speclipse

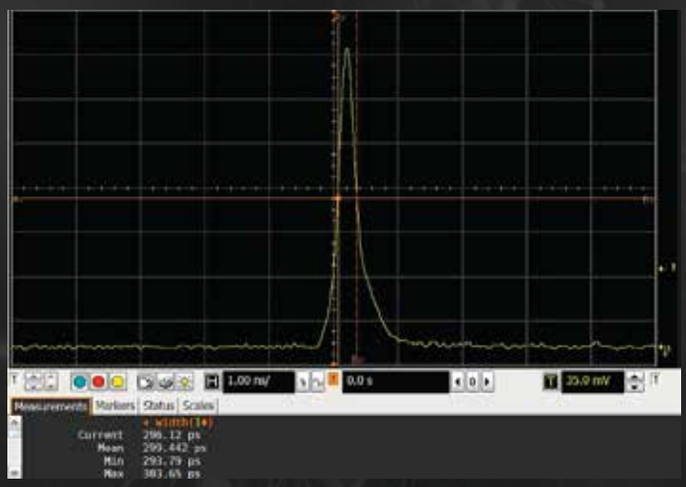
PICO-K

The Best Technologies Brought to Light



300 ps & 2.0 GW

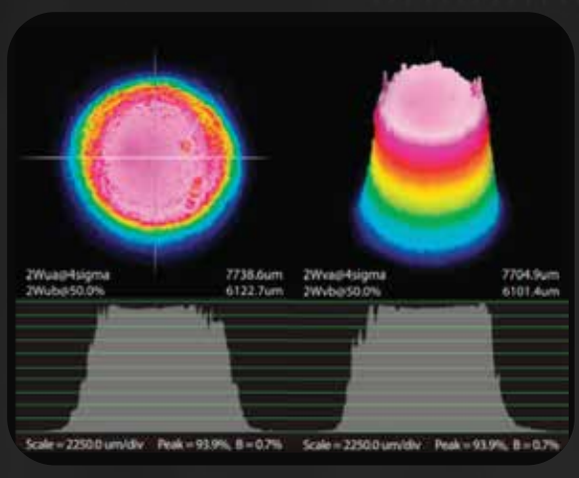
PICO-K maintains a standard deviation of only around 2 % of the 300 ps pulse duration, ensuring maximum peak power of 2.0 GW and a high-quality beam profile at any pulse repetition rate. This means that users can rely on the device to deliver precise and consistent laser treatment with minimal side effects.



300 ps Pulse Duration

Patented Technologies

Through years of research and development, backed by numerous patents that are advanced from the competition, PICO-K is a revolutionary picosecond laser that provides a truly unique and innovative solution that outstands the market.



Laser Beam Profile of Pico-K

"Control System for Thermal Lens Effect in Medical Laser Device"

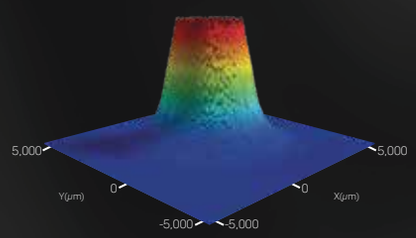
The patented technology utilizes a mechanical switch and micro-controller to control the thermal lens effect, resulting in a stable output energy and consistent beam size. This ensures that the Pico-K laser maintains a uniform level of beam size during treatment.

High-Quality Top-Hat Beam Profile

Thanks to the optimized optical design, PICO-K delivers a high-quality top-hat beam profile even at its maximum pulse repetition rate for extended treatment time. The beam profile does not show any unwanted excessive peak energy at the center (center peak), ensuring safe and effective treatment.

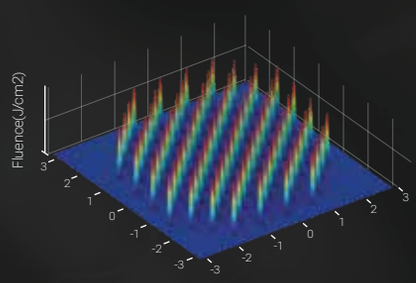
Single Beam





Fractional Beam





Output Stability



Power Supply with Power Factor Correction (PFC)

PICO-K incorporates Power Factor Correction (PFC), which helps to maintain a stable output of energy.

As a result of the PFC feature, Pico-K is able to deliver consistent energy output during operation.

Flashlamp & Simmer Stabilization

The laser beam profile of PICO-K is consistently maintained at the same size at a high-quality level by controlling flashlamp discharge voltage by 1 Volt, regardless of the pulse repetition rate. This means that users can rely on the stability of the beam profile across all pulse repetition rates, ranging from 1 to 10 Hz.



