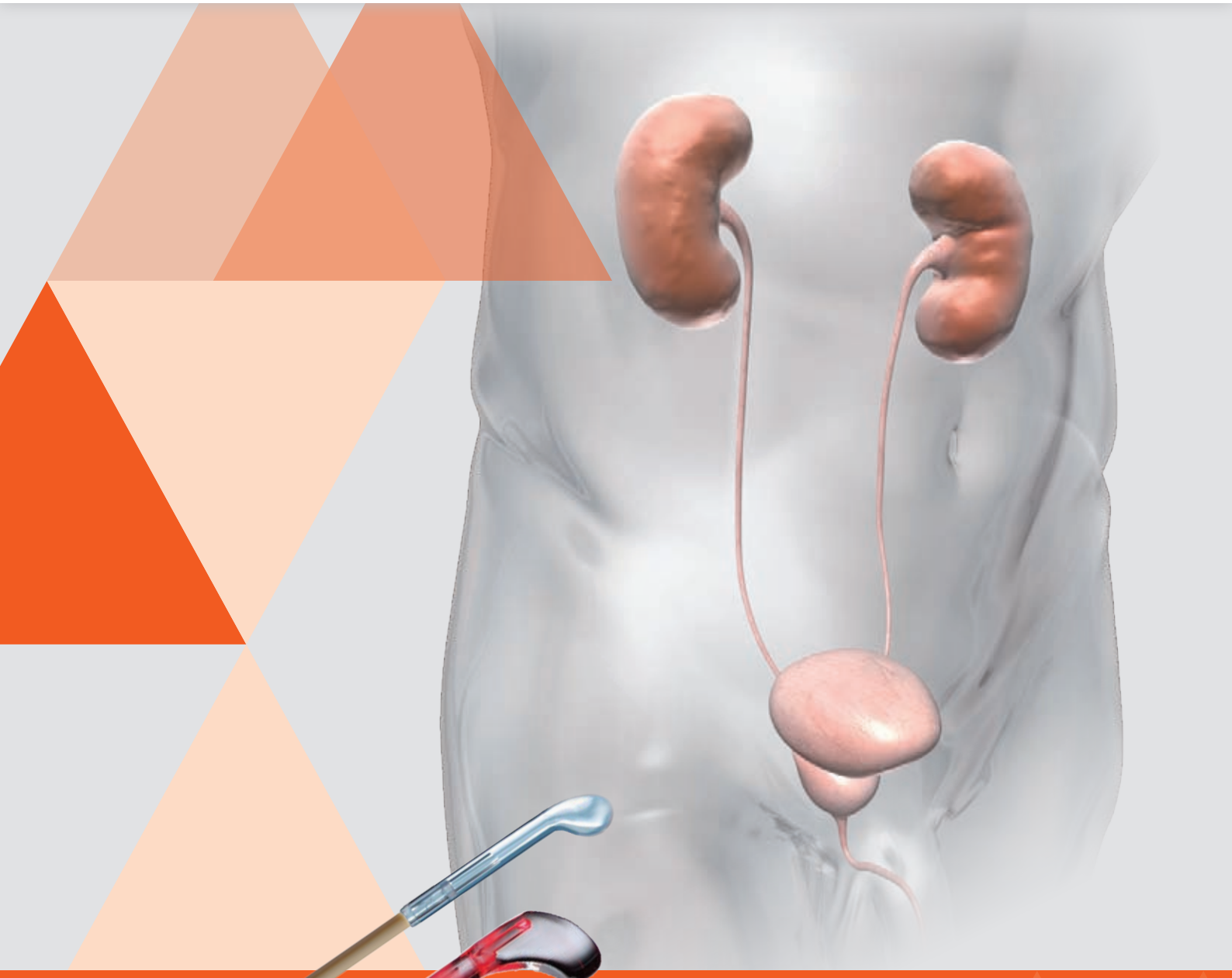
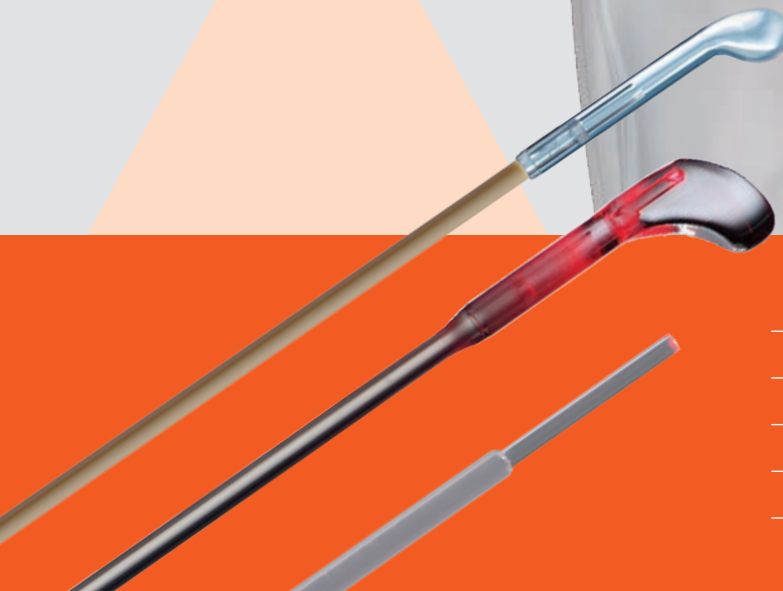
biolitec® in Urology
TWISTER, XCAVATOR®

