

Brilliant Trillionth
P I C O - K

A Groundbreaking Picosecond Laser Redefining Laser Treatment



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INTRODUCTION

PICO-K has emerged as a game-changer in the field of laser treatment, offering unparalleled precision, consistency, and effectiveness. Through years of dedicated research and development, coupled with a range of patented technologies, PICO-K has established itself as a revolutionary picosecond laser, setting new standards in the industry.

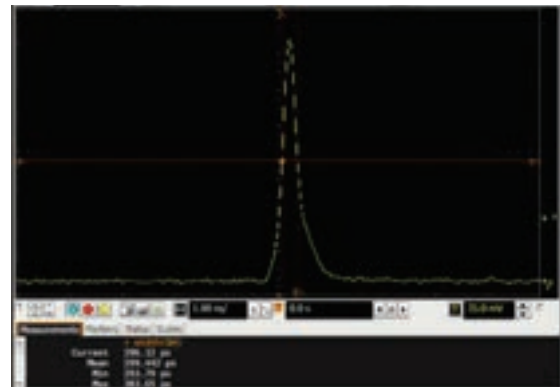
PICO-K offers a comprehensive range of dermatologic applications, effectively targeting and treating various skin lesions. From common conditions like melasma, post-inflammatory hyperpigmentation (PIH), solar lentigo, freckles, and seborrheic keratosis to more specific concerns such as Café-au-Lait, Nevus of Ota, ABNOM (Acquired Bilateral Nevus of Ota-like Macules), and both black and colored tattoos, PICO-K proves to be a versatile solution.

Additionally, PICO-K demonstrates remarkable efficacy in addressing aesthetic concerns, including the reduction of wrinkles, acne scars, and enlarged pores. Its wide applicability extends beyond these mentioned indications, encompassing a multitude of skin conditions, ensuring that dermatologists and medical practitioners can rely on PICO-K as a go-to tool for an extensive range of treatments.

With its advanced technology and precision, PICO-K empowers dermatologists to provide patients with effective solutions tailored to their unique needs. The versatility and effectiveness of PICO-K make it a valuable asset in the field of dermatology, enabling practitioners to achieve superior outcomes and enhance patient satisfaction.

PULSE DURATION & PEAK POWER

PICO-K sets itself apart with its exceptional pulse duration and peak power capabilities. With a remarkable standard deviation of just around 2% of the 300 ps pulse duration, the device ensures a maximum peak power of 2.0 GW, yet still maintains a consistently high-quality beam profile, regardless of the pulse repetition rate. This level of precision and reliability enables users to trust PICO-K for accurate and consistent laser treatments while minimizing the occurrence of unwanted side effects.



300 ps Pulse Duration

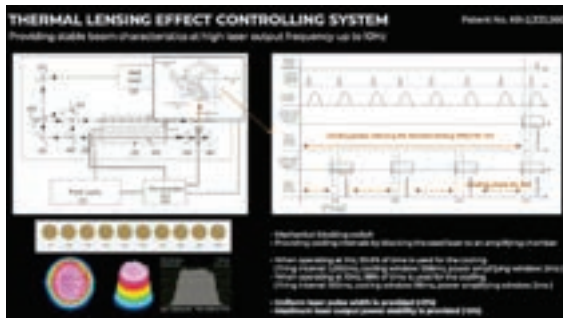
PATENTED TECHNOLOGIES

Setting PICO-K apart from traditional other lasers are its two patented technologies.

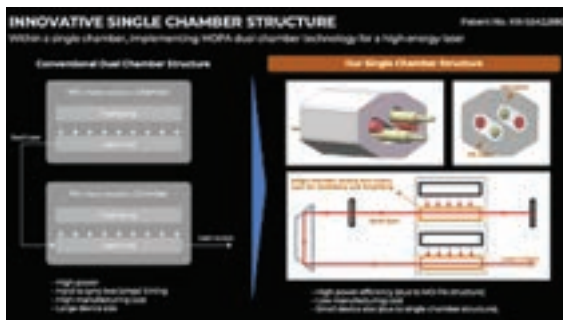
The first is "Control System for Thermal Lens Effect in Medical Laser Device", which utilizes a mechanical switch and micro-controller to ensure a stable output energy and consistent beam size. By effectively managing the thermal lens effect, PICO-K guarantees uniform treatment results and minimizes the risk of side effects.

