



The Complete Picosecond Platform









## PicoWay – The Complete Picosecond Platform



PicoWay is a remarkably innovative 3 wavelength picosecond laser with both full-beam & fractional capabilities from Syneron Candela, the most trusted name in aesthetic lasers.

PicoWay's unique mode of action is based on delivering ultra-short picosecond pulses of energy to the tissue. These bursts of energy create a photoacoustic impact which breaks up the target pigment into smaller, more easily eliminated particles.

### Now with 3 wavelengths

532nm, 785nm & 1064nm picosecond laser

Targets a wide range of tattoos and pigmented lesions 3 wavelengths to treat a variety of pigmented lesions and all tattoo colors & types

Resolve<sup>™</sup> dual wavelength picosecond fractional module Treats pigmentation, skin irregularities and signs of aging

### High peak power

Enables a broad range of spot sizes for ultimate treatment customization

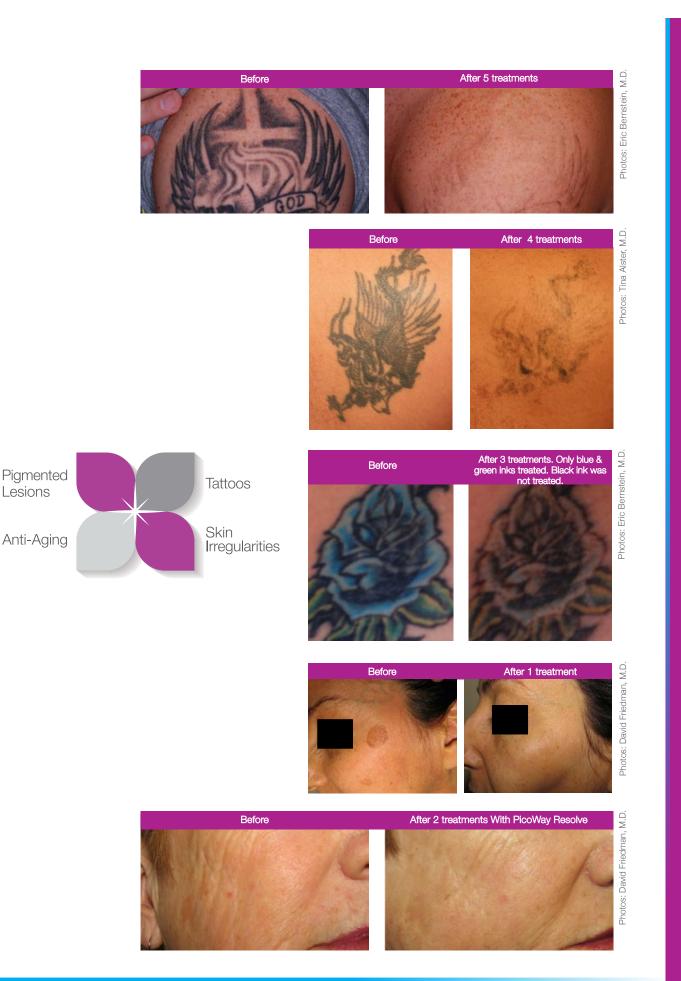
### Ultra-short picosecond pulses

Allows effective treatment with minimal risk of side effects



"This is the first, ever, 785nm wavelength picosecond-domain laser in the world. This novel addition to the PicoWay enables optimal treatment for blue and green tattoos, and is a welcome addition to the 532 and 1,064nm wavelengths already available with the PicoWay. The new 785nm wavelength further enhances the already strong capabilities of the PicoWay platform for tattoo removal, adding to its ability to rapidly and safely clear multicolored tattoos. I am thrilled to offer this new wavelength to my patients."

Eric Bernstein, M.D., President of Main Line Center for Laser Surgery, Ardmore, PA



"The PicoWay Nd:YAG laser allows us to treat a broader range of skin types and a wide array of tattoo ink colors. With the ultra-short picosecond pulse duration, there is less discomfort during treatment and faster healing. Professional and multicolored tattoos are cleared in far fewer treatment sessions than with conventional Q-switched lasers."

