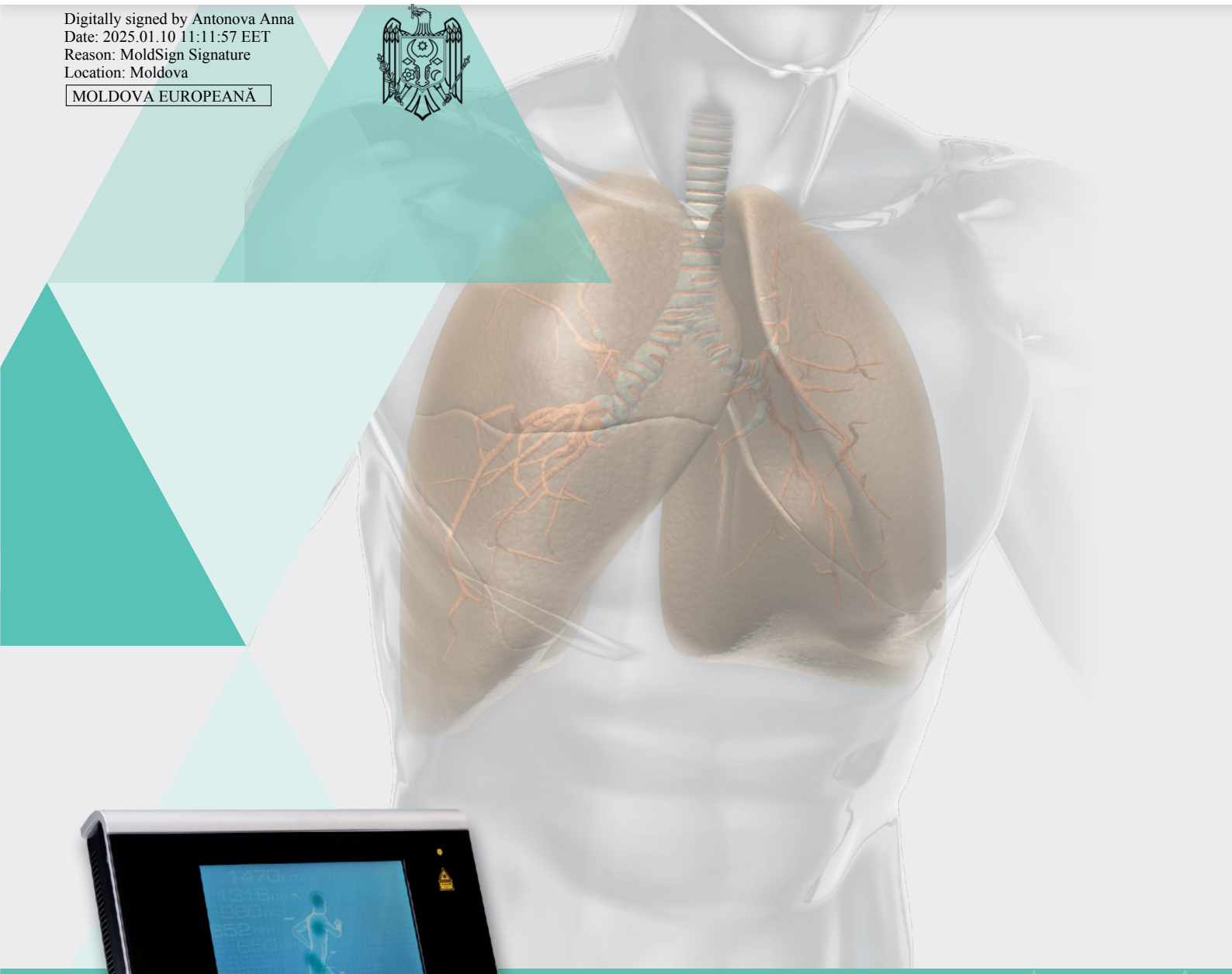
Thoracic Surgery and Intervetional Pulmonology

Minimally invasive laser surgery for lung metastases and bronchial tumors

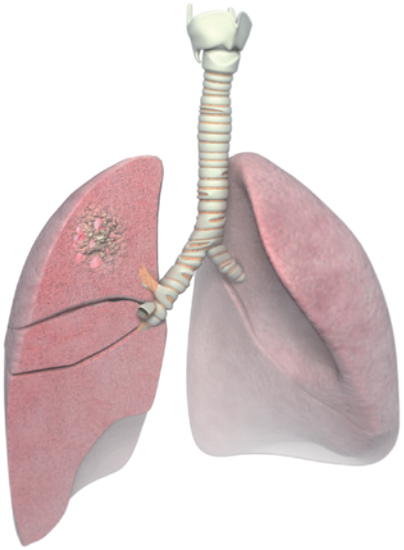


- Precision
- Minimal loss of parenchyma
- Coagulation and sealing

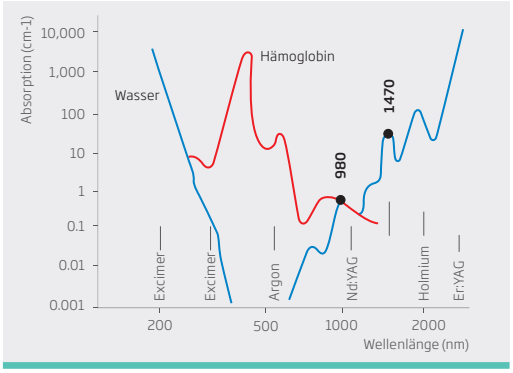
Laser technology for thoracic surgery and interventional pulmonology

The use of laser technology in thoracic surgery has proven to be clinically effective and beneficial for the patient. During the last decades, laser development with modern semiconductor technology has demonstrated excellent performance with wavelengths in the range of 1318–1350 nm. This laser wavelength has proven ideal for parenchymal tissue (lungs and kidney).

biolitec® has followed its tradition of developing new minimally invasive treatment methods to join the proven results of the 1350 nm laser. By combining the dual wavelength mixture of 980 nm and 1470 nm, a new clinical approach with supurb intra-operative efficiency and excellent post-operative outcome has resulted. The dual wavelength diode laser system is characterized by high economic efficiency and reliability with high quality fiber optic fibers to provide secure and cost-efficient care for patients by the medical specialists.



Highly developed diode laser technology from biolitec®



DUAL wavelength 980 + 1470 nm – new approach and progress in thoracic surgery

Why?

