bio LITEC®
biomedical technology

» *The gentle power of laser light providing breakthrough technology that help surgeons to treat at the same time of diagnosis* «

biolitec® in Gynaecology

The use of laser technology in gynaecology has become widespread from the early 1970's by the introduction of CO_2 lasers for the treatment of cervical erosions and other colposcopy applications. Since then, many advancements in laser technology have been made, and several other types of lasers are now available, including the latest semi-conductor diode lasers.

At the same time, the laser has become a popular instrument in laparoscopy, especially in the area of infertility. Other areas like Vagine Rejuvenation and the treatment of sexually transmitted lesions renewed interest on lasers in the field of gynaecology.

Today, the trend to perform outpatient procedures and minimally invasive treatments lead to the development of very valuable applications in »outpatient hysteroscopy« using standard diagnostic instruments to resolve minor or more complicated conditions right in the office with the help of state of the art fiber optics.

biolitec® has introduced a revolutionary laser system that together with dedicated delivery fibers optics and accessories will allow you to expand your practice in different areas of gynaecology.

bio LITEC®
biomedical technology

WHY?

SAFE

- Safer saline environment
- Contact use for tactile feedback
- Good visibility
- Rare complications

EFFECTIVE

- High success rate in outpatient setting
- Excellent haemostasis and tissue vaporisation speed
- Lower cost compared to surgery

EASY & VERSATILE

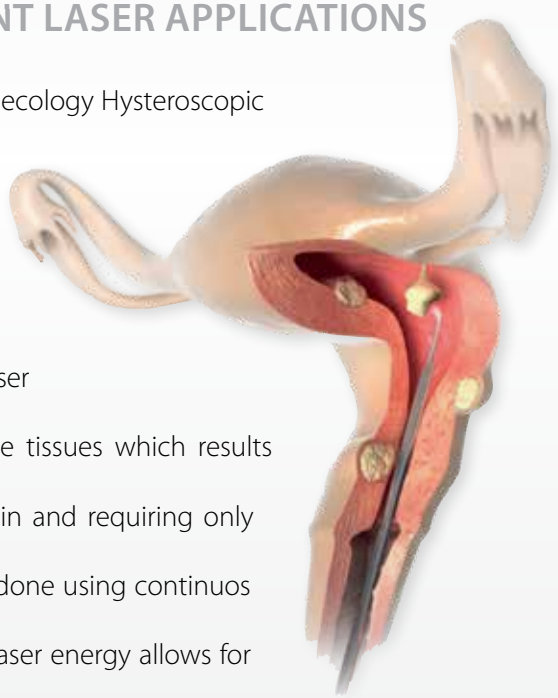
- Minimally invasive procedure easy and quick to perform
- Versatility using your standard instrumentation
- Do more in your consulting room saving time and cost for OR

PATIENT FRIENDLY

- Local or minimal anaesthesia requirements
- Virtually pain free for the patient
- Quick return to normal life

HOLA™*

*HYSTEROSCOPIC OUTPATIENT LASER APPLICATIONS



biolitec® brings you versatility of use in Gynaecology Hysteroscopic Outpatient Laser Applications (HOLA™). Using standard diagnostic hysteroscopes and specially designed fibers you can vaporise in contact polyps and myomas. Laser energy does not contract the lining muscle tissues which results in a procedure performed with minimal pain and requiring only minimal local anaesthesia. The treatment is done using continuos flow which provides a clean environment. Laser energy allows for precise control of the tissue vaporisation with no bleeding and immediately visible results.

FIBER OPTICS

high end optical fibers for safe and efficient laser energy delivery

- MyoFiber™
- PolyFiber™
- Bare Fibers: flat, conical and ball tips

COLPOSCOPY APPLICATIONS

HPV lesions

Cysts of the mucosa

Cervical intraepithelial neoplasia

Fornix and cupola pathologies

Ectopic lesions

Benign erythroplakia

APPLICATIONS

LAPAROSCOPIC LASER TREATMENTS

Adhesions

Endometriosis

Fallopian tube microsurgery

Ectopic pregnancy

Dysfunctional uterine bleeding

Resection of uterine septum

Ablation of the uterosacral ligaments

Ovarian drilling (PCOS)

