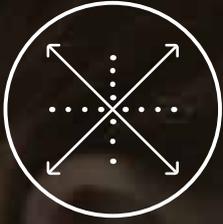


**Alma**

For You. For Life.



**ALMA-Q**



**MAXIMUM POWER  
TRIPLE MODE  
Q-SWITCHED, LP  
AND QLP ND:YAG  
LASER SYSTEM**

**3 PULSE DURATIONS ⊗ 4 DISTINCTIVE WAVELENGTHS ⊗ MULTIPLE INDICATIONS**



## INTRODUCTION

ALMA-Q presents the most powerful triple mode Nd:YAG laser treatment solution available, featuring Q-switched, Long Pulsed and Quasi-Long Pulsed modes on a single, dedicated platform.

With Double Pulse technology offering up to 2,000mj per pulse; an extraordinarily short pulse width of 7nsec; unique technological innovations including **depth control** and **fractional delivery** and additional options of working with both the Long Pulsed and Quasi-Long Pulsed Nd:YAG 1064nm laser, ALMA-Q is unmatched in its **power and versatility** for treating a wide range of aesthetic dermal indications.

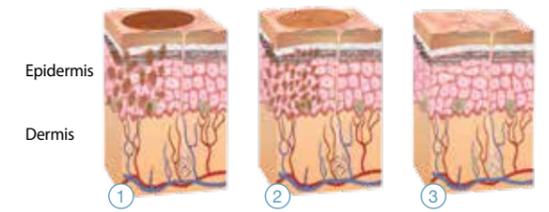
## THE Q-SWITCHED LASER ADVANTAGE

### The Q-Switched Laser

The high powered Q-switched laser is the most effective method for removing natural or artificial pigmentation, while minimizing the risk of damage to surrounding tissue. ALMA-Q's **fractional** capabilities further extend the potency of the Q-switched laser, opening the door to additional treatment possibilities, including challenging skin imperfections associated with aging.

ALMA-Q delivers photo acoustic shockwaves to the target area through high laser intensities in ultra-short nanosecond pulses.

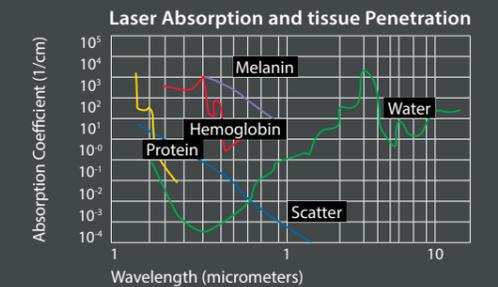
This method creates controlled dermal wounds via a mechanical Q-Switched effect - a unique mechanism of action that achieves optimal results for various indications without causing thermal damage or coagulation in the surrounding tissue.



1. Pigment in the skin
2. Due to photoacoustic effect pigment particles are selectively fragmented
3. Fragmented pigment particles are carried away by phagocytes

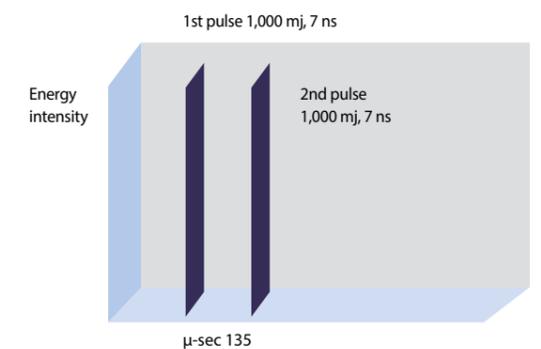
### Four Distinct Wavelengths

ALMA-Q offers four distinct wavelengths targeting the full spectrum of ink colors found in multi colored tattoos.