### PicoWay - Fully Featured Picosecond Platform

Proprietary PicoWay technology has optimal flexibility to adjust wavelength (532nm, 785nm &1064nm), beam delivery, energy, spot size and repetition rate for completely customizable treatments.

### Exemplary performance

Integrated in a proven, reliable Candela platform.

### Optimal flexibility for optimal results

Adjust wavelength, energy, spot size and repetition rate to treat all skin types.

### Scalable

Robust design enables future application developments.

### Ergonomic handpieces

Featherweight handpieces and articulated arm mean improved user comfort over large treatment areas and long treatment days.

#### Large spot sizes

Customize treatments with a broad range of spot sizes. Large spot sizes for faster coverage and the depth of penetration needed for deeper targets.

#### Linked user interface

System recognizes handpiece automatically.

#### Easy to use

Streamlined user interface virtually eliminates a learning curve.

#### Fits any office environment

Medium sized, mobile from room to room.

### Fast initiation time

Ready to use in less than 2 minutes.

### Low running costs

PicoWay Pulse-on-Demand ensures ultra-long flashlamp life.





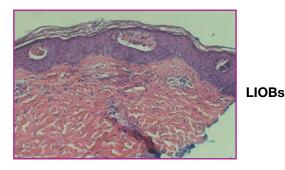
# PicoWay® + Resolve<sup>™</sup> Holographic Fractional Handpiece

- Provides dual wavelength (1064nm & 532nm) to target deep and shallow lesions.
- 1st and only aesthetic laser with revolutionary holographic fractional technology.
- Customizes treatment of pigmentation and skin and textural irregularities with adjustable fluences.
- Easy add-on to PicoWay.

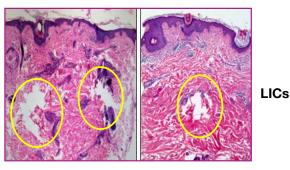


### Resolve Treats Skin Irregularities via LIOBs & LICs

Resolve uses picosecond pulses to create both Laser Induced Cavitations (LICs) in the dermis and Laser Induced Optical Breakdown (LIOBs) in the dermal-epidermal junction, while leaving the epidermis intact. These LIC creations, in a 2D pattern, stimulate a healing response and skin remodeling. The LIOB creations, in a 2D pattern, produce more of an effect on pigmentation. "Picosecond lasers are already being used for skin rejuvenation and improvement of acne scarring, using fractionated and non-fractionated beam profiles".<sup>1-3</sup>

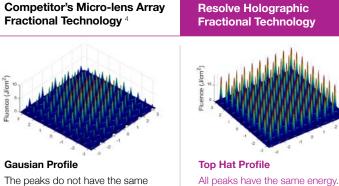


Histology of skin biopsied one-day post treatment with Resolve 532nm, 1.3 mJ/ $\mu$ beam showing 3 LIOB lesions in the epidermis. (Courtesy A. Kauvar, M.D.)



Histology of skin biopsied one-day post treatment with Resolve 1064nm and 532nm showing lesions in the upper dermis. The left image was treated with 1064nm, 2 mJ/µbeam. The right image 1064nm, 2 mJ/µbeam and 532nm, 0.3 mJ/µbeam. (Courtesy A. Ribe, M.D.)

Resolve uses a picosecond holographic fractional beam to deliver predictable energy and ensure uniform treatment with little downtime.



energy. <u>Peak Fluence Range:</u> 2.6 to 11.3 J/cm<sup>2</sup>. 30% of energy is lost as background energy.

Total energy = 0.2 J / treatment area

Peak Fluence: 16.8 J/cm<sup>2</sup> for all peaks. No energy is lost as background energy.