Hysterectomy

… and more

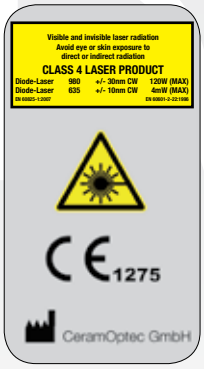
INSTRUMENTS

several single use or resusable instruments are available to facilitate your daily work

- Laparoscopic sheat for laser fibers
- Dual Luer Lock Handpiece
- Single use Handpiece with suction*

Ceralas® HPD Laser

Technical Details	Ceralas® HPD Laser
Wavelength	980nm
Power output	Model 120 Watt
Compatible Fibers	≥ 400µm Bare Fiber, PolyFiber™, MyoFiber™
Laser class	4
Pilot beam	635nm, 4mW
Treatment mode	Continuous Wave (CW), Pulse Mode
Pulse duration	Variable 0,01 – 99,9 Sec.
Power supply	110–240 VAC / 50 – 60 Hz / 660 VA
Cooling	Air cooled system
Dimensions HxWxD	approx. 30 cm x 60 cm x 30 cm
Weight	approx. 30 kg



For further product information please see our product range Gynaecology – available upon request.

Disclaimer: Products might be not available in every country

* Single Use Surgical Ltd.

biolitec® worldwide

biolitec biomedical technology GmbH
Otto-Schott-Str. 15
07745 Jena
Germany
Phone: +49 3641 519 53 0
Fax: +49 3641 519 53 33
info@biolitec.de

CeramOptec GmbH, Manufacturer
Bonn • Germany
Phone: +49 228 979 67 0

biolitec Italia SRL
Milano • Italy
Phone: +39 0228 172 400

biolitec Ltd (UK)
Cambridge - UK
Phone: +44 1487 842842

biolitec España SL (Spain)
Phone: +34 934 357 610
Phone: +34 956 891 843

biolitec SIA
Riga • Latvia
Phone: +371 653 436 46

biolitec SPb
Saint-Petersburg • Russia
Phone: +7 812 4492936

biolitec (M) Sdn. Bhd.
Petaling Jaya, Selangor D.E. • Malaysia
Phone: +603 56 32 71 28