Minimally invasive laser therapy of BPH, tumors, condylomas, strictures and more



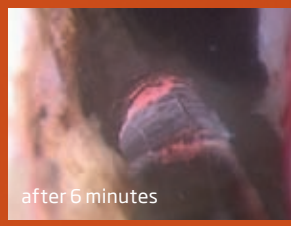


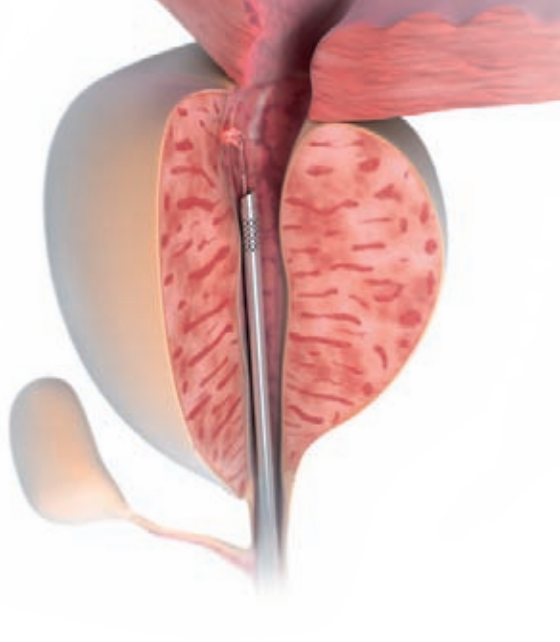
- Several urology applications
- Excellent hemostasis
- Fast and efficient prostate ablation
- Tolerated with high risk patient
- Local or minimal anesthesia

BPH – Benigne Prostatic Hyperplasia

Contact fiber approach with the XCAVATOR® and the TWISTER fibers

Our contact fibers are developed to reach out for unmatched ablation rates and excellent reliability. Working in contact mode offers direct and high energy delivery exact on the area where you want to ablate or vaporize. The results are smooth intrasurgical surfaces. Special developed glass tips assure working without fiber degradation and consistently high performance. More fiber control through tactile feedback shows the best outcome and permits outstanding treatment.