### Single and Double Pulse Technologies

ALMA-Q offers energy delivery in both Single Pulse and Double Pulse modes. Double Pulse technology disperses the laser energy into two consecutive pulses, mitigating peak power while delivering maximum energy of up to 2J per pulse. By creating a flat-top beam, maximum energy may be delivered evenly over the skin without risking epidermal injury. Both Single and Double Pulse modes are available in all ALMA-Q QSW wavelengths including: 1064nm, 532nm, 585nm and 650nm.



### Pixel Fractional Q-Switched Laser with Depth Control

ALMA-Q's Pixel applicator offers the first fractional Q-switched laser for skin rejuvenation that features unique depth control capabilities. Variable depth control allows practitioners to combine both deep and superficial treatment approaches depending on the area being treated, the skin type or the indication. Variable depths can also be used for combination work on the same area to achieve optimal results.



# THE Q-SWITCHED LASER ADVANTAGE

## Long Pulsed Nd:YAG Laser (LP)

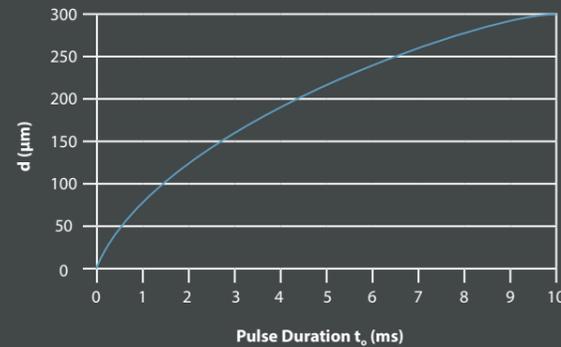
Maximizing the potential of the 1064nm wavelength, ALMA-Q also offers the Long-Pulsed Nd:YAG laser for the treatment of vascular lesions, malformations and deep veins. The extended duration of the long-pulsed

1064nm laser affords deep penetration and powerful heating, facilitating treatment of deeper lesions that cannot be targeted by shorter wavelengths.

## Quasi-Long Pulsed Nd:YAG Laser (QLP)

The Quasi-Long Pulsed Nd:YAG laser generates sub-millisecond pulse widths at a high repetition rate of 5Hz to provide both skin rejuvenation and microvascular treatments.

The QLP laser achieves safe and effective sub-dermal heating, stimulating the growth of new collagen and tightening skin laxity. At the same time, its ultra-short pulse duration makes it ideal for treating microscopic blood vessels with diameters of less than 50 microns.



## Listen to our experts:

*I have been using all kinds of laser technologies in my private clinics for more than 20 years now. Having that said, I can safely say that ALMA-Q is one of the most efficient platforms I have worked with. The use of different pulse durations; nanoseconds, microseconds and milliseconds enabled me to use it for the same indication with different combinations. It is powerful for tattoo and pigment removal treatments, and I like the depth controlled-non-ablative fractional capabilities. In my opinion, every patient that walks into a dermatology clinic from early ages to later years is a candidate for a treatment with ALMA-Q."*

*Dr. Şerafettin Saraçoğlu, MD, Dermatology Specialist,  
Clinic Estesense Nisantasi, Istanbul  
Elit Polyclinic, Bakirkoy, Istanbul*

# APPLICATORS

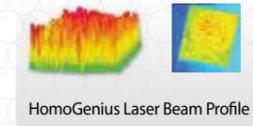
## Focus

Offers 7 distinct spot sizes: from 1 to 7mm, to address various degrees and depths of pigmented lesions and varying types of tattoos. The Focus applicator may be used in either Q-Switched, Long Pulsed or Quasi-Long Pulsed Nd:YAG laser modes.



## HomoGenius

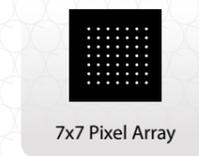
Treats pigmented lesions and tattoos using a homogenized laser beam profile with uniform energy intensity, preventing hot spots. A square beam with 3x3 mm<sup>2</sup> or 5x5 mm<sup>2</sup> spot sizes allow for coverage of treatment areas without overlap. The Homogenizer applicator may be used in Q-Switched laser mode and with 1064 or 532 wavelengths.



