) for 3 ~ 5 days until the crust flakes off (Prophylaxis against PIH)

Parameter settings

Adjust the parameters by referring to the table below

 lighter lesion / lighter skin	Pulse width	Fluence
 darker lesion / darker skin	Fluence	Pulse width

- The thicker the pigment, the longer the pulse width. Ablation reactions can be observed when selecting a short pulse width or sub-micro pulse mode.



# DERMAV Hair Removal

1064 nm



IntelliTrak mode can be utilized.

Hair type	Skin type	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Skin type	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Skin Type	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )
Fine (Upper lip)	III	12	Single	3	26 ~ 32	IV	5	24 ~ 28	V & VI	5~12	14 ~ 18
		14			26 ~ 30			14 ~ 26			8 ~ 16
		16			24 ~ 28			14 ~ 24			8 ~ 14
Medium (Arm, Legs)		12		5	24 ~ 30		5	18 ~ 22		12~20	12 ~ 16
		14			24 ~ 28			16 ~ 20			8 ~ 14
		16			22 ~ 26			16 ~ 18			8 ~ 12
Coarse (Beard, Axillary, Bikini)		12		5	22 ~ 26		10~20	20 ~ 26		20	6 ~ 10
		14			20 ~ 26			20 ~ 24			4 ~ 8
		16			20 ~ 24			20 ~ 22			4 ~ 6
	ICD : 20 / 20 / 0 ms					ICD : 20 / 20 / 0 ms			ICD : 20 / 20 / 0 ms		

▪ **CLINICAL ENDPOINTS** : Perifollicular edema & erythema

▪ **POST CARE**: Cooling and applying hydrocortisone to decrease the chance of folliculitis and other similar conditions.

- Perform a test spot to ascertain the appropriate response. If an excessive reaction occurs, lower the fluence by 2 J/cm<sup>2</sup> by step.
- Interval: 6~8 weeks
- Shave hair beforehand so that energy will be concentrated more on the hair roots and follicles, not wasted on the hair.

• **Pulse width** : Short - finer hair / lighter skin

Long - thicker hair / darker skin

• **Fluence** : High - lighter skin / low density of hair / smaller spot size

Low - darker skin / high density of hair / bigger spot size



Indication	Wavelength (nm)	Spot size (mm)	Pulse mode	Pulse width (ms)	Fluence (J/cm <sup>2</sup> )	Pulse rate (Hz)	ICD (Pre/Delay/Post)	Pass	Interval (week)	Session
<b>Eyebrow Reshaping</b>	1064	3x10	Single	5	32~	2~	10/10/10	1~	4	3~

## ❖ Eyebrow Reshaping

Remove hair around the eyebrows, using the 3x10 linear type cartridge. The tip prevents Laser energy from being delivered to unwanted areas around the eyes, allowing safe treatment.

▪ **COMMENTS** : Draw eyebrow shapes with a dermatograph pencil, remove the outer brows.

In case the distance between the patient's eyes and eyebrows is narrow, wearing eye shields in addition to the laser goggles is recommended.



## GUI

**Wavelength**

Nd:YAG 532 nm or 1064 nm is selectable.  
Hold for 2 seconds to change.

**Shot Count**

The number of laser shots emitted

**Pulse Width**

Time duration of one laser shot (ms)

**Multi-pulse Mode**

3 modes are selectable  
(Sub-Micro, Sub-Milli, Single mode)

**Operating Switch**

Laser emission control.  
Select either Finger or Foot switch.

**ICD**

**Intelligent Cooling Device**  
The timing of ICD gas delivery (Pre/Delay/Post)

**Standby/Ready**

When changed to Ready, laser emission is possible.

**Set-up**

Check total shot count, parameter history, sound volume, etc.

**Memory**

Frequently used parameters can be saved for each wavelengths.

**Parameter Capture**

Current parameters are captured and automatically saved in memory.

**Spot Size**

The diameter of the laser beam

**Fluence**

Energy per unit area (J/cm<sup>2</sup>)

**Pulse Rate**

The number of laser shots per second (Hz)

**IntelliTrak Mode (with IntelliTrak Tip)**

Speed gauge bar appears and Overlap percentage can be set.

**Skin Temp**

Check skin temperature in real time and indicated by **Green, Yellow, Red**.