XCAVATOR®

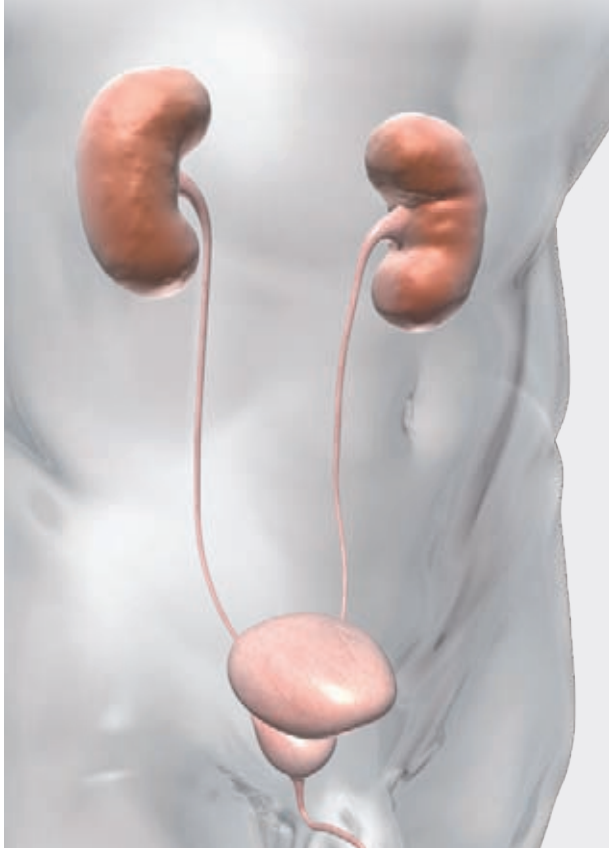
Time is precious, so we designed the XCAVATOR® as the first true Laser-TURP to combine the efficacy of trans-urethral resection with the unmatched safety and hemostasis of the LEONARDO® laser system series. The patent pending glass tip of the XCAVATOR® fiber ensures a safe treatment of benign prostate hyperplasia powered by optimized absorption in water and hemoglobin.

- Unique glass tip makes the XCAVATOR® as the first choice treating prostate glands from small to quite large
- Increased contact surface area results in a wider area of tissue resection
- Efficient vaporization, coagulation and resection
- Specially designed resectoscope decreases likelihood of costly optic damage
- Optimized field of view due to vapor bubbles concentrated at fiber tip only
- Tissue resection with possible histological diagnosis
- Short learning curve

TWISTER

The new TWISTER XL fiber is designed to increase the well known ablation rates of the TWISTER L and improve precision fiber handling by optimizing rigidity. Larger fiber tip design increases the surface area to almost 20 % larger than the TWISTER L. A specially designed coating enhances the rigidity and handling of the fiber tip while increasing durability.

- Increased fiber tip surface area for fast and efficient ablation
- Contact mode for tactile feedback
- Increased control of the fiber tip
- Excellent hemostasis
- Short catheter time and fast recovery
- Cystoscope compatibility in line with TWISTER L



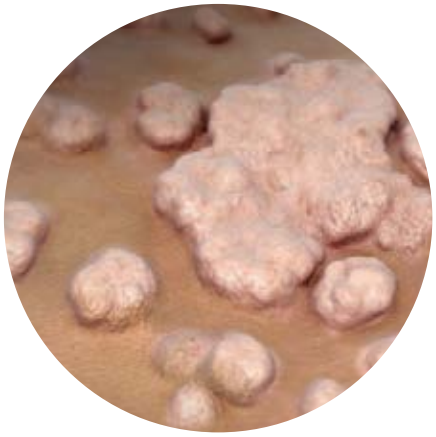
Several other urological laser applications

efficient – smooth – gentle

Upper tract tumors

- Comfortable treatment of upper tract tumors with a very thin fiber via a flexible cystoscope
- This avoids an open or laparoscopic surgery
- Fast and minimal invasive surgery

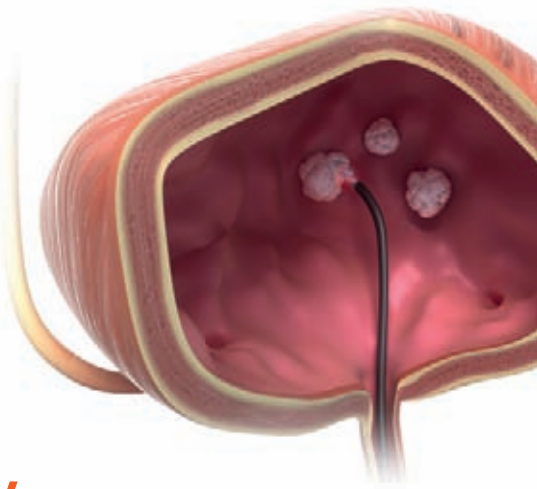
Condyloma



- Smooth and gentle laser condyloma treatment
- Smooth surface after the treatment
- No scars

Stricture

- No or very low bleeding
- Always a good view during the procedure
- Easy and comfortable handling



Tumor surgery

Our specialty fibers ensure a safe treatment of bladder tumors powered by optimized absorption in water and hemoglobin when utilizing the LEONARDO® DUAL 200 Watt or LEONARDO® DUAL 45 Watt.