Various Handpieces



Zoom Handpiece
(1064 & 532 nm)



Collimation Handpiece
(1064 & 532 nm)

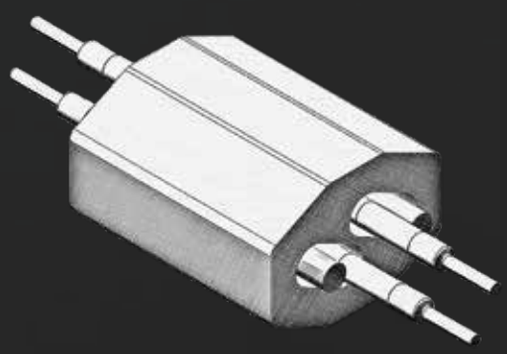


MLA Handpiece
(1064 & 532 nm)

PICO-K offers optimized treatment options with a wide range of handpieces. Depending on the location, color, or conditions of the skin lesions, users can select the most suitable handpiece to achieve the intended clinical results. This flexibility allows for customized treatment options and better outcomes for patients.

"Laser Oscillation by Single Chamber"

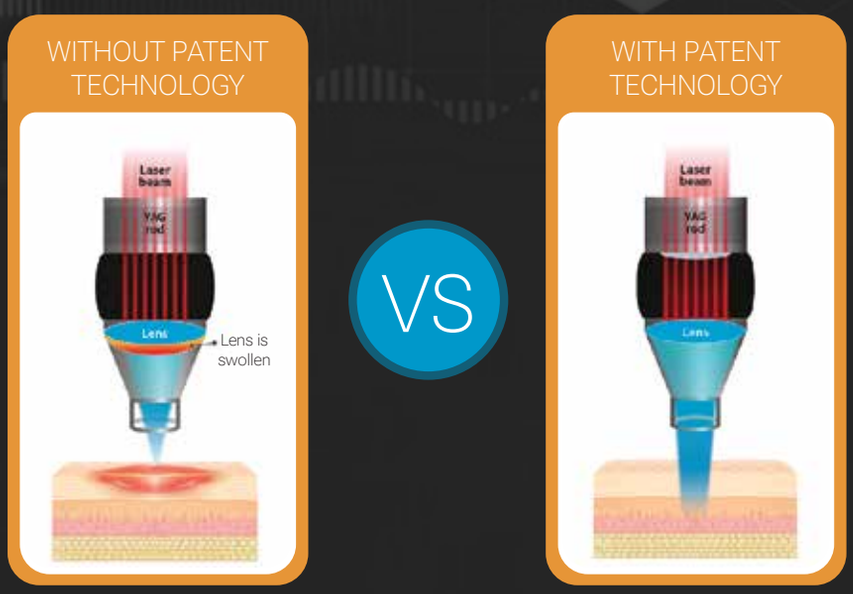
The patented technology utilizes a single chamber. By using a single chamber, PICO-K have achieved a more efficiency and significant manufacturing cost reduction.



Consistent Spot Size

When a laser heats up a lens, it can cause the lens to swell, which in turn shortens the laser's focal point and reduces the size of the laser spot on the skin surface. This can result in the delivery of more energy than the intended level, leading to clinical side effects and potentially damaging the internal components of the device over time.

However, with the patented technology, PICO-K effectively controls and minimizes the thermal lens effect, ensuring that the spot size of the PICO-K remains consistent and at the selected size.





Indication & Clinical Photos

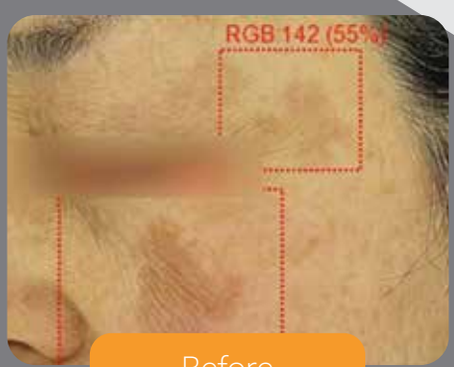
TONING
- Melasma
- PIH

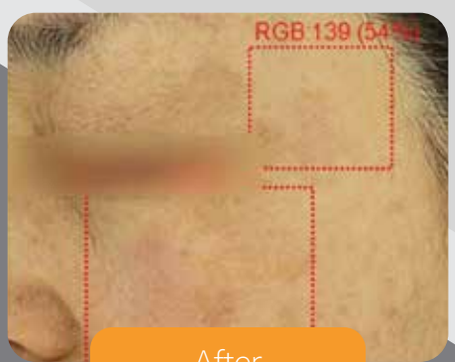
EPIDERMAL PIGMENTS
- Solar Lentigo
- Freckle
- Seborrheic Keratosis
- Café-au-Lait