## Pixel

(With depth control)

Employs a pixel delivery method which creates pixel-sized perforations in a 7x7 nonablative pattern, leaving the surrounding tissue intact. These micro-injury sites trigger a wound healing process that strengthens collagen and stimulates neo collagenesis, completely rejuvenating the target tissue. Five distinct treatment depths are available for maximum flexibility and precision.



## Collimated

The collimated applicator delivers parallel beams of energy to the target tissue with minimal dispersion, regardless of distance from the skin. This allows practitioners to administer treatment without having to maintain continuous contact with the skin while also allowing better visualization of larger treatment areas. With an 8mm spot size, this applicator offers an excellent coverage rate and high speed treatment. The Collimated applicator may be used in either Q-Switched, Long Pulsed or Quasi-Long Pulsed Nd:YAG laser modes.



## Spectrum-Y & Spectrum-R

The Spectrum applicators extend the capabilities of ALMA-Q's Q-switched laser, offering two additional wavelengths with precise ink targeting for especially challenging tattoo colors. The Spectrum-Y applicator (585nm) specifically treats sky blue and the Spectrum-R (650nm) treats green and teal.



## VasQular Long Pulsed 1064nm

Addresses various depths of vascular lesions including telangiectasias, hemangiomas and leg veins, by selective heating of the vessels. The energy is delivered using a long pulse duration (ms) and an appropriate spot size, which effectively impact the vasculature of the lesions and offer a safe treatment for vascular issues that cannot be addressed by using the short Q-switched pulses.



# INDICATIONS

## Pigmented Lesions

ALMA-Q is highly effective for treating various degrees and depths of pigmented lesions as well as melasma. The high power Q-switched Nd:YAG 1064nm laser treats deep pigmented lesions, while the monochromatic 532nm wavelength addresses superficial pigmented lesions. The treatment mechanically breaks up the melanin in the lesions without causing thermal damage, revealing lighter, unblemished skin.



BEFORE AFTER

Courtesy of: Clinical Department, Alma Lasers Ltd.

## Skin Remodeling

ALMA-Q features **the first fractional non-ablative Q-switched laser** that offers **depth control**, allowing practitioners to use the powerful benefits of a high intensity Q-switched laser for the treatment of age-related skin imperfections including wrinkles, fine lines, photodamage, uneven skin tone and skin laxity.



BEFORE AFTER

Courtesy of: Clinical Department, Alma Lasers Ltd.

These indications may also be addressed using the Quasi-Long Pulsed Nd:YAG 1064nm laser which achieves neo-collagenesis and skin remodeling through selective heating.

The QLP emits light through ultra-short pulses at a high repetition rate to elevate dermal temperature. This mechanism causes **micro thermal injury** to the tissue which contracts existing fibers, stimulates the formation of new collagen (especially collagen type III) and improves its alignment and thickness.

Both treatments are safe and effective for even thin and delicate areas of the skin such as the face, neck and décolleté areas.

## Vascular Lesions

The Long-Pulsed Nd:YAG 1064nm laser provides a powerful, non-invasive solution for vascular lesions, malformations and deep veins. In addition to its deep penetration and effective heating, the 1064nm wavelength is more readily absorbed by water and oxy-hemoglobin with relatively low absorption by melanin. This triggers photothermolysis of the water and hemoglobin chromophore, effectively targeting vascular lesions while avoiding damage to the epidermis.



BEFORE AFTER

Courtesy of: Clinical Department, Alma Lasers Ltd.

The ultra-short pulse duration of the Quasi-Long Pulsed Nd:YAG 1064nm laser makes this mode ideally suited for treating microvasculature (<50µm in diameter), including angioectasias, telangiectasias and erythema in melasma lesions.