biolitec India Pvt. Ltd.
Baroda • India
Phone: +91 265 3201106

biolitec Ltd Sti.
Istanbul • Turkey
Phone: +90 216 574 7456

biolitec Inc.
East Long Meadow, MA • USA
Phone: +1 413 5 25 06 00

biolitec B.C.I.E.L.
São Paulo • Brazil
Phone: +55 11 2093 8602

biolitec FZ LLC
Dubai • UAE
Phone: +971 44 29 85 92

bio LITEC® biomedical technology

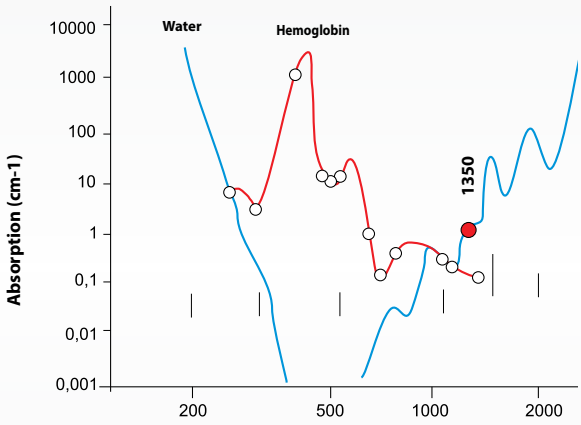
www.biolitec.com

bio LITEC®
biomedical technology

biolitec® in Thoracic Surgery

DIODE LASER TECHNOLOGY BY BIOLITEC®

1350NM – THE WAVELENGTH OF YOUR CHOICE IN THORACIC SURGERY

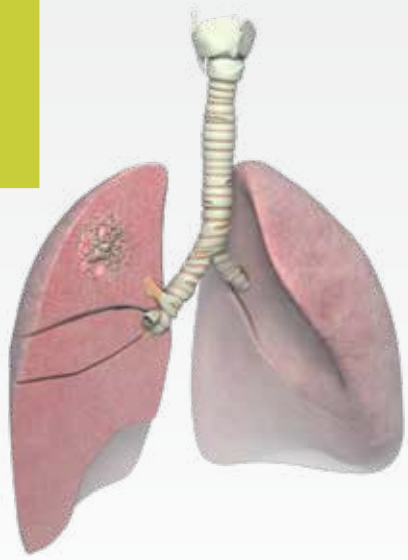


Due to the high water content and low density of of parenchymal tissue, the absorption rate of water and haemoglobin of 1350nm laser energy is proven to provide the best result in Thoracic Surgery. Due to its high absorption in water the Ceralas® HPD laser avoids accidentally firing into surrounding thoracic and bronchial areas.

The 1350nm diode laser renders high ablation rates of lung and tumor tissues while keeping a low and elastic coagulation zone to minimize post-operative side effects on lung tissue.

BENEFITS

- Cut and coagulate simultaneously
- Sealing properties provide smooth tissue surface
- Parenchyma-saving and lobe-sparing precise resection
- Deep and centrally located metastases can be exposed
- Re-treatment is possible with recurring metastases
- Precise resection of multiple metastases in only one procedure
- Best haemostasis
- Post-operative drainage can be removed shortly after treatment



LASER TECHNOLOGY IN THORACIC SURGERY

The use of laser technology in Thoracic Surgery has proved to be clinically effective and beneficial for the patient. In recent years, new developments in laser technology using state-of-the-art semiconductor diode lasers, delivered high power systems using 1350 nm wavelength which has proved to be ideal for parenchymal tissues (lung, kidney).

Following it's tradition to pioneer new minimally invasive treatments, biolitec® has combined cost effective and reliable diode lasers with high quality fiber optics and instruments to make procedures safer and more cost effective for the health care professional with an excellent standard of care for the patients.

Ceralas® HPD 1350

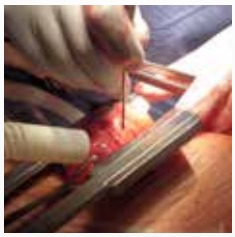
ADVANTAGES

- Multidisciplinary use for a variety of surgical applications
- Easy to set-up (no additional external cooling or high voltage requirements)
- Reliable diode technology
- Low maintenance cost
- User-friendly

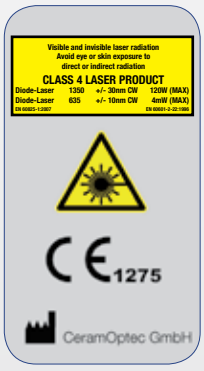
APPLICATIONS

EXAMPLES FOR OPEN SURGERY AND LASER ASSISTED VATS (VIDEO ASSISTED THORACOSCOPIC SURGERY)

- Metastasectomy
- Vaporization of tumors (carcinomas)
- Wedge excision of lung tissue
- Resection of multiple and deep lung metastases
- Recurring metastases and tumors
- Haemostasis and sealing of fistulas
- Adhesiolysis
- Tissue resection for histological examination

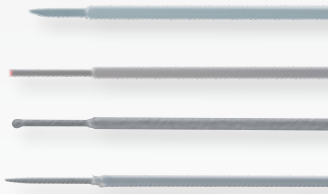


Technical Data	Ceralas® HPD 1350
Wavelength	1350nm
Power output	Model 60, 100 or 120 Watt
Fibers	> 600µm fiber
Laser class	4
Pilot beam	635nm+/- 30nm; PWM 4mW (max.)
Treatment modes	continuous wave (CW), pulse modus
Pulse duration	Variable 0,01 – 99,9 s or continuous
Power supply	110 –240 VAC / 50 – 60 Hz / 1000 VA
Cooling	Air cooled system
Dimensions HxWxD	approx. 30cm x 60cm x 42cm
Weight	approx. 38kg



ACCESSORIES

OPTICAL FIBERS



- Bare Fibers

  high quality fibers with a variety of fiber tips and diameters

  Flat, ball and conical tip ranging from 600µm to 1000µm
- Liquid-Cooled Fibers

INSTRUMENT FOR THORACOSCOPY

- Instrument for Thoracoscopy

  Special design with adapter for smoke suction device, autoclavable.