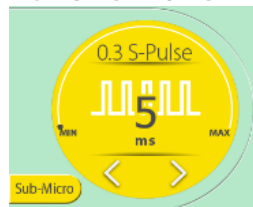
**Aiming Beam**

The brightness of the aiming beam is adjustable in the Ready state.

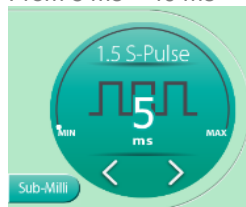
## Multi-pulse Mode

**Sub-Micro pulse mode**

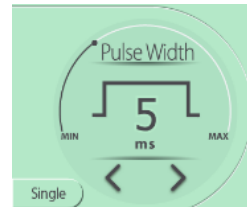
0.3 ms of sub-pulse mode  
From 5 ms – 40 ms

**Sub-Milli pulse mode**

1.5 ms of sub-pulse mode  
From 5 ms – 40 ms

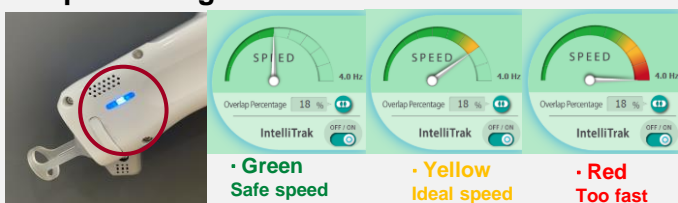
**Single pulse mode**

Single pulse  
From 0.3 ms – 40 ms



## IntelliTrak Mode

## ◆ Speed Gauge Bar



- As the IntelliTrak tip rolls over the skin surface, the speed gauge bar shows you the moving speed on the color.
- Bar on the GUI, echoed by color LEDs on the Handpiece.

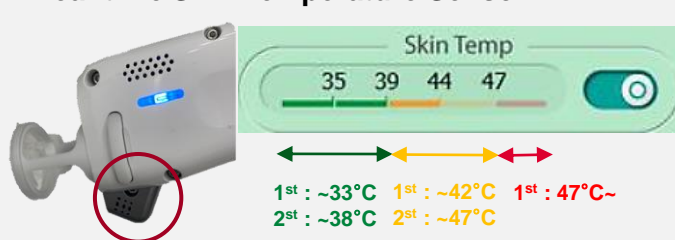
## ◆ Overlap Setting (-15, 0, 18, 30, and 50%)

- Overlap setting enables rapid and consistent treatment on large areas.
- 18% is the most ideal for hair removal. More overlap is recommended for lighter skin types, and less overlap is for darker skin types.



## Skin Temp Mode

## ◆ Real-time Skin Temperature Sensor



\*The range is adjustable in Set-up

- When the Handpiece is placed on the skin surface, the skin temperature is detected in both the Standby & Ready states.
- The range of skin temperature is shown in color on the GUI, which is echoed by color LEDs on the Handpiece.
- Turn off ICD mode when using the Skin Temperature mode.

Handpiece

- **Standby/Ready Button:** Double clicking this switch toggles between Standby and Ready states on the GUI.
- **Finger Switch:** When it is pressed in the Ready state, laser energy is emitted. Activate the finger switch mode on the GUI to use it.

**[Note:]**  
Do not bend the optical fiber to a diameter of less than 30 inches.

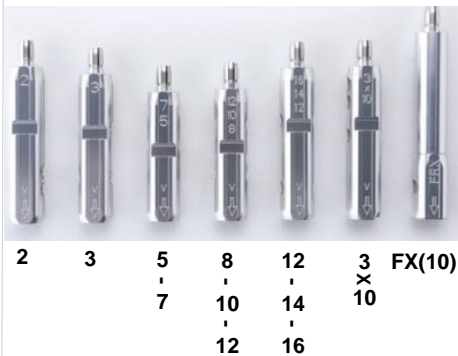


How to Set



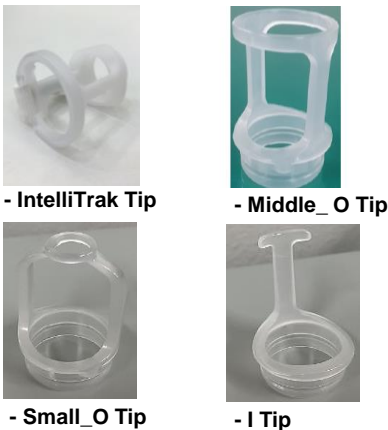
- Select an appropriate multi-spot cartridge according to the lesion.
- Attach it to the optical fiber.
- Insert the cartridge with the fiber into the Handpiece.

