

EVOLVE™ IN PLDD

*The innovative microsurgical solution
for percutaneous Laser Disc Decompression
and Laser Denervation*



Application fields:

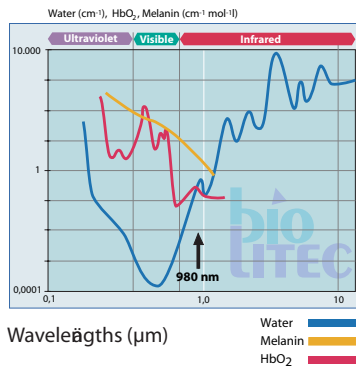
- **Cortained herniated lumbar discs**
- **Herniated cervical discs**
- **Laser Denervation for chronic pain at facette, shoulder, hip, elbow**
- **Further neurosurgical applications**

EVOLVE™

The technological evolution for a new dimension in laser microsurgery.

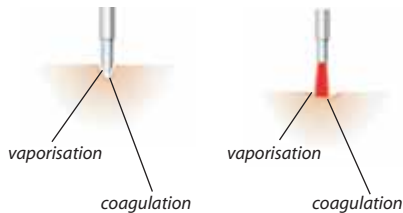
EVOLVE™, designed innovatively safe, effective and flexible use in all surgical disciplines, and provides a range of mini- invasive and micro- invasive solutions to broaden your therapeutic options.

Absorption spectrum



contact mode

non-contact mode



Tissue interaction

The **EVOLVE™ 980** laser platform is based on the absorption characteristics of the 980 nm wavelength which, thanks to its interaction with H₂O and haemoglobin, enables procedures to be carried out safely and accurately, especially in proximity of delicate anatomical structures.

The wide range of laser fibres available in various sizes (200 to 1,000 microns) and shapes (tapered, flat, spherical), combined with the exclusive and patented kits for **EVOLVE™** procedures, enables incisions, vaporization and coagulation to be performed selectively and accurately on the basis of the clinician's therapeutic needs.

Microsurgical precision is guaranteed by the technical characteristics of the special **EVOLVE™** laser fibres, which allow surgical effectiveness, ease of handling and maximum safety.

Advantages of EVOLVE™

- Microsurgery precision
- Tactile feedback from the laser fibre
- Good haemostasis
- Optimal visualization of the operating field
- Less postoperative nursing time

EVOLVE™ PLDD-Diode laser system

The **EVOLVE™** system from Biolitec incorporates a range of user-friendly features:

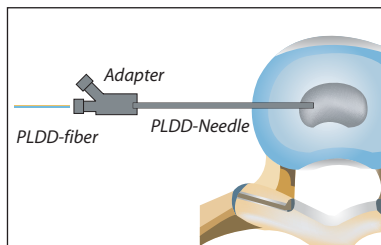
- Dedicated software for surgical applications
- Unique 220 Mm core fibre enables use in micro-surgery
- Quick to set up and easy to use
- Low running costs
- Reliable diode technology with no routine maintenance required
- Compact, portable and ideal for use in either a clinical or operating theatre
- Operates from a standard electrical outlet
- Attractive extended warranty options available



Technical Specifications

Wavelength	980 nm
Laser Power	15 Watt or 25 Watt (7,5 W using 220 µm laser fiber)
Aiming Beam	635 nm, mW
Operating mode	CW-mode, pulse-mode, DermaMode
Pulse Duration / Interval	0.01 -99, 9 sec
Dimensions	18 cm X 22 cm X 37 cm (15 W & 25 W System) 18 cm X 44 cm X 37 cm (50W)
Weight	Ca. 7, 5 kg (15 W & 25 W system) 16 kg (50 W)

▶ EVOLVE™ in percutaneous Laser Disc Decompression (PLDD)



Disc decompression achieved through denaturation of the nucleus by means of laser energy is an internally accepted method for elective treatment in specific pathological conditions.

EVOLVE™ has innovative features both in terms of the specific and effective absorption of the wavelength (980 nm) and in terms of the use of specific Biolitec PLDD Kits containing the special 220 micron fibre for micro-invasive access (21 G) to the disc area.