Total energy = 0.4 J / treatment area

# The Science of PicoWay Technology -Experience Picosecond Laser Leadership

### Ultra-Short Pulses & High Peak Power for Optimal Results

PicoWay's unique, proprietary mode of action has high peak power and short pulse durations for demonstrated performance and comfort. PicoWay's ultra-short pulses enable the strong photoacoustic impact needed to fracture pigment particles using lower fluences, for clearance in fewer treatments.



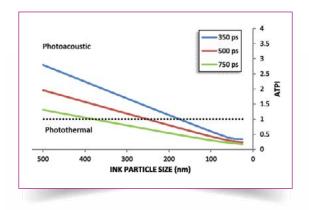
Photoacoustic

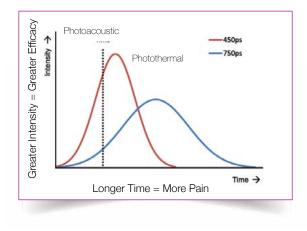
Laser energy is delivered so rapidly that the even the smallest pigment fragments will shatter.



Photothermal Laser energy is delivered more slowly so that only larger pigment

fragments will shatter.





### Acoustic to Thermal Pressure Index.

An ATPI index greater than 1 indicates a photoacoustic fracturing mechanism while an index less than 1 indicates a photothermal fracturing mechanism. PicoWay, with pulses from 300-450ps, has an ATPI index greater than 1.

#### Photoacoustic Fracturing is Advantageous

1. Less heat is generated resulting in fewer side effects and minimal discomfort.

2. Improved ability to treat smaller particles resulting in more complete clearance.

#### High Peak Power Means Greater Efficacy

The high peak power of the 450ps pulse of PicoWay delivers 4.5 times more photoacoustic effect than the 750ps pulse of other picosecond devices. The 750ps pulse delivers a more photothermal effect, since it does not have high peak power and must deliver the energy over a longer period of time. This excess photothermal effect can lead to potential side effects.

\* Unpublished data on file

# Why was 785nm chosen for PicoWay's 3rd wavelength?

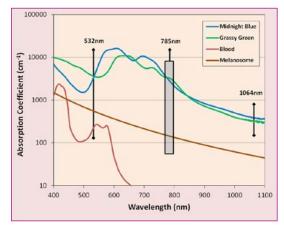
The 755 nm wavelength has been the standard to address blue and green pigments, as well as melanin. While Syneron Candela is a recognized expert and top global provider of 755nm laser devices, we deliberately chose the 785nm wavelength instead as our 3rd wavelength on PicoWay because:

- 1. 785nm has good absorption by green & blue inks.
- 2. 785nm penetrates deeper compared to 755nm to the region of the spectrum where it can treat melanosomes, without interference from blood.
- 3. 785nm enables ultra-short pulses (300ps), for better elimination of green and blue inks.

Compare how PicoWay's 785nm picosecond laser eliminates

# the green compared to a 755nm Q-switched laser.





### Figure 1

Absorption of commercial green and blue tattoo pigments and melanin. The relative positions of the three PicoWay laser wavelengths are also shown.

### Why choose PicoWay over a Q-Switched Laser?

Scientists acknowledge that the shorter the pulse duration, the higher the efficiency for converting laser energy into the mechanical stress needed to fracture particles into small fragments. The smaller the fragment, the easier it is for the body to effectively remove it.

Q-Switched technology requires numerous treatment sessions, causes significant discomfort during treatment and, in many cases, incompletely removes tattoos<sup>\*\*</sup> and pigmented lesions. PicoWay technology has ultra-short pulse durations, 100 times shorter than Q-switched pulses. PicoWay

requires fewer treatment sessions with less discomfort.





After treatment with nanosecond Q-switched lasers

2



After treatment with PicoWay's picosecond technology, pigments are shattered into tiny particles making them easier to be eliminated by the body's natural processes.

\*\* As reported in scientific literature.