■ Spot Size by Cartridge



- Select the appropriate distance gauge.
- Attach the distance gauge to the front of the Handpiece by matching the groove or port.

■ Distance Gauge



- Insert the window into the slot above the Laser Aperture.
- Replaceable windows are stored in the accessory compartment.

**[Note:]** The window should be clean before the treatment.

■ Replaceable Window





## How to Clean

## Distance Gauge

1



IntelliTrak Tip

- Clean the surface with a cotton swab soaked with ethanol (70% or higher).
- Remove the roller, wipe it clean with ethanol and insert into the tip again.

2

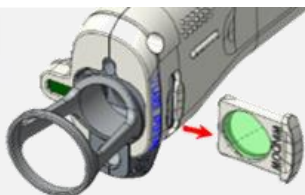


Other Tips

- With the tip in place, clean the surface with a cotton swab soaked with ethanol (70% or higher).
- Or separate the tip from the Handpiece and clean.

## Window

1



- Take out the replaceable window from the HP to check if it is clean.
- If there is debris, remove it with an air dust blower or soft lens cloth.

2



- If there is debris which cannot be removed with an air blower, remove it with a cotton swab soaked with ethanol (70% or higher).

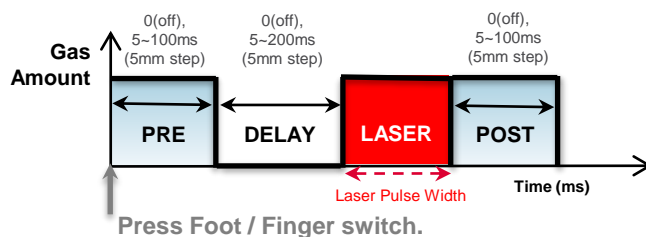
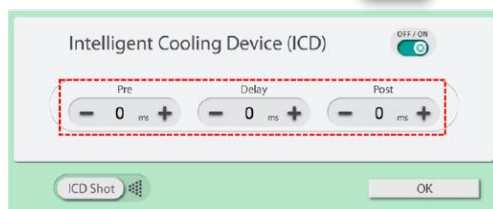
3



- In case of irreparable damaged to a window, push the window from the holder and replace it with a new one.

## ICD

- Cooling gas is **sprayed** immediately before and after laser irradiation to cool down the skin surface.
- Activate the ICD mode by pressing on the GUI.



- **PRE** ICD gas sprayed before laser irradiation
- **DELAY** Time interval between pre and lasing
- **POST** ICD gas sprayed after laser irradiation

## How to Set

- Press the gas amount button to check the percentage of remaining ICD gas.
- Whenever a new ICD canister is inserted, reset the initial value to 100%.

1

Caution (Check 00 00 00 08)

CHK 04 : Replace ICD canister.

- When ICD canister is empty, the error message above pops up on the GUI.

2



- Open the cap located on the top by turning left.

3



- Insert the new ICD canister.

4



- Replace the cap by turning right.

[Note!]



Always perform  
3~5 test shots  
before treatment.

## Post care

- Please do not use exfoliants or scrub the treated area for a week after treatment.
- Please do not use active cosmetics which contain Retinol or AHA for 48 hours.
- Please avoid taking a sauna for a week after treatment.
- Avoid using alcohol-containing cosmetics for at least 1 week after treatment. Instead, use a mild type of moisturizing toner and lotion.
- Apply a UVA/B sunblock of more than SPF 30, PA++ for at least 30 days after treatment.
- Please notify your doctor if you are taking medication for any other condition.
- Apply a cooling pack on areas affected by excessive erythema for more than 20 minutes.
- If your doctor has prescribed a steroid ointment, do not use it for more than 2 days.
- Do not pluck any remnant treated hair after hair removal treatment, but let it fall out spontaneously. If the hair is removed by force, folliculitis may occur due to inflammation.

**For more information, please contact your physician at the address below.**