LEONARDO® DUAL wavelength diode lasers offer a combination of advantages. The 980 nm wavelength provides equal light absorption in both hemoglobin and water which offers an excellent coagulation effect. The 1470 nm wavelength is highly absorbed in water to generate an excellent cutting and vaporization.

The LEONARDO® DUAL 100-watt laser allows the clinician to direct a laser beam with mixed wavelengths onto or into lung tissue that has very high water content and low density. Users are able to observe that the laser achieves high ablation rates in the lung and tumor tissue with a simultaneously low and elastic coagulation zone to minimize post-operative side effects such as an unacceptable outflow rate.

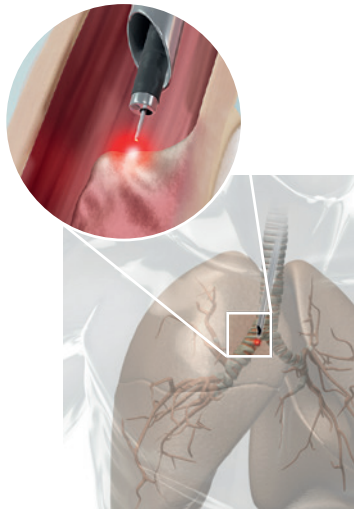
Advantages

- Simultaneous cutting and coagulation
- Sealing properties for a smooth tissue surface
- Parenchyma and lung lobe preservation
- Deep and centrally positioned metastases can be uncovered
- Follow-up treatment possible in recurring metastases
- Precise resection of multiple metastases in only one procedure
- Best hemostasis
- Post-operative drains can be removed shortly after the treatment

Applications

Open surgery and laser-supported VATS / Uniportal VATS

- Metastasectomy
- Vaporization of tumors
- Wedge excision of lung tissue
- Resection of multiple and deep lung metastases
- Recurring metastases and tumors
- Hemostasis and fistula sealing
- Adhesiolysis
- Tissue resection for histological examination



Interventional Pulmonology

- Coagulation and ablation of endobronchial tumors and stenoses
- Removal of bronchial obstructions and fistulas
- Separation of tracheal stenoses
  (all procedures are performed with rigid or flexible endoscopes)

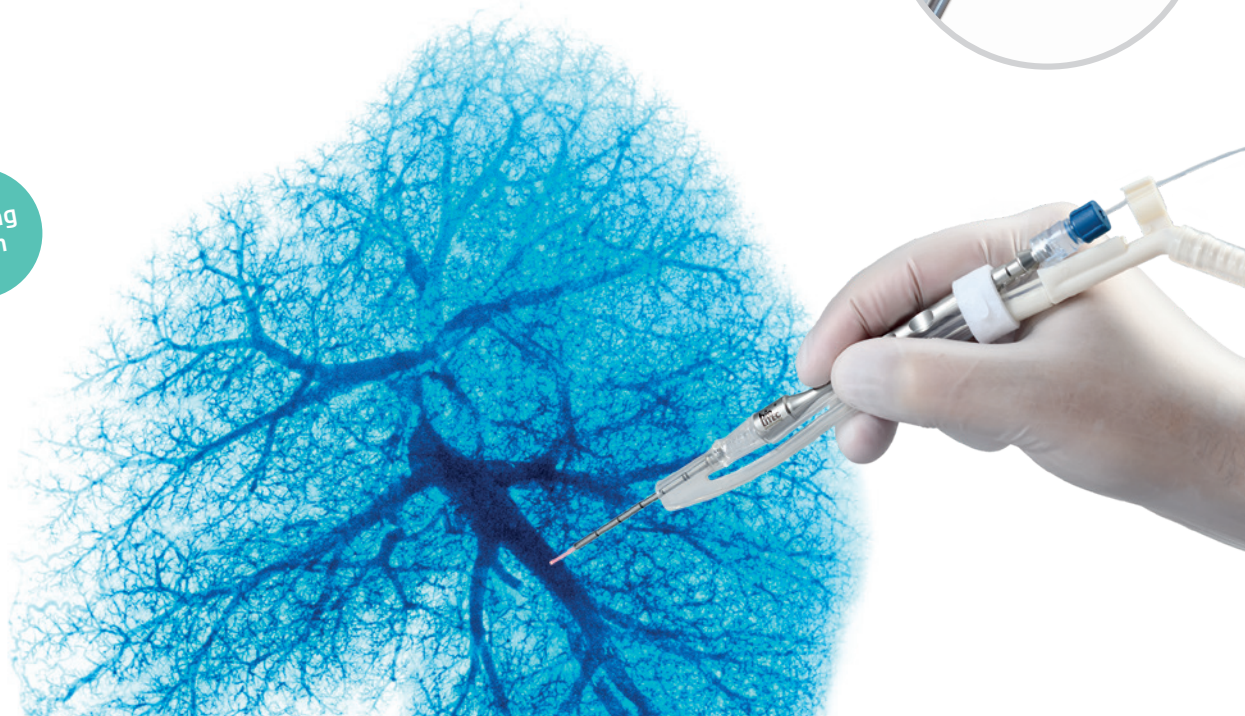
biolitec® Laser Systems

Advantages

- Multi-disciplinary use for numerous surgical applications
- Simple set-up (no additional external cooling or high voltage necessary)
- Reliable diode technology
- Low maintenance costs
- User-friendly

Discover the new Laparoscopic Bending Instrument, which allows you to direct the laser fiber where it is needed – for an even more effective procedure!

Coming soon



biolitec® Laser Systems

Model	**LEONARDO® DUAL 100**	**LEONARDO® DUAL 45**
REF	SL980+1470nm100W	SL980+1470nm45W
Wavelength	980 nm and 1470 nm	980 nm and 1470 nm
Performance	max. 100 Watt (1470 nm / 15 Watt + 980 nm / 85 Watt), individually adaptable	max. 45 Watt (1470 nm / 15 Watt + 980 nm / 30 Watt), individually adaptable
Fiber diameter	≥ 360 µm	≥ 360 µm
Laser class	4	4
Target beam	532 nm and 635 nm, green 1 mW, red 4 mW, user-defined intensity	532 nm and 635 nm, green 1 mW, red 4 mW, user-defined intensity
Treatment mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode
Impulse length/-pause	0.01 – 60 sec / 0.01 – 60 sec	0.01 – 60 sec / 0.01 – 60 sec
Energy supply	110 – 240 VAC, 50 / 60 Hz, 600 VA	110 – 240 VAC, 50 / 60 Hz, 450 VA
Cooling	–	–
Measurements (H × W × D)	approx. 28 cm × 37 cm × 9 cm	approx. 28 cm × 37 cm × 9 cm
Weight	approx. 8.5 kg	approx. 8.5 kg

