

World-Class Laser

Several Wavelengths... Multiple Applications

Unmatched Q-Switched Frequency Doubled Nd:YAG Technology

The MedLite™ Q-Switched Frequency Doubled Nd:YAG Laser series from HOYA ConBio

revolutionized the way physicians think about aesthetic laser procedures.

Since 1992, the team of MedLite engineers has worked to continually improve the performance of this outstanding system by increasing power, finding new applications and adding accessories.

Therefore MedLite is now the worldwide leader in its category.



- Multiple application laser
- Dual wavelengths (1064 nm & 532 nm)
- Optional MultiLite solid state dye laser handpieces for additional wavelengths: 585 nm & 650 nm
- Optional treatment recording printer

- User friendly
- Extremely fast treatment times – up to 10 Hz
- Multispot handpiece – one handpiece...multiple spot sizes
- Easy to maneuver articulated arm
- Compact and robust
- Low maintenance and minimum consumables – most economic laser in its class

- Treats all skin types
- Minimal to no adverse reactions
- No need for skin cooling
- Minimal patient discomfort
- No downtime

The many wavelengths available with MedLite C Laser Series allow for excellent varied treatment capabilities:

		532 nm	585 nm	650 nm	1064 nm
Pigmented lesions	Epidermal Dermal	C3 & C6 –	– –	– –	– C3 & C6
Tattoo removal	Dark colors, all inks Red, orange, brown Sky blue Green	– C3 & C6 – –	– – C6 with MultiLite –	– – – C6 with MultiLite	– C3 & C6 – –
Skin rejuvenation & resurfacing*		–	–	–	C6
Laser-assisted hair removal**		–	–	–	C6
Vascular lesions***		C3 & C6	C6 with MultiLite	–	–

* eg. fine wrinkles and acne scars

** eg. vellus hair on dark skin

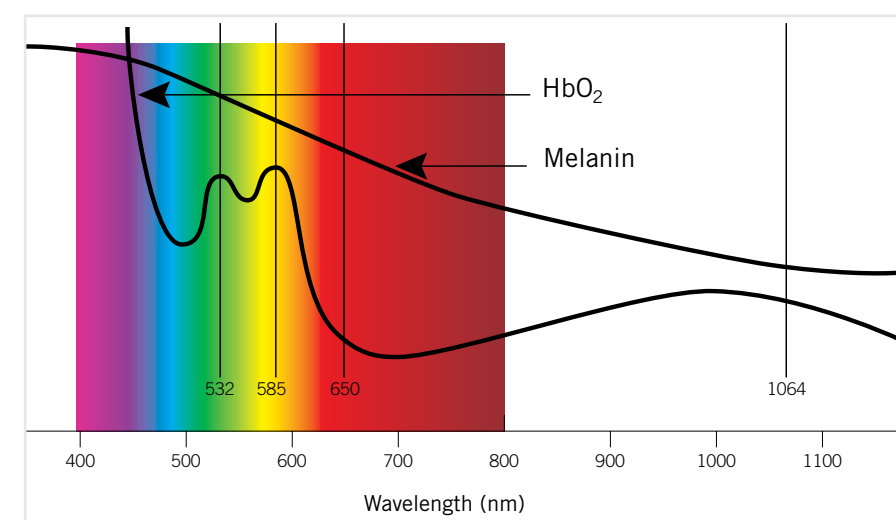
*** eg. telangiectasia, angioma, port wine stains (type 1 or 2)

Laser Light Absorption

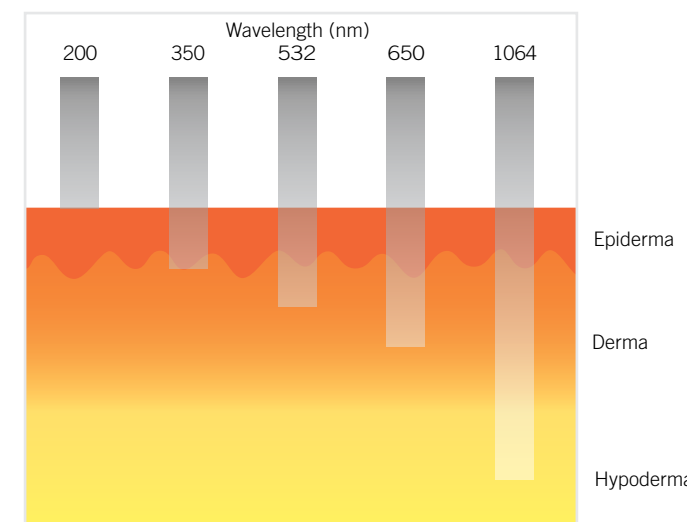
In order for light to heat biological tissue, it must be absorbed by that tissue. This is a wavelength dependent phenomenon. In addition, the depth of laser beam penetration generally increases with increasing wavelength.