  The outer diameter of 10mm guarantees optimal suction and an unrestricted view of the operating field

- Laser Focus Handpiece*

  This handpiece for non-contact-surgery focuses the laser beam and guarantees precise cutting, vaporization and coagulation of parenchymal tissue, especially for deep metastases.

* Available soon. Compatible with Ceralas® HPD diode laser

For information on additional accessories, like such as smoke evacuation and fiber preparation please refer to the Thoracic Surgery Product Range.

biolitec® worldwide

biolitec biomedical technology GmbH
Otto-Schott-Str. 15
07745 Jena
Germany
Phone: +49 3641 519 53 0
Fax: +49 3641 519 53 33
info@biolitec.de

CeramOptec GmbH, Manufacturer
Bonn • Germany
Phone: +49 228 979 67 0

biolitec Italia SRL
Milano • Italy
Phone: +39 0228 172 400

biolitec Ltd (UK)
Cambridge - UK
Phone: +44 1487 842842

biolitec España SL (Spain)
Phone: +34 934 357 610
Phone: +34 956 891 843

biolitec SIA
Riga • Latvia
Phone: +371 653 436 46

biolitec SPb
Saint-Petersburg • Russia
Phone: +7 812 4492936

biolitec (M) Sdn. Bhd.
Petaling Jaya, Selangor D.E. • Malaysia
Phone: +603 56 32 71 28

biolitec India Pvt. Ltd.
Baroda • India
Phone: +91 265 3201106

biolitec Ltd Sti.
Istanbul • Turkey
Phone: +90 216 574 7456

biolitec Inc.
East Long Meadow, MA • USA
Phone: +1 413 5 25 06 00

biolitec B.C.I.E.L.
São Paulo • Brazil
Phone: +55 11 2093 8602

biolitec FZ LLC
Dubai • UAE
Phone: +971 44 29 85 92

bio LITEC® biomedical technology

www.biolitec.com

EVOLVE®

Simply Definitive Care for BPH

Contact Laser Vaporization for BPH

bioLITEC® biomedical technology

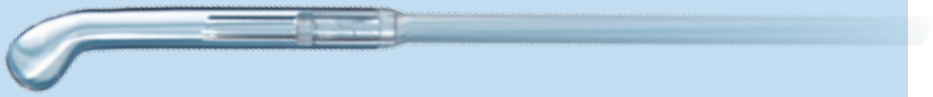
TWISTER™ EVOLVE® DUAL

Clinically Proven Care for BPH

The Ceralas® HPD laser combined with the TWISTER™ fiber from biolitec® guarantees unmatched performance in speed, safety and effectiveness.

EVOLVE® Laser treatment for BPH ensures minimal intra and post operative bleeding and an optimal preservation of surrounding tissue for a quick recovery.

biolitec®
biomedical technology



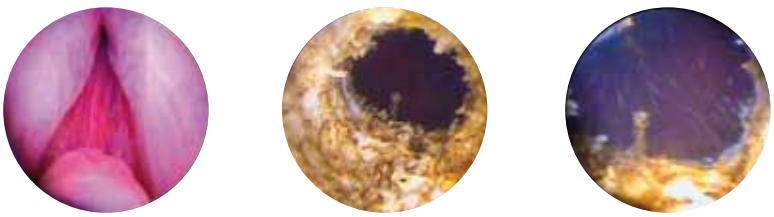
UROLOGY

TWISTER™

For effective Laser Vaporization of the Prostate

The new TWISTER™ fiber offers unmatched ablation rates and reliability.

Due to its special ability to work in contact mode, performance loss and fiber degradation are things of the past. With its patented design the TWISTER™ gives you tactile feedback of the area you want to ablate or vaporize.



before | after 6 min | after 14 min

Patient 72 yrs | Prostate 45 gr | Treatment 16 min

The ultimate Fiber for BPH

In combination with the Ceralas® Laser series the TWISTER™ fiber achieves ablation rates of 2-3 grams per minute and can reduce treatment times up to 50% as compared to side firing fibers.