Fibers

Thoracic Surgery

REF	Product	Length [m]	AD ø [µm]
503300415	Bare Fiber 1000 µm, Flat Tip, Adj. Luer, ID (1 × 6 h)	3	1400

Interventional Pneumonology

503200525	GLC 180 Gas-, Liquid Cooled fiber, ID (1 × 6 h)	3	1800
503200744	Bare Fiber 400µm, Flat Tip, IC	2.6	750
503200745	Bare Fiber 600 µm, Flat Tip, Adj. Luer, ID (1 × 6 h)	2.6	860

Handpieces and Instruments

400400120	LAPAROSCOPIC BENDING INSTRUMENT
500400370	Instrument for Thoracoscopy, with smoke suction adapter, for 600 – 1000 µm fibers
400100100	Universal Dual Luer Handpiece, for 600 – 1000 µm fibers

Accessories

MP0003	LEONARDO Laser Cart
LA7209	Laser safety goggle 950 – 980 DLB5 / 980 – 1400 DLB6 / 1400 – 11500 DLB4
AB2594	Biopsy needle 14 G, 6 cm with cm markings, sterile PU. 20 pcs

Flue Gas Exhaustion

MP0025	Smoke evacuation FUMOVAC 700 Comlete unit 220/240 V 50/60 Hz, HM57525420
MP0026	Smoke evacuation filter for FUMOVAC 700 twin pack
MP0027	Tube set single use / holding device HP, 3m length, sterile, REF 57525332, PU. 10 pcs
MP0028	Laparoscopic Smoke Evacuation Tube, 2.44m length, sterile, REF HM57525334, PU. 5 pcs

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Laser Use in Orthopedics & Spine

Microsurgical Solution for percutaneous pain management

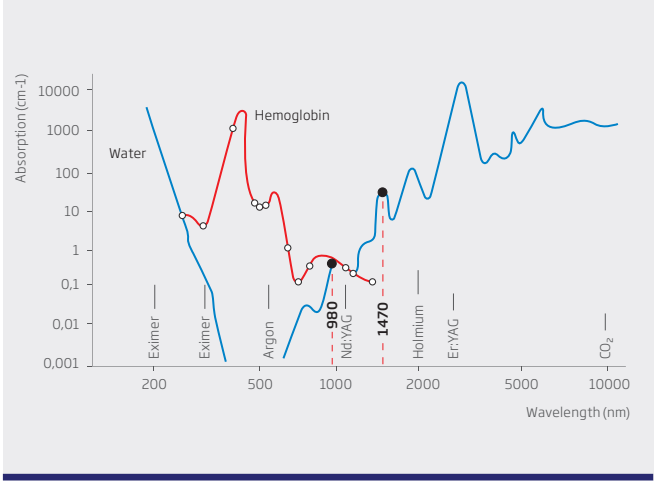
- Intra-discal application on cervical spine, thoracic spine, lumbar spine
- Medial branch neurotomy for facet joints
- Lateral branch neurotomy for sacroiliac joints

EVOLVE® in PLDD

During treatment with EVOLVE®, a small volume in a closed hydraulic space (nucleus pulposus) is being vaporized to achieve a reduction of intra-discal pressure (thermic "shrinking effect"). The reduction in volume and pressure of the pathological disc induces the reduction of disc herniation and thus a reduction in nerve root compression. Furthermore, it leads to the denervation of the pain receptors (nociceptive nerves) of ingrowing nerves from dorsal ligament into annulus fibrosus. In addition to the above, pain causing facette joints can be treated in the same session to give an even better relief in a combination therapy.

The therapeutic effect of intra-discal laser therapy is based on the combination of the specific treatment characteristics. Thanks to the standardized treatment protocol and heating effect, the surgeon creates a defined shrinkage of the disc. Due to vaporization of disc liquid, intra-discal pressure decreases. The laser energy used in minimally invasive treatment strengthens the disc through laser-stimulated scarring as the collagen structure changes. Neo-vascularisation of inflamed discs can be switched off with denervation of pain receptors inside the annulus fibrosus.

Tissue interaction with LEONARDO® DUAL



The LEONARDO® DUAL platform is based on the absorption characteristics of both 980 nm and 1470 nm wavelengths, which, thanks to its outstanding interaction in water and haemoglobin and moderate penetration depth into disc tissue, enables procedures to be carried out safely and accurately, especially in proximity of delicate anatomical structures.

Microsurgical precision is guaranteed by the technical characteristics of the special PLDD laser fibers, which allow for surgical effectiveness, ease of handling, and maximum safety.

The use of flexible tactile laser fibers with core diameters of 360 micron in combination with the microsurgical PLDD enables a very precise and accurate access and intervention to sensitive areas like the cervical and lumbar disc zones on the basis of clinical therapeutic needs.

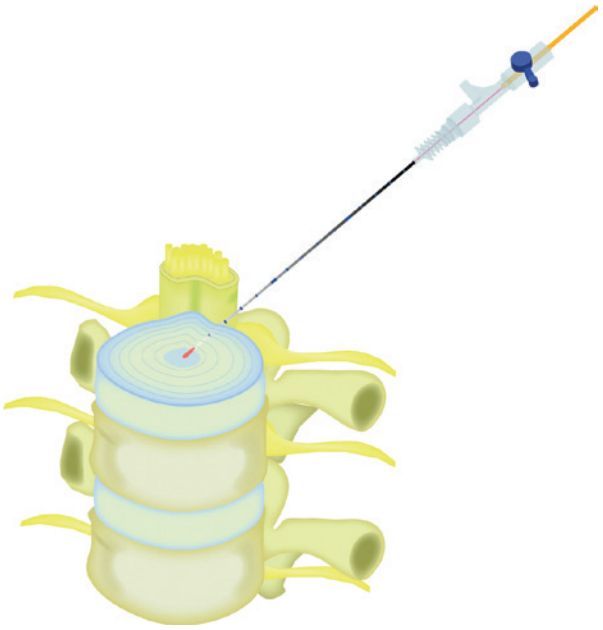
PLDD laser treatments are mostly used after non-successful conventional therapeutic options under strict MRT/CT control.