The second patented technology, "Laser Oscillation by Single Chamber", marks a significant advancement over its double-chamber counterparts. PICO-K's single chamber design maximizes efficiency while significantly reducing manufacturing costs.

This innovation represents a significant leap forward in laser technology.



Patent No. KR-2,333,260

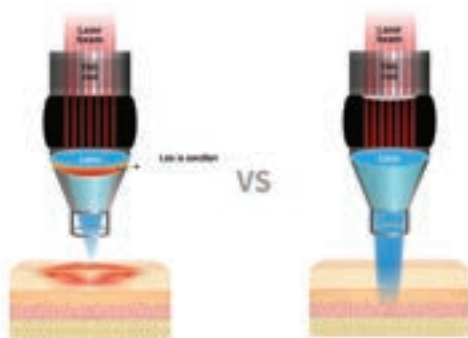


Patent No. KR-1,642,880

CONSISTENT SPOT SIZE

Maintaining a consistent spot size is crucial in laser treatments to ensure precise and controlled energy delivery. Traditional lasers often encounter issues where the lens swells due to heating, resulting in a shortened focal point and a smaller laser spot on the skin surface. This unintended reduction in spot size can lead to the delivery of excessive energy, causing unwanted side effects and potentially damaging the internal components of the device over time.

However, PICO-K incorporates patented technology



With Patent Technology

Without Patent Technology

that effectively controls and minimizes the thermal lens effect. This innovative approach ensures that the spot size of PICO-K remains consistent and at the selected size, providing reliable and predictable treatment outcomes.

HIGH-QUALITY TOP-HAT BEAM PROFILE

PICO-K's optimized optical design enables the delivery of a high-quality top-hat beam profile, even at its maximum pulse repetition rate during extended treatment sessions. This means that the beam profile remains uniform without any excessive peak energy at the center called "center peak." By maintaining a safe and effective beam profile, PICO-K enhances treatment efficacy while prioritizing patient safety.



High-Quality Top-Hat Beam Profile by PICO-K

OUTPUT STABILITY

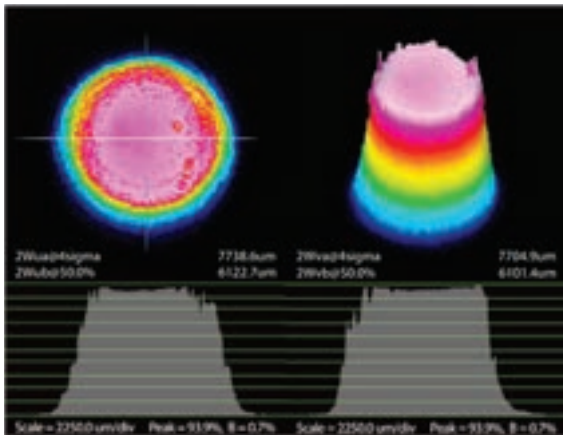
PICO-K incorporates Power Factor Correction (PFC), a feature that guarantees stable energy output during operation. With PFC, practitioners can rely on the laser to consistently deliver the desired energy levels, ensuring reliable and effective treatments. This control over output stability sets PICO-K apart as a dependable tool for precise medical procedures.



Power Supply with Power Factor Correction (PFC)

FLASHLAMP AND SIMMER STABILIZATION

PICO-K boasts a remarkable feature known as flashlamp and simmer stabilization, which ensures the laser beam profile remains consistently sized and of high quality, regardless of the pulse repetition rate. Whether operating at 1 Hz or 10 Hz, users can rely on the stability of the beam profile throughout the entire range of pulse repetition rates by controlling flashlamp discharge voltage by 1 Volt.



Beam Profile



Uniform Spot Size

VARIOUS HANDPIECES

Recognizing the diverse requirements of different skin conditions, PICO-K offers a wide range of optimized treatment options with its various handpieces. This versatility allows practitioners to select the most suitable handpiece for each treatment, ensuring tailored and effective results. Customized treatment plans enhance patient satisfaction and contribute to improved outcomes.

Five handpieces available for PICO-K are seen below.