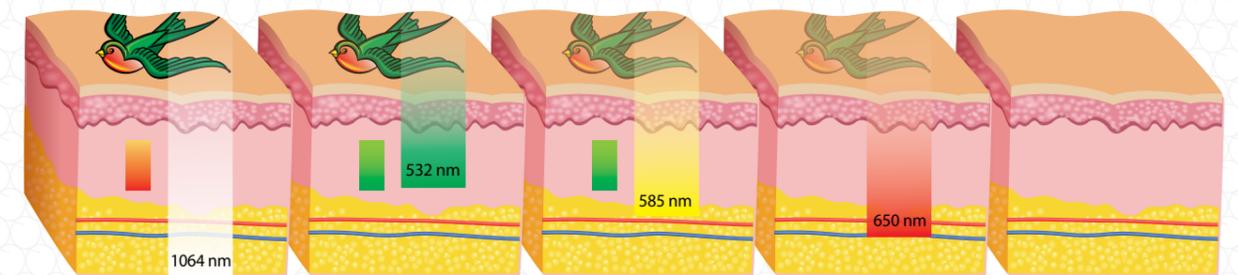
## Tattoo Removal

Successful multi-color tattoo removal requires a high powered laser that can deliver enough energy within the absorption spectrum of a wide range of colors. Alma-Q offers four distinct Q-switched Nd:YAG laser wavelengths, each targeting a specific ink color for full-spectrum multi-color tattoo removal. The high power QSW 1064nm laser is ideal for treating darker ink colors, while the 532nm wavelength is effective for brighter ink colors, including red, orange and yellow. The 585nm wavelength specifically targets sky blue and the 650nm wavelength targets green and teal.



BEFORE AFTER 3<sup>RD</sup> TREATMENT

ALMA-Q mechanically breaks down the ink particles in the tattoo without causing thermal damage, revealing healthy, color-free skin with minimal risk of scarring or permanent hypopigmentation.



# BENEFITS



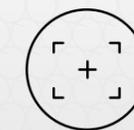
Combined Q-switched, Long Pulse and Quasi-LP Nd:YAG laser platform - offering maximum versatility



Multiple Wavelengths - for full spectrum multi-color tattoo removal



Double Pulse Technology - delivering maximum power



Unique Depth Control Capabilities - for precise and accurate treatment



Fractional Delivery - addressing a wide range of indications



Safe & Effective - for all skin types (I-VI) as well as for thin and delicate areas

# ALMA-Q SPECIFICATIONS

Operation Mode	Wavelength	Applicator	Spot Size	Pulse Duration	Repetition Rate	Maximum Pulse Energy
QS 1064	1064nm	Focus	1-7mm	7nsec	Up to 10Hz	Single pulse: 1200mJ
		Collimated	8mm			Double pulse: 2000mJ
		Pixel	7x7 spots 11x11mm <sup>2</sup>	7nsec	Up to 10Hz	Single pulse: 20mJ/pixel
						Double pulse: 32mJ/pixel
HomoGenius	3x3mm <sup>2</sup> or 5x5 mm <sup>2</sup>	7nsec	Up to 10Hz	Single pulse 1050 mj		
				Double pulse 1800mj		
QS 532	532nm	Focus	1-7mm	7nsec	Up to 10Hz	Single pulse: 450mJ
		Collimated	8mm			Double pulse: 700mJ
		Homogenius	3x3mm <sup>2</sup> or 5x5 mm <sup>2</sup>			Single pulse: 400mJ
Double pulse: 620mJ						
QS 585	585nm	Spectrum-Y	2mm	7nsec	Up to 2Hz	Single pulse: 280mJ
						Double pulse: 400mJ
QS 650	650nm	Spectrum-R	2mm	7nsec	1Hz	Single pulse: 180mJ
						Double pulse: 250mJ
QLP 1064	1064nm	Focus	1-7mm	400µsec	Up to 10Hz	4J
		Collimated	8mm			
LP 1064	1064nm	VasQular	1-7mm	10-110ms	1Hz	36J



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