Mode of percutaneous laser disc decompression:

- Denaturation and shrinking of the disc tissue
- Obliteration of sensible, planning nerves inside the disc
- Suppression of pain transmitters in the disc
- Stabilization of the fibrous ring

Advantages:

- Excellent interaction with tissues
- Micro-invasive percutaneous access
- Limited discomfort/pain for the patient during the PLDD surgery
- Local anaesthesia
- Quick patient recovery to normal activities
- No scars
- Repeatable procedure

Indications:

- Contained herniated lumbar discs
- Herniated cervical discs

Accessories:

- Exclusive PLDD kits with flexible 220 micron (21G) and 360 micron (18G) laser fibres
- PLDD kit with the unique 600 micron (18G) fibre for its use with EVOLVE™ 50

▶ Kit PLDD



PLDD kit	Part Number	Description	Needle
PLDD 220/21	500200872	220 µm PLDD Fiber	21 G
		21 G / 15cm introduction needle	
		PLDD Adapter (2-way)	
PLDD 360/18	500200873	360 µm PLDD fiber	18 G
		18 G / 15cm introduction needle	
		PLDD Adapter (2-way)	
PLDD 600/18	500200962	360 µm PLDD fiber	21 G
		18 G / 15cm introduction needle	
		PLDD Adapter (2-way)	
PLDD 600/18	500200962	600 µm PLDD fiber	18 G
		18 G / 15cm introduction needle	
		PLDD Adapter (2-way)	

► Why biolitec ...

biolitec is an established and leading manufacturer and supplier of diode lasers, optical fibers and accessories for application in a wide range of surgical specialities. The **biolitec** group includes the CeramOptec brand of medical lasers and fibers and is also involved in the development and production of photosensitizers for use in photodynamic therapy (PDT). **biolitec** is unique in providing all core competencies for PDT – lasers, fibers and photosensitizers.

► Training and After-Sales Support

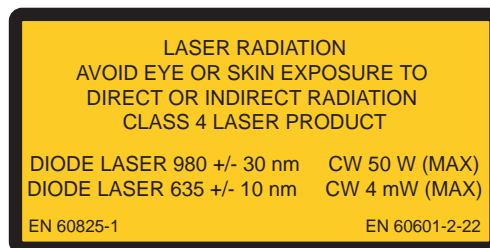
biolitec products are sold around the world through our network of local sales offices or by exclusive distributors. We have a strong commitment to provide clinician training in the safe and successful use of our products either in the form of user workshops or one to one training at a **biolitec** reference center.

Your local sales office or distributor is your first point of contact for after-sales support and service to enable you to get the maximum benefit and return on investment from your laser system.

► Your biolitec point of contact

International enquiries	Bonn	Phone	+49 (0) 2 28/9 79 67-0
		E-Mail	info@biolitec.de
Germany	Jena	Phone	+49 (0) 36 41/5 08-5 50
		E-Mail	info@biolitec.de
	Bonn	Phone	+49 (0) 2 28/9 79 67-0
Italy		Phone	+39 02 45 48 53 70
		E-Mail	info@biolitec.it
Malaysia		Phone	+603/56 32 71 28
		E-Mail	info@biolitec.com.my
USA		Phone	+1 413 525 06 00
		E-Mail	info@biolitec.com

Local biolitec contact:



Manufacturer:
CeramOptec GmbH
Siemensstrasse 44
53121 Bonn
Germany
A company of
biolitec group
Ph: +49 228 979670

www.biolitec.com

**bio
LITEC**
biomedical technology

Biolitec AG
Winzerlaer Straße 2a
D-07745 Jena, Germany
Phone +49 (0) 36 41/5 08-5 50
Fax +49 (0) 36 41/5 08-5 99
E-Mail info@biolitec.de
www.biolitec.com

All medical devices are supplied in conformance with the Medical Devices Directive 93/42/EEC. CeramOptec GmbH products are manufactured in conformance with ISO 9001. CeramOptec is a company of biolitec group.

© biolitec group 2005

biolitec is a Registered Trade Mark of biolitec group. biolitec reserves the right to change specifications without prior notice.