- Zoom Handpiece (1064 & 532 nm)
- Collimated Handpiece (1064 & 532 nm)
- MLA Handpiece (1064 & 532 nm)
- 585 Handpiece (585 nm)
- 650 Handpiece (650 nm)

** 585 nm and 650 Handpiece are optional.*



Zoom Handpiece
(1064 & 532 nm)



Collimated Handpiece
(1064 & 532 nm)



585 Handpiece
(585 nm)



650 Handpiece
(650 nm)

MLA Handpiece has outstanding specifications as seen below.

- Super Gaussian Mode
- 220 micro-beams
- 100 μm spot size
- Max. 31.84 J/cm² of Fluence



MLA Handpiece
(1064 & 532 nm)

SUSTAINABLE ALIGNMENT

PICO-K excels in sustainable alignment, ensuring the laser delivery arm remains reliably aligned even when rotated up to 270 degrees. This exceptional level of sustainability extends to the stability of alignment, which is maintained at an impressive 90% even after flash lamp replacement. As a result, the need for realignment during servicing is significantly reduced,

saving valuable time and streamlining maintenance processes.



Additionally, by withstanding extensive rotation of the laser delivery arm, the system allows for enhanced flexibility and ease of use in various treatment scenarios. Medical professionals can confidently position and adjust the laser delivery arm without compromising the precision and accuracy of the laser beam.

INTUITIVE USER INTERFACE & POWER SAVING MODE

PICO-K features an intuitive touch screen user interface, facilitating easy navigation and operation, even for first-time users. The interface also includes a memory function for frequently used settings, promoting efficiency and streamlining workflows.

Additionally, PICO-K includes a power-saving mode that activates after a period of inactivity, conserving energy and enhancing the overall longevity of the device.



User Interface



Power Saving Mode

PHYSICIANS' TESTIMONIALS

Physicians who have integrated PICO-K into their practices are impressed with its capabilities and positive impact on patient outcomes. Physicians have noted its effectiveness in treating resistant pigmentary lesions, surpassing their expectations and improving patient satisfaction. The real pulse duration of 300 ps in PICO-K's 532 nm wavelength has also proven safe and effective for patients with pigmentary lesions, dispelling initial concerns about hyper- or hypo-pigmentations. PICO-K's remarkable ability to minimize side effects and provide complete treatment has garnered praise from physicians. It has become a valuable tool in the treatment of various skin conditions, with practitioners reporting significant improvement in their cases. The high-quality beam profile and pulse duration have enabled faster and more comfortable pigment and tattoo removal, reducing treatment time and the number of sessions required.



HYUN JUENG SONG, M.D.

AMI Clinic, South Korea

"Impressive equipment with perfectly stable 532 nm. Wonderful equipment that can expand the range of pigments on treatment."



JONG GU KIM, M.D.

Oracle Clinic, South Korea

"Surprised by the technology they had and satisfied with the stability of the equipment. It was a wonderful choice to have it in my clinic."



JI HWAN LEE, M.D.

It's Me Network Clinic, South Korea

"The highest output among picosecond lasers in Korea and stable performance. It is one of the most attractive equipments I have ever used."



KYOUNG HUN YOO, M.D.

Lumi Clinic, South Korea

"A good piece of equipment that can increase the utilization of pico laser. Its stable output can create protocols using both 532 nm and 1064 nm."

"As a dermatologist, I sometimes encounter cases where complete removal of pigment using a 755 nm picosecond laser is challenging. However, I have found that PICO-K is very effective in treating resistant pigmentary lesions. This innovative technology allows me to offer better outcomes for my patients and improve their overall satisfaction with the treatment."

"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."

"Typically, I used to anticipate that 20-30% of my cases would experience side effects. However, after using PICO-K, I was pleasantly surprised that none of my patients experienced any side effects. Previously, I was not entirely confident that I could completely treat my cases, but now I believe I have a strong armament. PICO-K has become a valuable tool in my practice, and I will continue to refine my treatment parameters for even better outcomes."

"As a dermatologist, I have found PICO-K to be highly effective in treating my recalcitrant melasma cases. I have noticed that PICO-K, with its Collimated Handpiece, works more efficiently than my previous Q-switched Nd:YAG lasers for those melasma cases. In fact, I have been able to further improve skin tone and enlarged pores by combining it with its MLA handpiece."

"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."