Clinical tests have proven that a 40-50gr prostate can be treated in less than 15 minutes while keeping the well known hemostatic characteristics of the EVOLVE® procedures.

bioLITEC® biomedical technology

Main Features

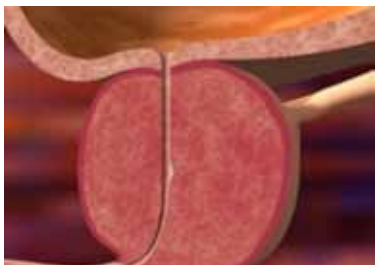
- Working in contact mode
- Long lasting with minimal degradation
- Direct and high energy delivery in contact mode
- Provides an exceptionally smooth surgical plane while vaporizing
- Compatible to the Ceralas® Laser Series

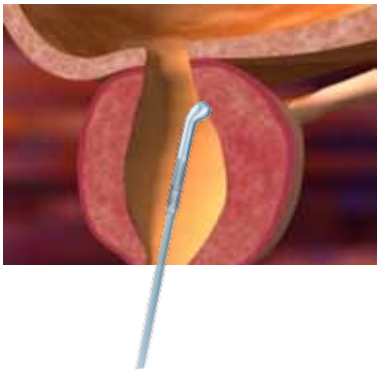
BPH FIBER

True definitive Care for BPH

TWISTER™

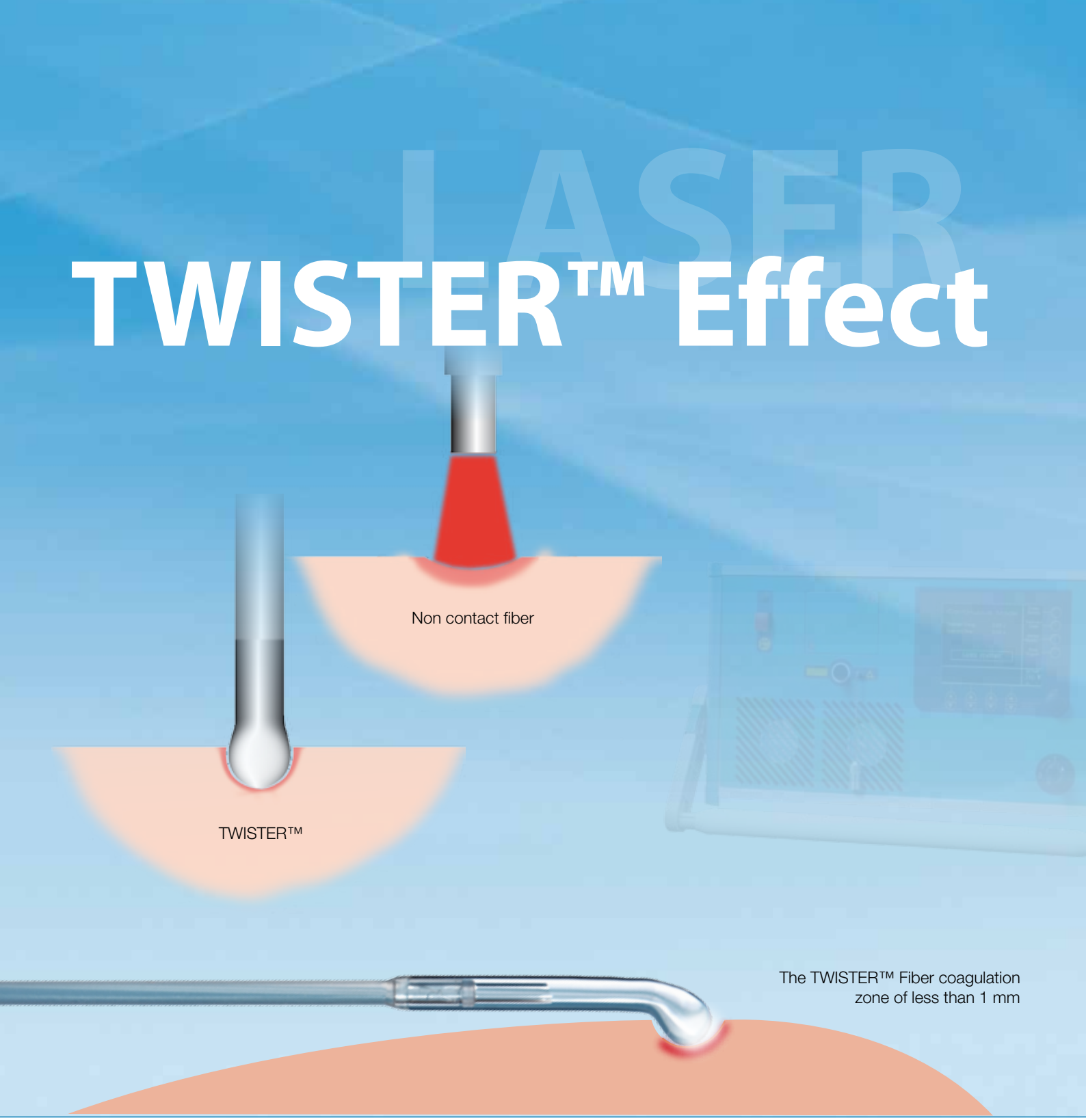
- Higher ablation rates than side and end fire fibers
- Procedure time reduced up to 50%
- No need to clean the fiber tip or take other precautions in order to maintain integrity and minimize degradation
- TWISTER™ allows greater access to the anterior portion of the prostate
- Enhanced visibility
- Increased control of the fiber tip
- For the first time the urologist will be able to utilize the traditional TUR type movements effectively with a laser