Applications

- Intra-discal application on cervical spine, thoracic spine, lumbar spine
- Medial branch neurotomy for facet joints
- Lateral branch neurotomy for sacroiliac joints

Indications

- Contained disc herniations with consecutive foraminal stenosis
- Discogenic spinal stenosis
- Discogenic pain syndroms
- Chronic facet and sacroiliac joint syndrom
- Further surgical applications, e.g. tennis elbow, calcaneal spur



Benefits of the minimally invasive PLDD procedure

- No soft tissue injury
- No risk of epidural fibrosis or scarring
- No extensive hospitalization (on outpatient basis possible)
- No general anesthesia, local anesthesia with mild sedation
- Minimal recovery time
- Lower costs

LEONARDO®

Model	**LEONARDO® Mini 1470 nm**	**LEONARDO® DUAL 45**
REF	SL1470nm8W	SL980 + 1470 nm 45 W
Wavelength	1470 nm	980 nm and 1470 nm
Power	8 W (1470 nm)	max. 45 Watt (1470 nm / 15 Watt + 980 nm / 30 Watt) separately adjustable
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming beam	635 nm, max. 4 mW	532 nm and 635 nm, green 1 mW, red 4 mW, user controlled intensity
Treatment mode	CW, Pulse Mode (optional), ELVeS® Signal	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode
Pulse duration / -break	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – 60 sec / 0.01 – 60 sec
Power supply	110 - 240 VAC, 50 - 60 Hz (7.2 VDC @ 36 W)	110 - 240 VAC, 50 / 60 Hz, 450 VA
Batteries	Li-ion batteries	-
Dimensions (H × W × D)	6.0 cm × 9.0 cm × 21.5 cm	approx. 28 cm × 37 cm × 9 cm
Weight	900 g	approx. 8.5 kg

All laser sets incl. 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case.

Kit

503200830	PLDD Kit 360 / 18 / 150 Y-Click Adapter, IC

Contact us

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ThyLA DUAL

Laser Thermal Ablation of Thyroid Nodules

- Function-preserving procedure
- High effectiveness
- Outpatient treatment

ThyLA DUAL – DUAL Laser Technology

Following our tradition during the development of new minimally invasive treatments, we succeeded in combining wavelengths, 980 nm / 1470 nm and 1064 nm / 1470 nm, in a single device for excellent and efficient intra- and postoperative results. Dual diode laser with high quality fiber optics makes procedures safe and cost-effective for medical professionals and patients.

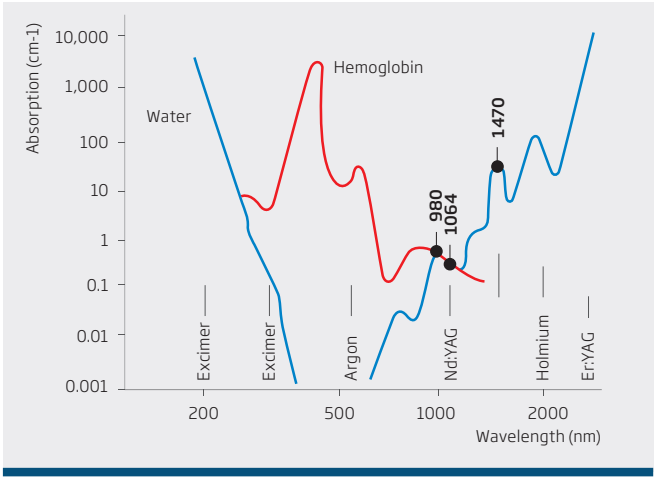
Laser Thermal Ablation

Advantages

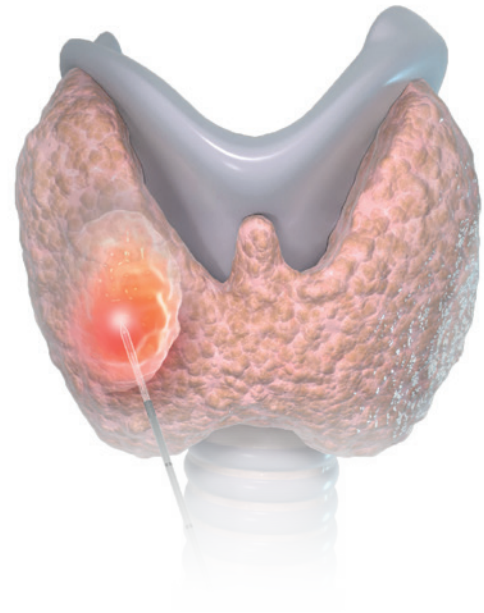
- Treatment possible with local anesthesia
- High effectiveness, reduction of the nodule volume by about 50 % after three months
- Short treatment duration
- Protection and preservation of healthy thyroid tissue
- Good cosmetic results
- Easy to control penetration depth
- Function-preserving procedure, usually no medication necessary after the intervention
- Quick resumption of daily activities
- Treatment can be repeated as needed
- Suitable for risk patients

Indications

- Symptomatic benign nodular formations
- Symptomatic thyroid cysts
- Rapidly developing benign nodules or cyst formations
- Visually disturbing nodules
- "Hot" nodular formations (autonomous adenoma) when radioiodine therapy is not desired
- Patients who do not want an operation or are only fit for a limited procedure or one without anesthesia



Through the occupation of the absorption maxima and minima by the diode laser of wavelengths 980 nm, 1064 nm and 1470 nm, we succeeded in adapting the penetration depth to the extent of the thyroid nodule to be treated.



A gentle, organ-preserving method for the treatment of benign thyroid nodules

Laser thermal ablation is a minimally invasive procedure during which the tissue is dissicated by laser energy. During the laser thermal ablation, similar to a biopsy with ultrasound monitoring, the special ThyLA fiber is introduced into the thyroid nodule to coagulate the nodular tissue through selective radiation.

When the size or shape of the lesion to be treated requires, the therapy takes place with the so-called “multiple overlapping shot technique” (moving shot technique). In this instance, the ThyLA fiber is replaced intranodally after each pulse. Thus multiple coagulative necroses are placed, and the entire nodule is treated. To enable a homogeneous and controlled penetration depth and, at the same time, an excellent ultrasound view, the ThyLA fiber was developed.