The 1064 nm wavelength is then able to target dark melanocytes and dark ink chromophores in the dermal skin layer with very low interference from epidermal melanin (minimal risk of hyper- or hypopigmentations). In contrast, melanin absorption is very high at 532 nm, thereby well absorbed for the removal of epidermal pigmented lesions. Also, 532 nm and 585 nm wavelengths are well absorbed by oxyhemoglobin for vascular lesion removal.

Absorption Spectrum for Melanin and Hemoglobin



Depth of penetration in the skin



The MedLite optical bench includes flashlamps, the Nd:YAG rod, a frequency doubler, a Pockel cell and optics. The MedLite articulated arm and its mirrors allow high energy light delivery.

Nd:YAG Rod:

The Nd:YAG (Neodymium Yttrium Aluminum Garnet) rod absorbs the intense broad-spectrum light emitted by the excited flashlamp and releases the energy as laser light at 1064 nanometers (infrared). The MedLite is uniquely set apart from the ordinary Nd:YAG laser in that it is Q-Switched and Frequency Doubled.

The Q-Switched technology is recognized as the most effective technology to remove tattoos and pigmented lesions.

Q-Switch:

The Q-Switch or Pockel cell acts as an extremely high speed shutter which allows the MedLite to produce ultra-short (5-20 nanoseconds) high peak power (up to 200 megawatts) pulses bringing about an “explosive” action on target structures (photomechanical or photoacoustic effect). The short pulse duration limits the healthy tissue’s exposure to heat build-up, offering extremely safe and fast treatments.

AimLite™ aiming beam:

AimLite™ is our new aiming beam that optimizes MedLite’s® newest applications, including facial skin toning, treatment of acne scarring and pigmented lesions. The AimLite™ helps guide the user when the laser is in the single-pulse mode, particularly for close work where accuracy is essential.



PurpuraLite™:

The PurpuraLite™, our exclusive chromophore-clearing device, minimizes purpura that typically results from certain aesthetic laser treatments. The PurpuraLite™ acts by temporarily “emptying” the fine blood vessels under the treatment area, eliminating the “red” chromophore that would typically absorb energy and create a purpuric response.



MultiLite Dye Handpieces (optional accessory for the MedLite C6):

These non-hazardous, dye-impregnated polymer rods convert the 532 nm wavelength to either 585 nm (yellow) or 650 nm (red). With the addition of the MultiLite handpieces, the MedLite C6 effectively has four wavelengths in one laser system, thus giving more treatment options.



Efficacy, Reliability and Repeatability

Epidermal and Dermal Pigmented Lesions by MedLite™

The MedLite C Series is perfect for treating a wide variety of epidermal and dermal pigmented lesions, including age spots, solar lentiginos, café-au-lait lesions and dermal melanocytosis (Nevus of Ota, aberrant Mongolian Spot). Extensive worldwide research has shown that these lesions clear with little to no risk of hypopigmentation. Many lesions can be removed quickly and become a huge profit center in your practice, as well as making a significant difference in the lives of your patients.



Suzanne Klimer, MD, Sacramento, CA

Advanced Tattoo Removal by MedLite™

The MedLite sets the "gold standard" for advanced tattoo removal. The nanosecond pulse durations and high peak powers allows the tattoo to be treated with minimal risk of scarring, skin pigment changes, and less discomfort than other laser treatments. The 1064 and 532 nm wavelengths of the laser effectively treat red and dark ink tattoos including black, dark blue, brown and purple. The additional wavelengths (585 & 650 nm) offered by the MultiLite handpieces treat some of today's more challenging colors including sky blue and green. The laser is also ideal for permanent makeup and traumatic tattoos.