Contact Laser Vaporization for BPH

TWISTER™ Effect



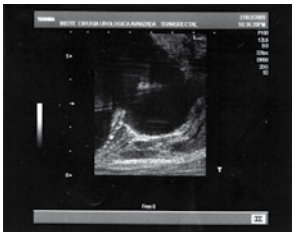
Working in Contact Mode decreases Coagulation Zone

bioLITEC® biomedical technology

Ceralas® HPD 180
Ceralas® HPD DUAL

Higher Ablation Rates than current Lasers

vorher



nachher

The procedure incorporates both our Ceralas® Laser Systems and our patented TWISTER™ fibers. The combined result is a minimally invasive procedure with enhanced patient benefits such as quick recovery, opportunity for local anesthesia and minimal post-treatment side effects or discomfort.

A better Patient Experience through a Number of advanced Features and Benefits

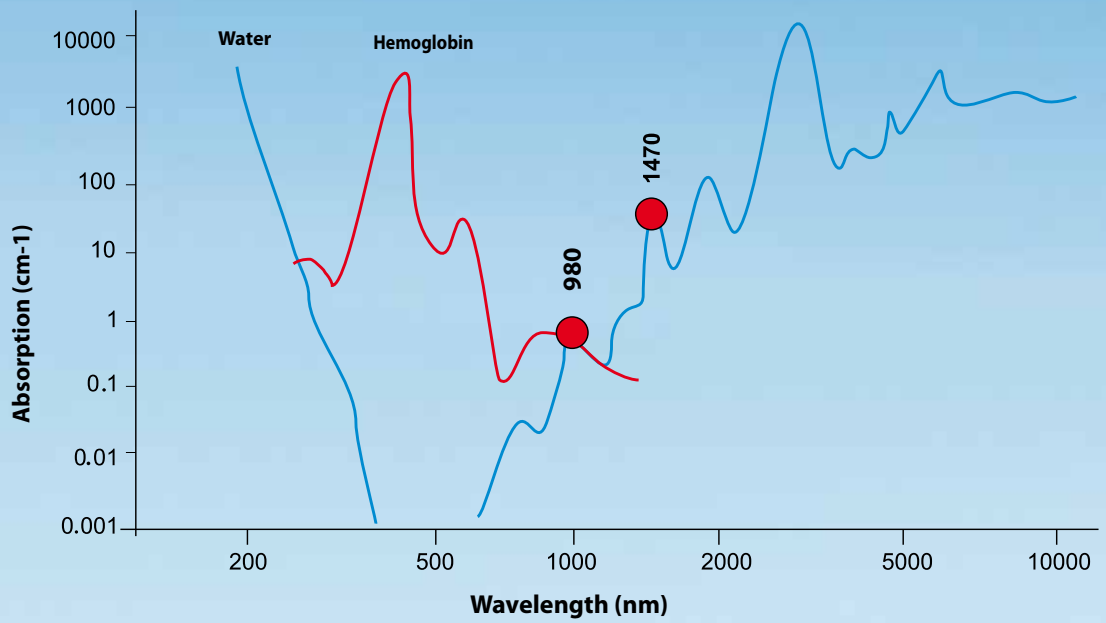
- Minimal post-treatment discomfort or side effects
- Option of local anesthesia
- Quick recovery
- Limited need for post-op catheterization
- No hospitalization post-op required