Bladder tumors

The ability of simultaneous cutting and coagulation offers a simple and safe method with a minimal to non loss of blood. Different methods are possible, the standard procedure in an operating room with general/regional anesthesia or outpatient procedure which is even tolerate of high risk patient. The outpatient procedure using a flexible cystoscopy and different kinds of bare fibers does not require general/regional anesthesia and is a gentle way of treating bladder tumors. Both laser treatments for bladder tumors reduce risks for the patient and can be performed quickly.

- Outpatient procedure using flexible cystoscopy
- Tolerated with high risk patient
- Can be performed safely and effectively in the office

Partial nephrectomy

Cutting and coagulation properties of our optical fibers contribute to a successful nephron sparing surgery securing better overall renal function. Our high-tech fibers would be the fiber of choice to ensure best results. Cutting and coagulating at the same time provides minimal bleeding with a good view on the tissue. Use of our special diode lasers for (open, laparoscopic or robotic) partial nephrectomy offers benefit of no or shorter warm ischemia time with more effective tissue coagulation, hemostasis and reduced parenchymal damage.

- Less bleeding
- No need of suppressing feeding arteries – no time pressure
- Cutting and coagulating at the same time
- Laparoscopic or open procedure

LEONARDO®

Model	LEONARDO® DUAL 200	LEONARDO® DUAL 45
REF	SL980+1470nm200W	SL980+1470nm45W
Wavelength	980 nm and 1470 nm	980 nm and 1470 nm
Max. power	200 Watt (1470 nm / 40 Watt + 980 nm / 160 Watt) individually adjustable	45 Watt (1470 nm / 15 Watt + 980 nm / 30 Watt), individually adjustable
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming 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
Pulse duration /-break	0.01 – CW / 0.01 – 60 sec	0.01 – CW / 0.01 – 60 sec
Power supply	110 – 240 VAC, 50 / 60 Hz, 850 VA	110 – 240 VAC, 50 / 60 Hz, 450 VA
Dimensions (H×W×D)	approx. 20 cm × 37 cm × 26 cm	approx. 28 cm × 37 cm × 9 cm
Weight	approx. 15 kg	approx. 8.5 kg

Model	LEONARDO® Mini Dual	LEONARDO® Mini 1470 nm
REF	SL980+1470nm14W	SL1470nm12W
Power / Wavelength	10 W (980 nm) / 4 W (1470 nm)	12 W (1470 nm)
Fiber diameter	≥ 360 µm	≥ 360 µm
Aiming beam	635 nm, max. 4 mW	635 nm, max. 4 mW
Treatment mode	CW, pulse mode (optional)	CW, pulse mode (optional), ELVeS® signal
Pulse duration /-break	0.01 – 180 sec / 0.01 – 180 sec	0.01 – 180 sec / 0.01 – 180 sec
Power supply	110 – 240 VAC, 50 - 60 Hz (12 VDC @ 65 W)	110 – 240 VAC, 50 – 60 Hz (12 VDC @ 100 W)
Batteries	Li-ion Batteries	Li-ion Batteries
Dimensions (H × W × D)	6 cm × 9 cm × 21.5 cm	6 cm × 9 cm × 21.5 cm
Weight	900 g	900 g

All laser sets comprise 3 safety goggles, foot switch, interlock connector, power cord and manual in a carrying case. The LEONARDO® DUAL 45 Watt is only suitable for the treatment of vesical tumours, partial kidney resection and other low-grade applications with low wattage settings. The standard device in urology primarily used for BPH treatment and all other applications is the LEONARDO® DUAL 200 Watt. The LEONARDO® DUAL 45 is the suitable laser system for partial nephrectomy, bladder tumors, strictures, condylomas etc. The LEONARDO® Mini is the suitable laser system for bladder tumors, strictures, condylomas, etc.