Bruce Saal, MD, Los Gatos, CA

Laser Toning by MedLite™

The MedLite C6 is the laser of choice for laser toning – nonablative skin resurfacing for wrinkles and acne scars – through collagen regeneration. With the MedLite, there is little risk of pigmentary changes, burns, or scars. Patients report and doctors have confirmed that they have achieved a more refreshed appearance, a reduction in fine lines and wrinkles, smoother skin texture, and a decrease in pore size.

A study conducted by Paul Friedman, MD and Roy Geronemus, MD (Laser & Skin Surgery Center of New York) used 3-D in-vivo optical skin imaging to objectively quantify the efficacy of multiple treatment sessions with the MedLite for acne scarring. The researchers also looked to determine improved efficacy after multiple treatment sessions and biomechanically characterize nonablative skin resurfacing. It was found that in less than five treatment sessions patients experienced quantifiable improvement of surface topography, and in skin tone.



Paul J. Frank, MD, New York, NY

Laser Peel by MedLite™

This new indication using the 532 nm wavelength of the MedLite laser corrects the cutaneous signs of photoaging associated with long-term ultraviolet damage. The rejuvenation treatment improves pigment irregularities, textural problems and decreases pore size. With just one treatment, patients see a clearly identifiable improvement in the condition of their skin with no down time or purpura. Results are truly outstanding.



Bryan Rubach, MD, Aurora, IL



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SPECIFICATIONS

MedLite™ C6

Laser Parameters

Laser Medium Nd:YAG & Dye Impregnated Polymers
Operating Parameters Q-Switched, Frequency Doubled

Nominal Delivered Energy at end of Articulated Arm with no Handpiece

1064 nm 1.0 Joule
532 nm 400 mJ

Converted Wavelengths

585 nm 250 mJ
650 nm 150 mJ

Maximum Pulse Energy Density at:

1064 nm 12.0 J/cm² @ 3.0 mm spot size
532 nm 5.0 J/cm² @ 3.0 mm spot size
585 nm 8.0 J/cm² @ 2.0 mm spot size
650 nm 4.5 J/cm² @ 2.0 mm spot size
Pulse Width 5–20 ns
Treatment Repetition Rate single shot, 1,2,5 and 10 pulses per second (Hertz)

Spot Sizes

1064 nm 3, 4, 6 & 8 mm
532 nm 2, 3, 4 & 6 mm
585 nm 2 & 3 mm
650 nm 2 & 3 mm
Cooling closed cycle water to air heat exchanger

Physical Parameters

Input Power 220 V, Single Phase, 8 Amps or 110 V, Single Phase, 15 Amps
Weight 58 kg
Size 72.5 cm depth
30.5 cm width
81 cm height without articulated arm
113 cm height with articulated arm

Beam Delivery

articulated arm

MedLite™ C3

Laser Parameters

Laser Medium Nd:YAG
Operating Parameters Q-Switched, Frequency Doubled

Nominal Delivered Energy at end of Articulated Arm with no Handpiece

1064 nm 450 mJ
532 nm 200 mJ

Maximum Pulse Energy Density at:

1064 nm 12.0 J/cm² @ 2.0 mm spot size
532 nm 5.0 J/cm² @ 2.0 mm spot size
Pulse Width 5–7 ns
Treatment Repetition Rate single shot, 1,2,5 and 10 pulses per second (Hertz)

Spot Sizes

1064 nm 2, 3, 4, 6 & 7 mm
532 nm 1.5, 2, 3, 4 & 6 mm
Cooling closed cycle water to air heat exchanger

Physical Parameters

Input Power: 220 V, Single Phase, 8 Amps or 110 V, Single Phase, 15 Amps
Weight: 58 kg
Size: 72.5 cm depth
30.5 cm width
81 cm height without articulated arm
113 cm height with articulated arm

Beam Delivery

articulated arm

About HOYA ConBio

A U.S. laser manufacturer since 1977, Hoya ConBio has been a leading provider to the global medical and dental communities for almost 15 years. The company's innovative technology is highly versatile, effective, and offers rapid return on investment. Fremont, CA-based Hoya ConBio is a fully owned subsidiary of Hoya Corporation, a €2.5 billion leader in optical solutions for information technology, vision care, and medical devices.

Our laser team is constantly looking for new applications for the MedLite™ laser. The laser has also been cleared by the FDA for laser-assisted hair reduction and vascular lesion treatments. Copyright 2005 HOYA ConBio. 992-9150 Rev.A. All Rights Reserved.



Fast, Safe and Versatile Q-Switched Nd:YAG Laser Series.