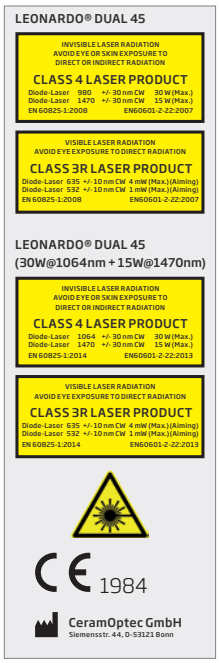
Our Products

biolitec®'s unique FUSION® technology

The glass fiber caps are welded to the fibers and not simply glued. That means maximum safety during the application.

biolitec® laser systems

Modell	LEONARDO® Mini Dual	LEONARDO® DUAL 45	LEONARDO® DUAL 45
REF	SL980+1470nm16W	SL980+1470nm45W	SL1064+1470nm45W
Wavelength	980 nm ± 30 nm / 1470 nm ± 30 nm	1470 nm ± 30 nm + 980 nm ± 30 nm	1064 nm ± 30 nm + 1470 nm ± 30 nm
Power	11 W@980 nm ± 20 % (Pmax = 13,2 W) 5 W@1470 nm ± 20 % (Pmax = 6 W)	30 W ± 20 % (max. 36 W) + 15 W ± 20 % (max. 18 W)	30 W ± 20 % (max. 36 W) + 15 W ± 20 % (max. 18 W)
Fiber diameter	≥ 360 µm	≥ 360 µm and 220 µm with reduced Pmax. (optional)	≥ 360 µm and 220 µm with reduced Pmax. (optional)
Laser class	4	4	4
Aiming beam	635 nm, max. 4 mW	532 nm and 635 nm, green 1 mW, red 4 mW, user-controlled intensity	532 nm and 635 nm, green 1 mW, red 4 mW, user-controlled intensity
Treatment mode	CW, Pulse Mode (optional)	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode
Pulse duration/ break	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – 60 sec. / 0.01 – 60 sec.
Power supply	100 – 240 VAC, 50 – 60 Hz (12 VDC @ 64, 8 W)	110 – 240 VAC, 50 / 60 Hz / max. 450 VA	110 – 240 VAC, 50 / 60 Hz / max. 450 VA
Cooling	Air-cooled system	Air-cooled system	Air-cooled system
Dimensions (H × W × D)	6.0 cm × 9.0 cm × 21.5 cm	approx. 28 cm × 37 cm × 9 cm	approx. 28 cm × 37 cm × 9 cm
Weight	900 g	approx. 8.5 kg	approx. 8.5 kg



Fibers & Accessories

REF	Product	PU*	Length	Diameter	Ablation zone
503100450	ThyLA slim Fiber, IC	10	2.6 m	0.96 mm	olive
AB2571	Biopsy needle	10	100 mm	18 G	–

* Packaging unit

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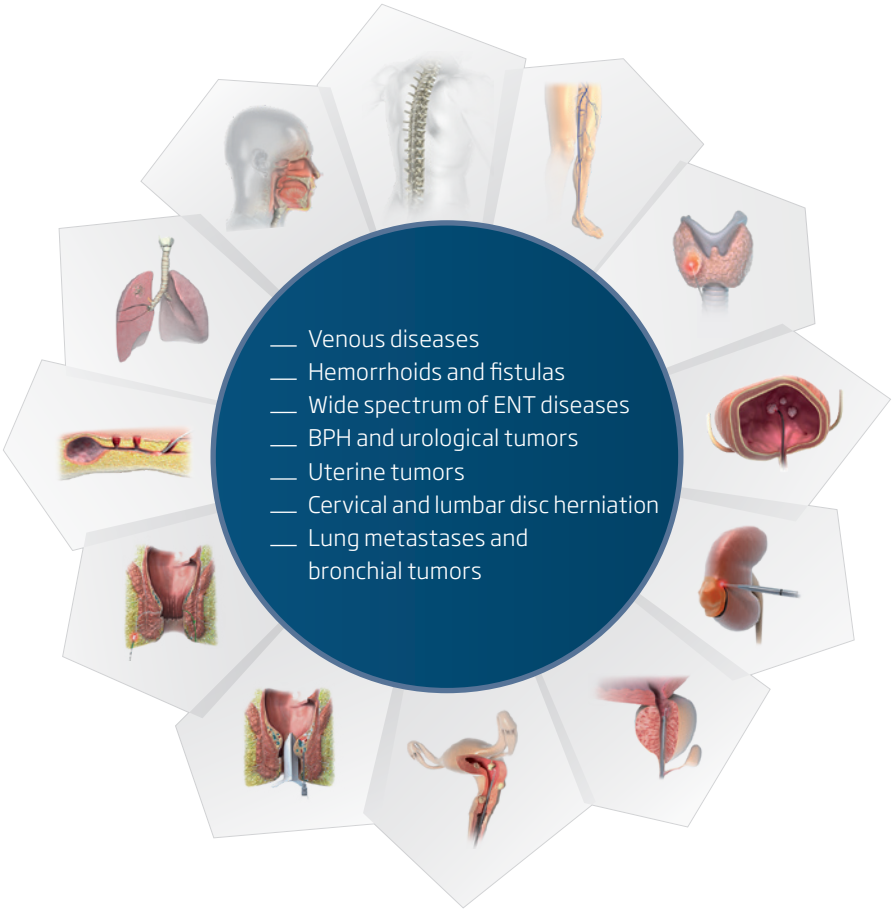

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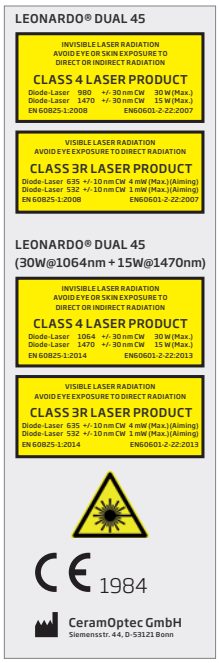
REF	SL980+1470nm16W	SL980+1470nm45W	SL1064+1470nm45W
Wavelength	980 nm ± 30 nm / 1470 nm ± 30 nm	1470 nm ± 30 nm + 980 nm ± 30 nm	1064 nm ± 30 nm + 1470 nm ± 30 nm
Power	11 W@980 nm ± 20 % (Pmax = 13,2 W) 5 W@1470 nm ± 20 % (Pmax = 6 W)	30 W ± 20 % (max. 36 W) + 15 W ± 20 % (max. 18 W)	30 W ± 20 % (max. 36 W) + 15 W ± 20 % (max. 18 W)
Fiber diameter	≥ 360 µm	≥ 360 µm and 220 µm with reduced Pmax. (optional)	≥ 360 µm and 220 µm with reduced Pmax. (optional)
Laser class	4	4	4
Aiming beam	635 nm, max. 4 mW	532 nm and 635 nm, green 1 mW, red 4 mW, user-controlled intensity	532 nm and 635 nm, green 1 mW, red 4 mW, user-controlled intensity
Treatment mode	CW, Pulse Mode (optional)	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode	CW, Pulse Mode, ELVeS® Signal, ELVeS® Segment, Derma Mode
Pulse duration/ break	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – 60 sec. / 0.01 – 60 sec.
Power supply	100 – 240 VAC, 50 – 60 Hz (12 VDC @ 64, 8 W)	110 – 240 VAC, 50 / 60 Hz / max. 450 VA	110 – 240 VAC, 50 / 60 Hz / max. 450 VA
Cooling	Air-cooled system	Air-cooled system	Air-cooled system
Dimensions (H × W × D)	6.0 cm × 9.0 cm × 21.5 cm	approx. 28 cm × 37 cm × 9 cm	approx. 28 cm × 37 cm × 9 cm
Weight	900 g	approx. 8.5 kg	approx. 8.5 kg