LEONARDO® DUAL 200

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR INDIRECT RADIATION
CLASS 4 LASER PRODUCT
Diode-Laser 980 +/- 30 nm CW 160 W (Max.)
Diode-Laser 1470 +/- 30 nm CW 40 W (Max.)
IEC 60825-1:2007 IEC 60601-2-22:2007

VISIBLE LASER RADIATION
AVOID EYE EXPOSURE TO DIRECT RADIATION
CLASS 3R LASER PRODUCT
Diode-Laser 635 +/- 10 nm CW 4 mW (Max.)(Aiming)
Diode-Laser 532 +/- 10 nm CW 1 mW (Max.)(Aiming)
IEC 60825-1:2007 IEC 60601-2-22:2007

LEONARDO® DUAL 45

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR INDIRECT RADIATION
CLASS 4 LASER PRODUCT
Diode-Laser 980 +/- 30 nm CW 30 W (Max.)
Diode-Laser 1470 +/- 30 nm CW 15 W (Max.)
EN 60825-1:2008 EN 60601-2-22:2007

VISIBLE LASER RADIATION
AVOID EYE EXPOSURE TO DIRECT RADIATION
CLASS 3R LASER PRODUCT
Diode-Laser 635 +/- 10 nm CW 4 mW (Max.)(Aiming)
Diode-Laser 532 +/- 10 nm CW 1 mW (Max.)(Aiming)
EN 60825-1:2008 EN 60601-2-22:2007

LEONARDO Mini Dual

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR INDIRECT RADIATION
CLASS 4 LASER PRODUCT
Diode-Laser 980 +/- 30 nm CW 10 W (Max.)
Diode-Laser 1470 +/- 30 nm CW 4 W (Max.)
IEC 60825 - 1:2007 IEC 60601-2-22:2007

VISIBLE LASER RADIATION
AVOID EYE EXPOSURE TO DIRECT RADIATION
CLASS 3R LASER PRODUCT
Diode-Laser 635 +/- 10 nm CW 4 mW (Max.)(Aiming)
IEC 60825 - 1:2007 IEC 60601-2-22:2007

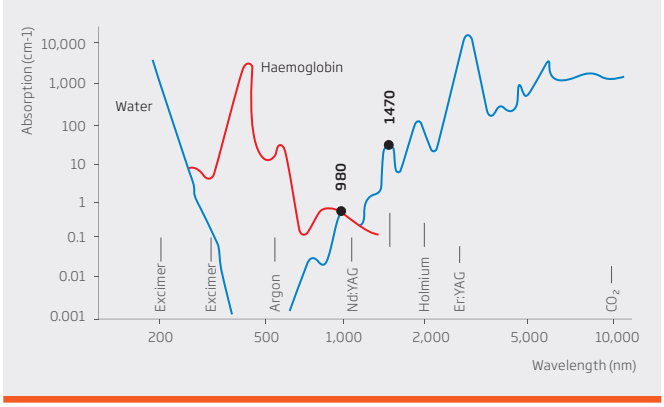
LEONARDO Mini 1470 nm

INVISIBLE LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR INDIRECT RADIATION
CLASS 4 LASER PRODUCT
Diode-Laser 1470 +/- 30 nm CW 8 W (Max.)
IEC 60825 - 1:2007 IEC 60601-2-22:2007

VISIBLE LASER RADIATION
AVOID EYE EXPOSURE TO DIRECT RADIATION
CLASS 3R LASER PRODUCT
Diode-Laser 635 +/- 10 nm CW 4 mW (Max.)(Aiming)
IEC 60825 - 1:2007 IEC 60601-2-22:2007

CE 1984

CeramOptec GmbH
Siemensstr. 44, D-53121 Bonn



LEONARDO® DUAL 200 Watt – Unique combination of two simultaneous wavelengths

LEONARDO® DUAL 200 Watt combines the wavelengths of 980 nm and 1470 nm with high absorption in H_2O and hemoglobin for multiple applications not only in urology. Wavelength of 980 nm provides high absorption in hemoglobin and is therefore well suited for applications in urology. Due to absorption properties the emitted laser beam does not affect the bladder.