DERMAL PIGMENTS
- Nevus of Ota
- ABNOM

TATTOO REMOVAL
- Black Tattoo
- Colored Tattoo

REJUVENATION
- Wrinkle
- Acne Scar
- Enlarged Pore





Courtesy of H.J. Song, M.D., South Korea

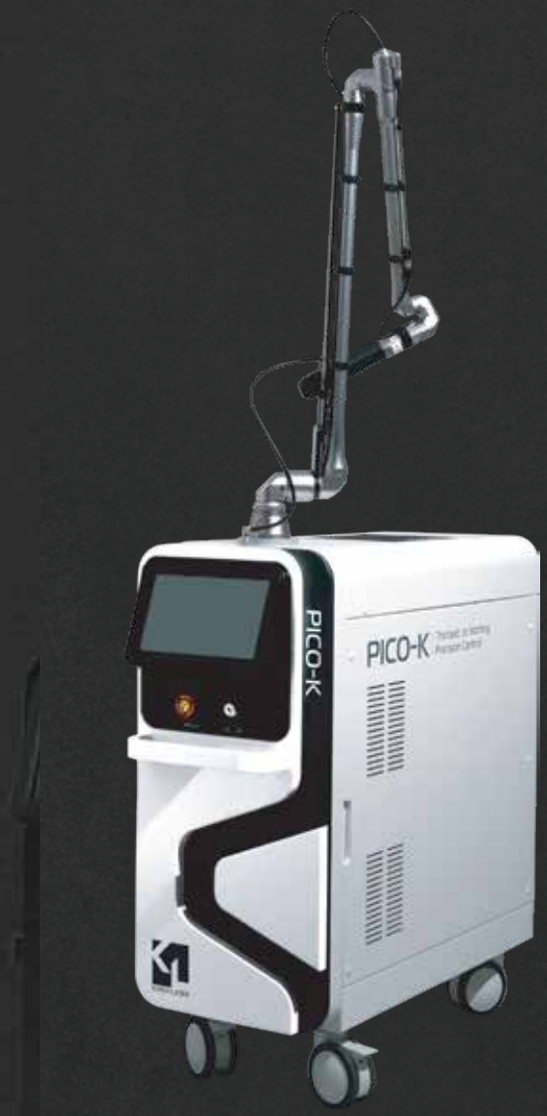




Courtesy of H.J. Song, M.D., South Korea

“While many doctors, including myself, have been hesitant to use the 532 nm wavelength due to concerns about hyper- or hypo-pigmentations. But after I have come to appreciate the benefits of PICO-K's real pulse duration of 300 ps, despite initial hesitation, I decided to try PICO-K's 532 nm on some of my patients with pigmentary lesions, and I was impressed with the results. This innovative technology offers a safe and effective alternative for patients with resistant pigmentary lesions and has improved patient outcomes and satisfaction in my clinic.”

“Using PICO-K for tattoo removal has allowed me to reduce the treatment time, number of sessions required, and patient discomfort by 30 %. I believe this is due to its high-quality beam profile and 300 ps pulse duration, which enable more effective and efficient removal of tattoo ink. With PICO-K, I can provide my patients with faster and more comfortable tattoo removal treatments.”



Nanosecond Laser



VS

Picosecond Laser



Picosecond is 10^{-12}, while a nanosecond is 10^{-9}. This means that the pulse duration of a picosecond laser is much shorter than that of a nanosecond laser, therefore it allows achieving higher peak power for better targeting of specific pigments in the skin, resulting in more effective treatment outcomes. Additionally, picosecond lasers are more precise and have less thermal damage to surrounding tissue than nanosecond lasers due to their shorter pulse duration. This makes picosecond lasers more safe than nanosecond lasers.

Specification

ITEMS	DESCRIPTION
WAVELENGTH	1064 nm, 532 nm
BEAM MODE	Top Hat
PULSE DURATION	300 ps
PULSE ENERGY	Max. 600 mJ @ 1064 nm Max. 250 mJ @ 532 nm
REPETITION RATE	1-10 Hz
PEAK POWER	2.0 GW
HANDPIECE	Zoom H/P: 2-10 mm Collimation H/P: 8 mm MLA H/P: 4-12 mm



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