Low Risk of Complications

- Low stress on cardiovascular system
- Protective procedure to avoid retrograde ejaculation
- In most cases, there is no impact on sexual performance and continence
- Ideal for patients taking anticoagulant medication
- No blood transfusions necessary
- Ideal control of unintended bleeding

True definitive Care for BPH

EVOLVE® DUAL



Dual Wavelength

Ceralas® HPD DUAL sets a new standard of efficacy and safety.

With two parallel working wavelengths of 1470nm and 980nm the Ceralas® HPD DUAL combines the characteristics of high ablation rates with excellent hemostasis due to its combined effect of absorption in water and hemoglobin.

bioLITEC® biomedical technology

Ceralas® HPD 180

The high power Ceralas® 180 Laser achieves ablation rates of 3g/minute while keeping a low and effective coagulation zone to minimize the risk of side effects.

Due to its high absorption in water the Ceralas® HPD avoids accidently firing into the bladder and other unintentional areas.

The EVOLVE® Safety Advantage

Excellent Visualization

The wavelength of the Ceralas® diode laser is invisible to the human eye and does not impair your vision during a procedure. The resulting lack of distraction makes it easier to operate with precision in a stress-free environment.

Extremely Quiet

Our Laser System allows you to work in a quiet environment.

Auto-Memory Function

Operating the Ceralas® HPD Laser is further simplified by automatically storing the last parameter settings used, ensuring both operator and patient safety.

Automatic Fiber Type Recognition

biolitec® bi-protect System detects and protects the fiber type by maintaining secured output parameters and avoids misuse and malfunction.

Interdisciplinary Use

Due to the lasers small footprint and its light weight, the procedure can easily be incorporated into a mixed-device/mixed-procedure environment within surgical centers.

Minimal Maintenance Costs

Thanks to the long life and trouble-free characteristics of biolitec® laser diode technology, high maintenance costs are things of the past.

For unmatched Performance in Speed, Safety and Effectiveness

EVOLVE®

High Power Diode Laser Vaporization of the Prostate: Preliminary Results for Benign Prostatic Hyperplasia

Journal of Urology Volume 182, Issue 3, Pages 1078-1082 (September 2009)

Ali Erol, Kamil Cam , Ali Tekin, Omur Memik, Soner Coban, Yavuz Ozer

Materials and Methods:

A total of 47 consecutive patients were included in the study. Inclusion criteria were maximal flow rate 12 ml per second or less with voided volume 150 ml or greater, International Prostate Symptom Score 12 or greater and quality of life score 3 or greater….

Results:

„Month 3 assessment revealed that the mean ± SD International Prostate Symptom Score decreased significantly from 21.93 ± 4.88 to 10.31 ± 3.79 (p = 0.0001). The mean maximal flow rate increased significantly from 8.87 ± 2.18 to 17.51 ± 4.09 ml per second (p = 0.0001). Quality of life score changed considerably compared to baseline….

Conclusion:

The high power diode laser provided significant improvements in International Prostate Symptom Score and the maximal flow rate with low morbidity. Thus, these results of prostate vaporization with the high power diode laser, representing what is to our knowledge the first clinical study in the literature, are encouraging.

Preliminary results on selective light vaporization with the side-firing 980nm diode laser in benign prostatic hyperplasia: "an ejaculation sparing technique"

R. Leonardi Department of Urology, Clinica Basile, Catania, Italy

Prostate Cancer and Prostatic Diseases (2009), 1–4

Results:

A total of 52 consecutive patients aged 52–65 years were treated with the diode laser. Prostate volumes ranged from 30 to 60 ml; mean (s.d.) 45.14 (9.15) ml; eight patients had prostates with a median lobe. Operating times ranged from 30 to 60 min, with a mean (s.d.) of 40.75 (8.8) min. Blood loss during the procedure was minimal. There was no significant change in hemocrit.