Handpieces and instruments

REF	Product
500400355	Storz Laser Cystoscope Set (blue) OD 23 Fr ID 7.5 Fr, no optics, incl. external and internal sheath and obturator
400400250	XCAVATOR® Resectoscope 360° Rotating and Continues Irrigation Set OD 26 Fr, no optics
AB2731	ASAP 30° Optics Hopkins II, compatible Storz Laser Cystoscope blue and XCAVATOR® Resectoscope
400100100	Universal Dual Luer Handpiece, for ø 600–1000 µm fibers
400400110	Laparoscopic sheath 30 cm, ID ø 1.4 mm, OD ø 5 mm
400400115	Laparoscopic sheath 40 cm, ID ø 1.4 mm, OD ø 5 mm

Fibers for LEONARDO®


XCAVATOR®


TWISTER


Bare Fibers Flat Tip


Bare Fibers Ball Tip


Bare Fibers Conical Tip

REF LEONARDO®	Product LEONARDO®	Length [m]	Core ø [Fr]	AD ø [µm]/[Fr]
BPH				
503200250	XCAVATOR® Fiber	3	1.8	–
503200220	TWISTER Large Fiber	3	1.8	3100 / 9.3
503200235	TWISTER XL Fiber	3	1.8	3300 / 9.3
Other Applications				
503200744	Bare Fiber 400 µm, Flat Tip, IC	3	400/1.2	750 / 2.3
503200740	Bare Fiber 600 µm, Flat Tip, IC	2.6	1.7	860 / 2.6
503300400	Bare Fiber 1000 µm, Flat Tip, IC	2.6	2.9	1400 / 4.2
503200750	Bare Fiber 600 µm, Ball Tip, Adj. Luer, IC (1 × 6 h)	2.5	1.7	860 / 2.6
503300410	Bare Fiber 1000 µm, Ball Tip, IC	2.6	2.9	1400 / 4.2
503200741	Bare Fiber 600 µm, Conical Tip, IC	2.6	1.7	860 / 2.6
503300405	Bare Fiber 1000 µm, Conical Tip, IC	2.6	2.9	1400 / 4
Enucleation				
503200745	Bare Fiber 600 µm, Flat Tip, Adj. Luer, ID (1 × 6 h)	3	565 / 1.7	860 / 2.6
503300415	Bare Fiber 1000 µm, Flat Tip, Adj. Luer, ID (1 × 6 h)	2.6	945 / 2.9	1400 / 4

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

Accessories

REF	Product
LA1371	Laser safety goggles 950 – 110 L4 + 1470 L2 (FULL) type: earpiece
LA5199	Laser safety goggles DIR 804 – 1755 L3 (FULL), type: basket, clear
LA5165	Sticker Laser warning 20 × 20 cm
400100115	Medi Strip 0.7 / 1.2 BF 600 µm, autoclavable – Fiber stripper for Bare Fiber 600 µm
AB1323	Stripping tool for fibers 0.3 – 1 mm
AB1908	Touhy Borst adapter
AB2594	Biopsy needle (for the handpiece)
400400200	Camera Filter HPD 980 nm and 1470 nm, small, OD 24 mm*

* With high wattages (100 watt) for a good view on the screen

Fibers for holmium laser systems


Single-use Fiber


Multiple use


Side Fiber

REF	Product	Length [m]	Core ø [µm]/[Fr]	AD ø [µm]/[Fr]	Connector	NA
Single-use Fiber						
500200326	Megabeam HBFSF 230 - 253, OD 420 µm	3.1	272	420	SMA905	0.28
500200327	Megabeam HBFSF 365 - 403, OD 550 µm	3.1	365	550	SMA905	0.22 / 0.37
500200328	Megabeam HBFSF 550 - 603, OD 750 µm	3.1	550	750	SMA905	0.22 / 0.37
Multiple use						
500200789	Megabeam RHBFSF 230 / 253 - 3	3.0	272	420	SMA905	0.22 / 0.36
500200790	Megabeam RHBFSF 365 / 400 - 3	3.0	365	550	SMA905	0.22 / 0.36
500200791	Megabeam RHBFSF 550 / 605 - 3	3.0	550	750	SMA905	0.22 / 0.36
500200792	Megabeam RHBFSF 945 / 1000 - 3	3.0	945	1400	SMA905	0.22 / 0.36
Side Fiber						
500300451	Megabeam SF - 2100 - H	3.2	550	950	SMA905	0.22

All fibers are free from latex and DEHP. Our fibers are designed for single use only (unless otherwise indicated), delivered sterile for immediate use. Fibers are compatible with, but not limited to: StoneLight®, COHERENT®, Deka, LUMENIS®, Dornier MedTech and NewStarLasers systems.

Contact us

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

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bio LITEC®

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