CONCLUSION

PICO-K offer revolutionized laser treatment by combining cutting-edge technologies, precision, and versatility. With its patented advancements, consistent spot size control, optimized handpieces, and comprehensive pigment and tattoo removal capabilities, PICO-K offers an unmatched solution for various dermatological conditions. Physicians trust PICO-K to deliver exceptional results and improve patient satisfaction, making it a pioneering device in the field of laser treatment.

CLINICAL PHOTOS



Before



After

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



Before



After

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

SPECIFICATION

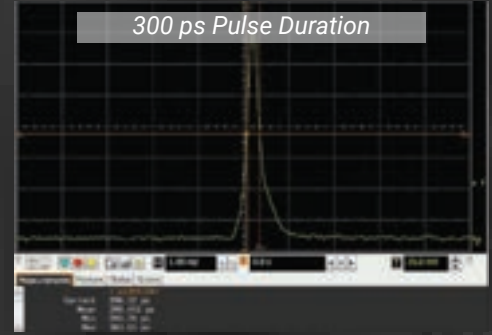
<i>Item</i>	<i>Description</i>
Wavelength	1064nm / 532nm *Optional : 585nm, 650nm
Beam Mode	Top hat
Pulse Duration	300ps
Pulse Energy	Max. 600mJ / 300mJ Max.300mJ / 532mJ
Repetition Rate	1 - 10Hz
Peak Power	2.0GW
Handpiece	. Zoom H/P : 2 - 10mm . Collimation H/P : 8mm . MLA H/P : 4 - 12mm . 585nm : 3mm . 650nm : 3mm



TECHNOLOGY FOCUS

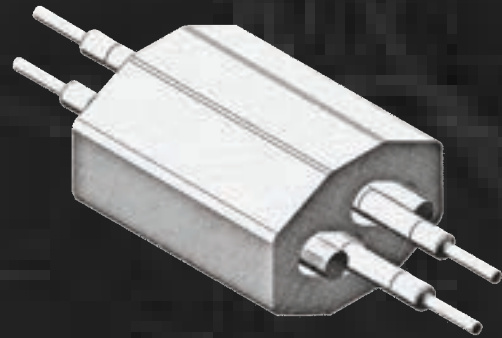
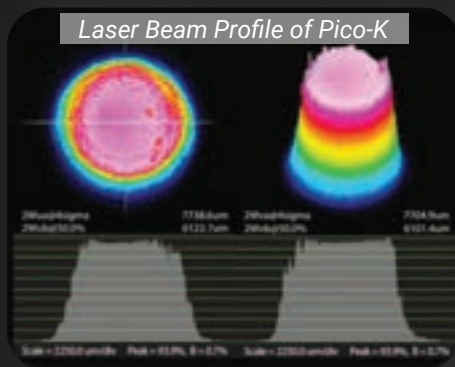
300 ps & 2.0 GW

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.



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.



“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.

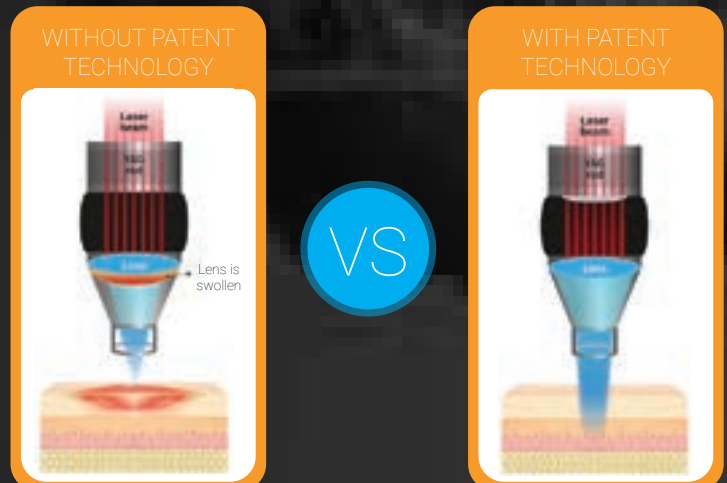
“Laser Oscillation by Single Chamber”

The patented technology utilizes a single chamber, which sets it apart from previous Q-switched lasers that typically use double chambers. By using a single chamber, PICO-K have achieved a **more efficiency and significant manufacturing cost reduction**.