Fibers & Accessories

REF	Product	PU*	Length	Diameter	Ablation zone
503100450	ThyLA slim Fiber, IC	10	2.6 m	0.96 mm	olive
AB2571	Biopsy needle	10	100 mm	18 G	–

* Packaging unit

Ophthalmology High-Power Laser

Laser Surgery with Fiber Optics

- Precise fiber guidance
- Excellent hemostasis
- Cutting, coagulating, vaporizing
- Very versatile

Laser applications with flexible fibers in Ophthalmology

The biolitec® diode laser systems are characterized by a compact, maintenance-free design for effective and safe use in ophthalmology. The sophisticated systems have also been developed for a variety of applications in ophthalmology and offer a wide choice of options for the minimally invasive laser treatment of medical conditions around the eye and in the eye itself. Whether used in an operating room, outpatient surgery center or in a private practice, the use of biolitec® diode laser systems significantly expands the user's range of options.

Benefits

- "Laser scalpel" with mechanical cutting characteristics
- Non-contact lasers with optimum optical control
- Micro-surgical precision
- Tactile feedback from the laser fiber
- Minimal bleeding
- Minimal post-operative measures
- Short rehabilitation time for the patient
- Minimal operative side effects with reduced post-operative pain
- Outpatient treatment with local anesthetic possible
- Optimum protection of the surrounding tissue
- No uncontrolled current flow, unlike high-frequency surgery

Outpatient Applications

Outpatient laser surgery in private practices or clinics has become firmly established and widely accepted as a method for surgical operations over the last ten years. Operations with very little bleeding, due to the excellent coagulation of the fiber-controlled diode laser, can be effectively performed in little time and usually under local anesthetic.

Blepharoplasty
(Removal of the fat deposits in the tear sac)
Discission, endocoagulation and lipolysis

Sicca syndrome
("Dry eye") Narrowing / occlusion of the evacuative lacrimal duct (laser coagulation for punctum stenosis)

Dacryocystorhinostomy (DCR)
Opening or bypassing an obstructed lacrimal sact or nasolacrimal duct

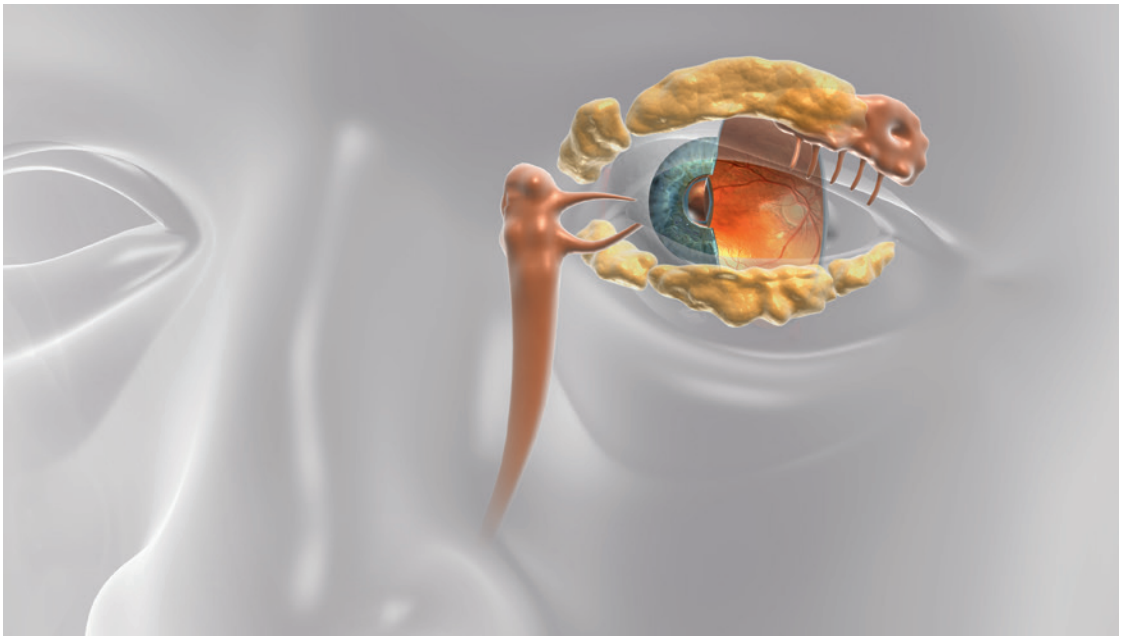
Watery eyes (epiphora)
Opening of the evacuative lacrimal duct
(Laser tip endoprobing)

Tumor surgery
(Benign fibroids, xanthelasma, xanthoma, etc.)
Coagulation, vaporization and excision

Telangiectasia (dilated capillaries)
Coagulation under enlarged view

Chalazia,
Styes
Vaporization and coagulation of the inflammation / cysts in and around the meibomian glands or glands of Zeis with extensive retention of the secretory tissu

Orbital hemangioma
("Port-wine stain") Coagulation and vaporization



Technological superiority

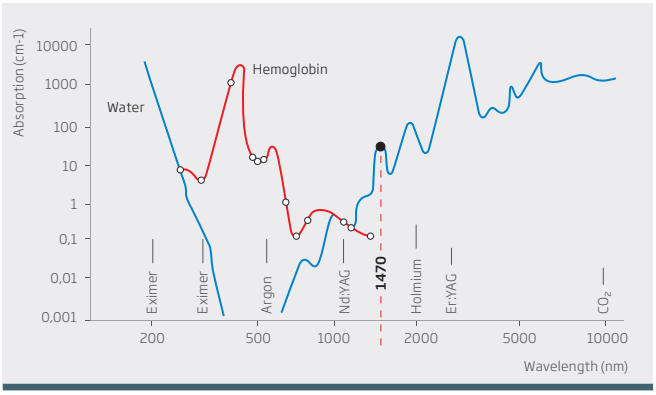
With its extremely thin laser fiber, the biolitec® laser can be used safely and precisely on the sensitive structures of the eye when using the contact mode. Compared with other lasers that use the open beam mode, using the contact mode with the fibers prevents the risk of damage to surrounding tissue . Only upon contact with the target tissue will the energy of the diode laser be activated in very small pulses, with the result that all the energy of the laser is immediately absorbed at the tip of the fiber. The depth of thermal damage is therefore minimal.