### PicoWay - The Complete Solution for Tattoo Removal, Pigmentation and Skin Irregularities<sup>5</sup>

### **PicoWay Specifications**

	Full	PicoWay Beam Handpiece Specificat	PicoWay Resolve Fractional Handpiece Specifications						
Laser Type	Nd:YAG	Frequency Doubled Nd: YAG	Titanium Sapphire	Nd:YAG	Frequency Doubled Nd:YAG				
Wavelengths	1064 nm	532 nm	785 nm	1064 nm 532 nm					
Maximum Energy	400mJ	200mJ	85 mJ	NA					
Micro-Beam Energy		NA		Up to 3.0 mJ	Up to 0.30 mJ				
Pulse Duration	450 ps	375 ps	300 ps	450 ps	375 ps				
Peak Power	0.90 Gigawatts	0.53 Gigawatts	0.28 Gigawatts	NA					
Spot Sizes	2, 3, 4, 5, 6	6, 7, 8, 9, 10 mm	2, 3, 4 mm	6mm x 6mm					
Matrix		NA	10 x 10 Microbeam array						
Repetition Rate	Single, 1, 2, 3,	4, 5, 6, 7, 8, 9, 10 Hz	Single 1, 2, 3, 4, 5 Hz	Single, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Hz					
Delivery System	Articulated arm with 2	wavelength Zoom handpiece	Dedicated handpiece	Articulated arm with Resolve handpiece					
System Specifications									
Warm Up Time	2 minutes								
User Interface	Touchscreen with GUI								
Size	42" H x 18" W x 27" D / 107 cm H x 46 cm W x 69 cm D								
Weight	275 lbs. / 125kg.								
Power Requirements	200 - 240 VAC, 50/60 Hz, 30 A, 4600 VA single								

Candela is a leading global aesthetic device company with a comprehensive product portfolio and a global distribution footprint.

The Company's technology enables physicians to provide advanced solutions for a broad range of medical-aesthetic applications including body contouring, hair removal, wrinkle reduction, tattoo removal, improving the skin's appearance through the treatment of superficial benign vascular and pigmented lesions, and the treatment of acne, leg veins and cellulite.

<sup>1</sup> Bernstein EF, Schomacker KT, Basilavecchio LD, et al. A novel dual-wavelength, Nd:YAG, picosecond-domain laser safely and effectively removes multicolor tattoos. Lasers Surg Med. 2015 Jul 14.

- <sup>2</sup> Weiss M, Weiss M, Lorden F, et al. Picosecond laser for reduction of wrinkles: long term results [abstract]. Lasers Surg Med. 2015 Mar;47(S24).
- <sup>3</sup> Kauvar A, et al. Histologic evaluation of in vivo human skin following treatment with high-intensity 1064 and 532nm picosecond pulses [abstract]. Lasers Surg Med. 2016 April;48(S27).

<sup>4</sup> Based on the competitors' published data

<sup>5</sup> The research was conducted by Wizer, an independent market research company via Harris Physicians Panel, including members of its third party panel providers, among 302 physicians in November 2015. Syneron-Candela had the highest brand recognition for Hair Removal, Facial Rejuvenation, Skin Tightening\*\* & Vascular Treatments.

\* CO<sub>2</sub>RE Intima is a module of CO<sub>2</sub>RE \*\* Wording used in the Wizer Survey.

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riyadh +966 11 465 0371	jeddah	+966 12 639 8200	madina	+966 14 813 2302	khobar	+966 13 894 5051		
<mark>qassim</mark> +966 16 326 5404	khamis mushai	it +966 17 237 0072	dubai	+971 4 451 4455	abu dhab	i +971 2 674 6493		
kuwait +965 2 225 0206	manama	+973 1733 1046	doha	+974 4441 6893	muscat	+968 24 297 816	امــداد 🚦 imdad	Qualifie
beirut +961 1 998 189	amman	+962 6 553 9977	others countries	<mark>s</mark> +971 4 451 4455				dadime