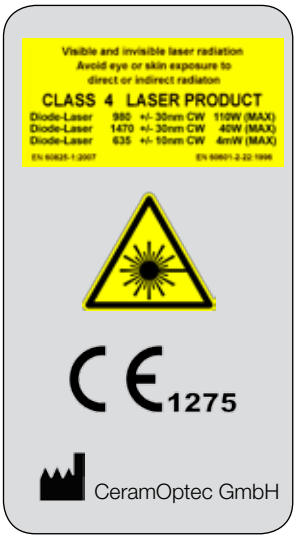
Conclusion:

This early experience in a pilot study with the 980nm diode laser seems promising in the short-term with good outcome and a low rate of complications. There is also good possibility of preservation of anterograde ejaculation with the technique described. Long-term outcome is being monitored.

EVOLVE® is clinically proven

bioLITEC® biomedical technology

True definitive Care for BPH



Fiber

Article No.	Ref.	Article Description	Manufacturer
FiTwisterC1	501200200	Twister™ Fiber	CeramOptec GmbH
FiTwisterLargeC1	501200220	Twister™ Large	CeramOptec GmbH
FiTwisterSlimC1	501200210	Twister™ Slim Fiber	CeramOptec GmbH

Laser

Technical Specifications	Ceralas® HPD
Wavelength	980nm and/ or 1470nm
Power	5 – 300 Watt
Fiber diameter	400 – 600µm
Aiming Beam	635 nm, 4 mW, intensity can be configured
Treatment mode	CW, Pulse Mode
Pulsduration / -pause	0,01 – 99,9 sec
Power supply	110 -240 VAC; 50-60 HZ
Dimensions HxWxD (cm)	30 x 60 x 30
Weight	approx. 30 kg

Ceralas® HPD Diode Laser

biolitec® worldwide

biolitec biomedical technology GmbH, Distributor
Otto-Schott-Str. 15 · 07745 Jena · Germany
Phone: +49 3641 519 53 0
Fax: +49 3641 519 53 33

CeramOptec GmbH, Manufacturer
Siemensstr. 44 · 53121 Bonn · Germany
Phone: +49 228 979 67 0
Fax: +49 228 979 67 99

biolitec Italia SRL
Via Monza 133 · 20129 Milano · Italy
Phone: +39 0228 172 400
Fax: +39 0228 172 29

biolitec SIA
Kaniera iela 10a · Riga 1063 · Latvia
Phone: +371 653 436 46
Fax: +371 653 076 78

biolitec SPb
Babushkina st., 36, b.1
Saint-Petersburg, 192171 · Russia
Phone: +7 812 4492936
Fax: +7 812 4493752

biolitec (M) Sdn. Bhd.
No.18, Jalan PJS. 7/21 · Brandar Sunway
46150 Petaling Jaya, Selangor D.E. · Malaysia
Phone: +603 56 32 71 28
Fax: +603 56 38 01 28

biolitec India Pvt. Ltd.
302B, 3rd Floor, Gold Tower, Residency Road
Bangalore 560025 · India
Phone: +91 80 2211 4955
Fax: +91 80 2211 4954

biolitec Ltd Sti.
Eski Uskudar yolu caddesi, Akay apartmanı · No:6 d:3
34752 Atasehir-Istanbul · Turkey
Phone: +90 216 574 7456
Fax: +90 216 574 7476

biolitec Inc.
515 A Shaker Road
East Long Meadow, MA 01028 · USA
Phone: +1 413 5 25 06 00
Fax: +1 413 5 25 06 11

biolitec B.C.I.E.L.
Rua Antonio de Barros, 2391 · Tatuapé
São Paulo, 03401-001 · Brazil
Phone: +55 11 2093 8602
Fax: +55 11 2093 8602

biolitec FZ LLC
B/P 49 Unit 306 · P.O. Box 505072
Dubai Healthcare City · Dubai · UAE
Phone: +971 44 29 85 92
Fax: +971 44 29 85 91

bio LITEC® biomedical technology

www.biolitec.com

biolitec AG
Otto-Schott-Str. 15 · 07745 Jena, Germany
Phone: +49 3641 519 53 0 · Fax: +49 3641 519 53 33
E-Mail: info@biolitec.de · http://www.biolitec.com