Surgical intervention often involves dealing with very narrow and sensitive structures. The biolitec® laser system has important benefits. With flexible and thin laser probes, intracorporeal structures can also be treated easily and precisely using a micro endoscope. Treatment for the frequently diagnosed condition of blepharoplasty, for example, has become pain-free operation with very little bleeding and with significantly reduced post-operative measures.

Significantly improved hemostasis (Clotting)

The wavelengths of 1470 nm/ 980 nm guarantee high absorption in water and hemoglobin. The thermal penetration depth is significantly less than, for example, with a Nd:YAG laser. These characteristics enable safe and precise laser applications to be performed near sensitive and narrow structures with simultaneous thermal protection of the surrounding tissue. Compared with the CO2 laser, these special wavelengths offer considerably better hemostasis and prevent major bleeding during operations, even in hemorrhagic structures such as hemangiomas.
With the biolitec® laser system, excisions, incisions and vaporisation of hyperplastic and tumorous tissue can be performed effectively and with virtually no side effects.

Laser beam absorption in hemoglobin and water



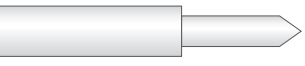
LEONARDO®

Technical Details	**LEONARDO® DUAL 45**
REF	SL980 + 1470 nm 45 W
Wavelength	980 nm and 1470 nm
Power max.	45 Watt (1470 nm / 15 Watt + 980 nm / 30 Watt) separately adjustable
Fiber diameter	≥ 360 µm
Aiming beam	532 nm and 635 nm, green 1 mW, red 4 mW, user controlled intensity
Treatment mode	CW, Pulse Mode, Derma Mode
Pulse duration /-break	0.01 – CW / 0.01 – 60 sec
Power supply	110 - 240 VAC, 50 / 60 Hz, 450 VA
Dimensions (H × W × D)	approx. 28 cm × 37 cm × 9 cm
Weight	approx. 8.5 kg

All laser sets include 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case.

"Cylindrical Tip"

"Globular Tip"



"Sharp Tip"

Fibers ("single use") and resterilizable hand pieces

Uncoated fiber ends with ca. 200, 400, 600 and 1000 µm diameter

"Cylindrical Tip"

"Globular Tip"

"Sharp Tip"

Hand pieces with interchangeable optics for external use

Solid beam diameter ("spot sized") with ca. 0.6, 1.0 and 1.5 mm

Contact us

to learn more about a whole new world of minimally invasive laser therapies

Esthetic Surgery

Ophthalmology

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bio LITEC®

All fibers are free of latex and DEHP. Our fibers are single use products (unless otherwise indicated) delivered sterile for immediate use.

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LipoLas® – Laser Lift

Minimally invasive laser therapy for skin tightening and body contouring

- Significant fat reduction and tissue tightening
- Precise and gentle fiber guidance
- Outpatient treatment
- Versatile in use

biolitec® LEONARDO® laser in aesthetics

Named after the universal genius Leonardo da Vinci, the LEONARDO® laser stands for innovation, technical progress, genius, versatility, visionary power and human anatomy.

LipoLas® – Laser Lift

In LipoLas® laser therapy, the LEONARDO® diode laser family in combination with the atraumatic LipoLas® laser fibers forms the basis for excellent treatment results and is characterized by a compact, low-maintenance and user-friendly design.

Technology meets Anatomy

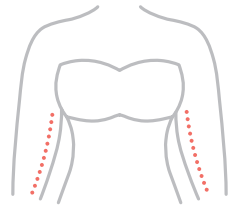
Applications for fat reduction and tissue tightening

FACE

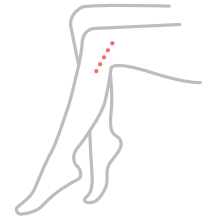
CHIN

NECK

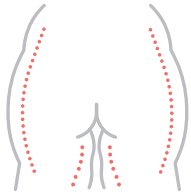
EYE



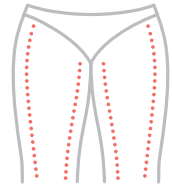
UPPER ARMS



KNEE



BOTTOM



THIGHS

BELLY

What is LipoLas® – Laser Lift?

atraumatic fiber tip

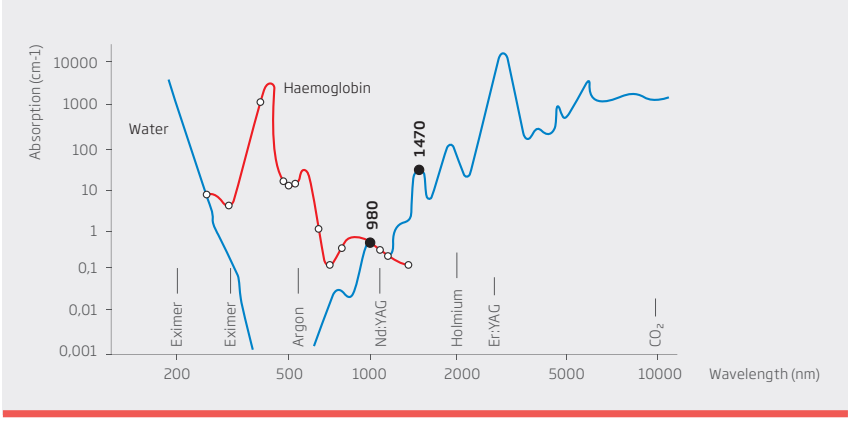
LipoLas® - Laser Lift is a minimally invasive procedure for skin tightening and fat reduction without scarring. The procedure can be performed on an outpatient basis under local anesthesia, e.g. TLA, or in combination with liposuction. A thin laser fiber is inserted subcutaneously into the tissue to be treated. No skin incision is required for this. The desired area is treated evenly by slow and fan-shaped release of laser energy.