Consistent Spot Size

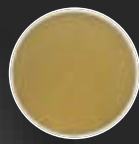
When a laser heats up a lens, it can cause the lens to swell, which in turn shortens the laser's focal point and reduces the size of the laser spot on the skin surface. This can result in the delivery of more energy than the intended level, leading to clinical side effects and potentially damaging the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

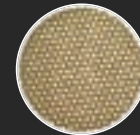
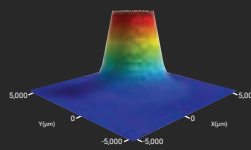


High-Quality Top-Hat Beam Profile

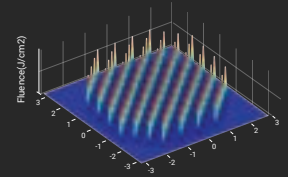
Thanks to the optimized optical design, PICO-K delivers a **high-quality top-hat beam profile** even at its maximum pulse repetition rate for extended treatment time. The beam profile **does not show any unwanted excessive peak energy** at the center (center peak), ensuring safe and effective treatment.



Single Beam



Fractional Beam



Output Stability

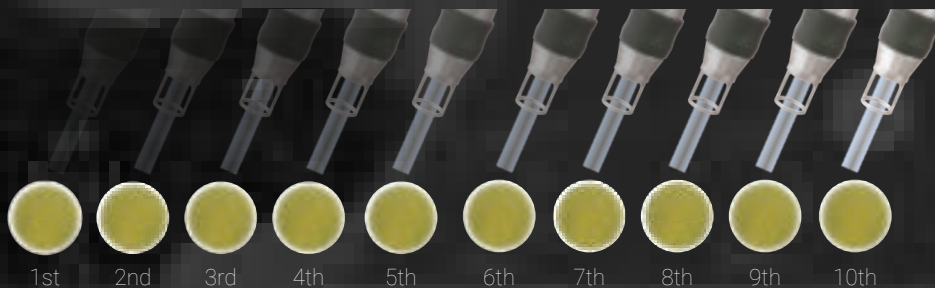
PICO-K incorporates Power Factor Correction (PFC), which **helps to maintain a stable output of energy**.

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



Power Supply with Power Factor Correction (PFC)

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

* 585 Handpiece and 650 Handpiece are optional.



Zoom Handpiece
(1064 & 532 nm)



Collimated Handpiece
(1064 & 532 nm)



585 Handpiece
(585 nm)



650 Handpiece
(650 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.

Indication & Clinical Photos

TONING

Melasma

PIH

REJUVENATION

Wrinkle

Acne Scar

Enlarged Pore

TATTOO REMOVAL

Black Tattoo

Colored Tattoo

EPIDERMAL PIGMENTS

Solar Lentigo

Freckle

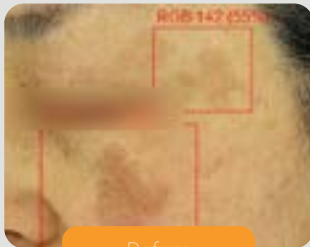
Seborrheic Keratosis

Café-au-Lait

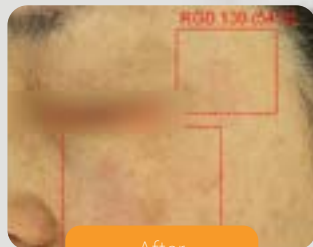
DERMAL PIGMENTS

Nevus of Ota

ABNOM

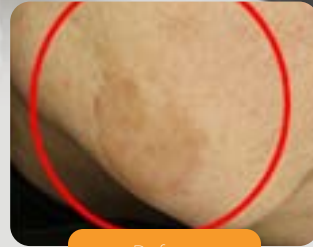


Before



After

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



Before



After

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 pigmented lesions, and I was impressed with the results. This innovative technology offers a safe and effective alternative for patients with resistant pigmented lesions and has improved patient outcomes and satisfaction in my clinic.”

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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.”

Global distributor Huemedical co., Ltd.

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Hwaseong-si, Gyeonggi-do, Republic of Korea
www.huemedical.co.kr

Speclipse, Inc. (Manufacturer)

#501~#504, Sunplaza, 31, Jungbo-ro,
Sangnok-gu, Ansan-si, Gyeonggi-do,
Republic of Korea
www.speclipse-laser.com