The position of the laser fiber is continuously controlled with the pilot beam visible through the skin. The specific interaction of the laser light in the tissue ensures a controlled, precise application and impresses with good results and long-term effects.

- Firms and tightens the skin
- Reduces excess fat
- Defines contours on the face and other areas of the body

Mode of action

The LEONARDO® is optionally equipped with 2 wavelengths 1470nm and 980nm, which have a high absorption in water, fat and hemoglobin. The complementary and simultaneous use of both wavelengths enables optimum reduction of excess fatty tissue and excellent tightening with maximum protection of the surrounding tissue. Due to the laser-induced sclerosis of the small blood vessels and stimulation of the formation of new collagen fibers, the postoperative course is also favored.



Laser absorption in hemoglobin and water

Expansion of the therapeutic spectrum

Whether in the operating room of a large hospital, as an outpatient in a surgical center or in a private practice - the use of the LEONARDO® laser system significantly expands the therapeutic spectrum for the physician.

Due to the described mode of action, almost all areas of the body can be tightened and defined with LipoLas®, regardless of whether they are small and sensitive areas around the eyes, face and neck or large areas on the body. LipoLas® is also ideal for the treatment of dents in the skin, known as cellulite.

In addition to purely aesthetic applications, the LEONARDO® laser system also offers other possible applications, such as in phlebology, proctology, gynecology (LaEvita*) and the treatment of hidradenitis suppurativa.

* LaEvita is the new, gentle solution for the treatment of vaginal atrophy and mild stress incontinence.

Advantages of LipoLas® – Laser Lift

- Minimally invasive procedure without scarring
- Effective skin tightening with long-term effect
- Removal of excess fat from small areas of skin
- Definition of face and body areas
- Can be used on almost all skin areas

Intuitive handling

The LEONARDO® diode laser system is characterized by its compact, user-friendly design.

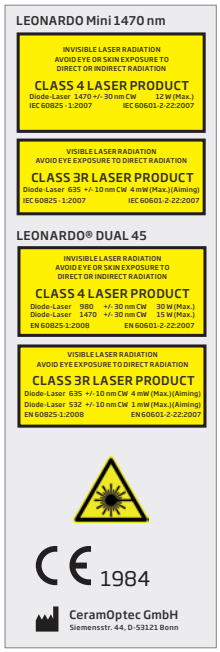
Advantages

User-friendly

- Intuitive use via touchscreen, quick setup
- Choice between preset modes and individual settings

Economical

- Two wavelengths in one compact and space-saving diode laser system (LEONARDO® Dual)
- Low maintenance thanks to reliable laser diodes

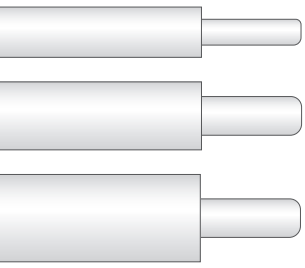


LEONARDO® laser systems

Technical data	**LEONARDO® Mini 1470**	**LEONARDO® DUAL 45**
REF	SL1470nm12W	SL980+1470nm45W
Wavelength	1470 nm	980 nm and 1470 nm
Power	12 W	45 Watt (1470 nm / 15 Watt + 980 nm / 30 Watt), individually adjustable
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming beam	635 nm, max. 4 mW	532 nm and 635 nm, green 1 mW, red 4 mW, user-defined intensity
Treatment mode	CW, Pulse Mode (optional), ELVeS® Signal	CW, Pulse Mode, Derma Mode
Pulse duration / pause	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – CW / 0.01 – 60 sec.
Power supply	110 - 240 VAC, 50 - 60 Hz (7.2 VDC @ 36 W)	110 – 240 VAC, 50 / 60 Hz, 450 VA
Batteries	Li-ion batteries	
Dimensions (H × W × D)	6.0 cm × 9.0 cm × 21.5 cm	approx. 28 cm × 37 cm × 9 cm
Weight	900 g	approx. 8.5 kg

All laser sets incl. 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case.

LipoLas® – Laser Lift



LipoLas®

Fibers

LipoLas® - Laser Lift

REF	Product	PU*	Length [m]	ø fiber tip [µm]
503200292	Bare Fiber 365 µm, Flat Tip, IC	10	2.6	445

LipoLas®

503500530	Bare Fiber 400 µm, Cylindrical Tip, IC	10	2.6	750
503500520	Bare Fiber 600 mic, Cylindrical Tip, IC	10	2.6	860
503500510	Bare Fiber 1000 mic, Cylindrical Tip, IC	10	2.6	1400

Accessories

AB5815-1	Y-Connector Pack
AB1633	Fine needle 21/150, Rev.A
400100100	Universal Dual Luer Handpiece

* Packaging unit

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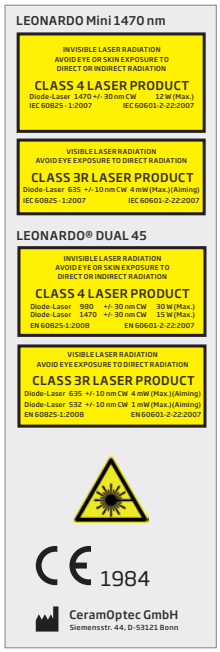

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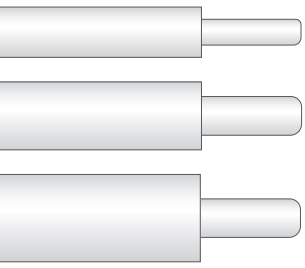
Aiming beam	635 nm, max. 4 mW	532 nm and 635 nm, green 1 mW, red 4 mW, user-defined intensity
Treatment mode	CW, Pulse Mode (optional), ELVeS® Signal	CW, Pulse Mode, Derma Mode
Pulse duration / pause	0.01 – 60 sec. / 0.01 – 60 sec.	0.01 – CW / 0.01 – 60 sec.
Power supply	110 - 240 VAC, 50 - 60 Hz (7.2 VDC @ 36 W)	110 – 240 VAC, 50 / 60 Hz, 450 VA
Batteries	Li-ion batteries	
Dimensions (H × W × D)	6.0 cm × 9.0 cm × 21.5 cm	approx. 28 cm × 37 cm × 9 cm
Weight	900 g	approx. 8.5 kg

All laser sets incl. 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case.

LipoLas® – Laser Lift



LipoLas®

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