

Applications

- Phlebology
- Proctology



Features



New laser with a unique laser wavelength of 1.94 μm .

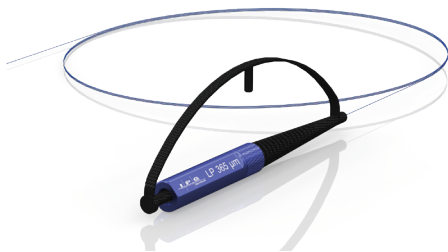


Designed for minimally invasive treatment of varicose veins by endovenous laser coagulation (EVLT).



EVLT using a wavelength of 1.94 μm is a new generation for endovenous laser coagulation.

Laser uses Surgical Fiber and Surgical Fiber Radial

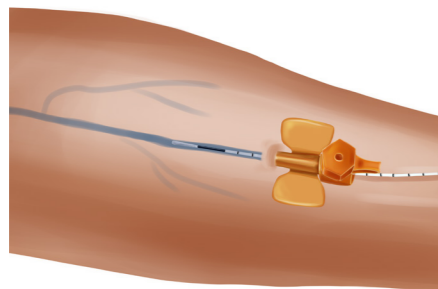


"Surgical Fiber" is used for dissection, vaporization and coagulation of tissues

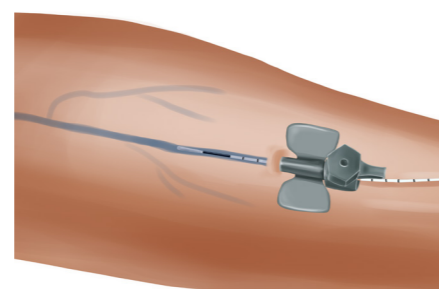


"Surgical Fiber" Radial is used for EVLT

SURGICAL FIBER RADIAL IS AVAILABLE IN TWO VARIANTS:



"Surgical Fiber" R550 core diameter 550 µm, used with a 14 G catheter



"Surgical Fiber" R365 core diameter 365 µm, used with a 16 G catheter

ADVANTAGES OF 1.94 µm IN EVLT

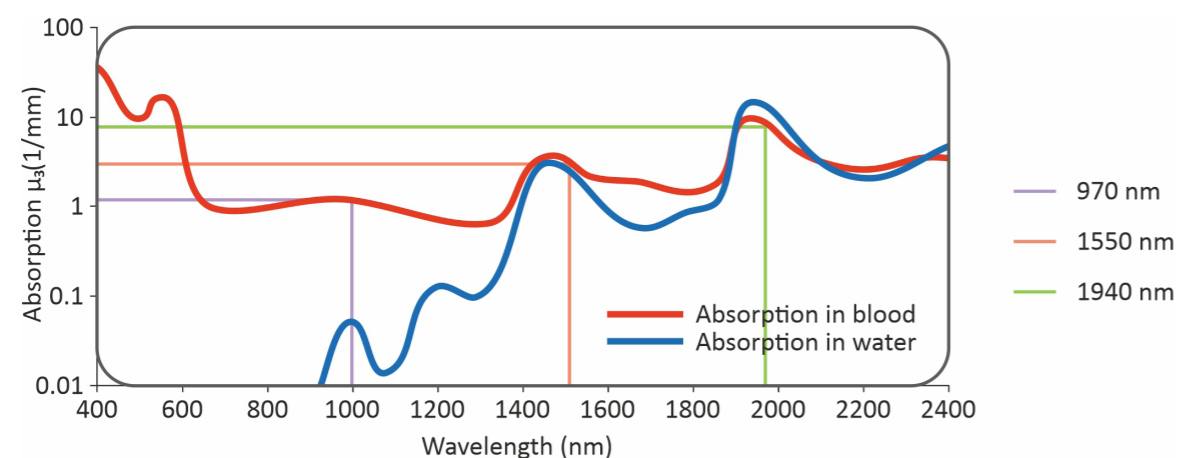
Compared to 1.47 µm, results in a reduction in the duration of postoperative pain and the use of pain medication¹.

- ▶ Effective coagulation of trunks of great saphenous veins at lower energy parameters in comparison with devices at a wavelength of 1.47/1.55 µm.
- ▶ Working at low energy parameters reduces the probability of failure of the fiber, and increases its resource in order to use it on several veins in one go.
- ▶ The possibility of performing EVLT in superficially located veins and varicose veins due to the absence of overheating of adjacent tissues due to the small depth of radiation penetration of 1.94 microns into the tissue.

ADVANTAGES OF 1.94 µm IN PROCTOLOGY

- ▶ Operations on an outpatient basis
- ▶ Reduced level and duration of pain
- ▶ Reducing the risk of bleeding both during surgery and in the postoperative period
- ▶ The speed of the operation
- ▶ Reducing the period of disability

Graph of the dependence of the radiation absorption coefficient on the wavelength². Due to the high absorption of 1.94 µm radiation in water, the processes of heat transfer and convection during EVLT at lower energies occur more efficiently.



¹ Mendes-Pinto, D., Bastianetto, P., Cavalcanti Braga Lyra, L., Kikuchi, R., & Kabnick, L. (2016). Endovenous laser ablation of the great saphenous vein comparing 1920-nm and 1470-nm diode laser. *International angiology* : a journal of the International Union of Angiology, 35(6), 599–604.

² Roggan A., Bindig U., Wäsche W., & Zgoda F. (2003). Action mechanisms of laser radiation in biological tissues, *Applied Laser Medicine*. Ch. I-3.1. Pg. 87.

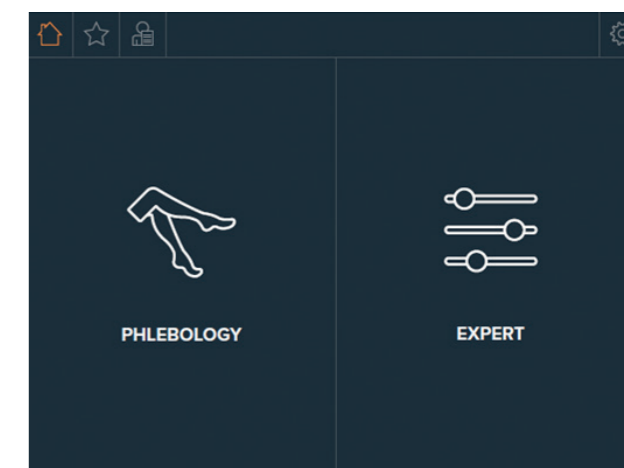
INTUITIVE INTERFACE

The intuitive interface allows easy to navigate in all sections of the menu.

The large touch screen makes it possible quickly and comfortably adjust parameters laser radiation, as well as brightness pilot beam.

The "Save procedure" option allows memorize the parameters of laser radiation for fast loading of the required mode of operation.

Automatic counter for energy and time informs user about the particular amount of energy transferred to the patient as well as about time used for the procedure.



MAIN MENU



«PHLEBOLOGY» MODE

The user is offered a recommended fiber extraction speed depending on laser parameters which are used.

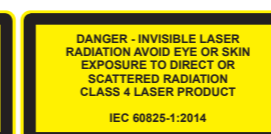
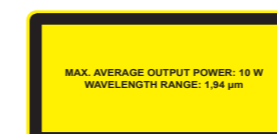


«EXPERT» MODE

The user can choose continuous or pulse mode of operation, set the parameters of power, pulse duration and pause.

SPECIFICATIONS

Wavelength, µm	1,94
Max power, w	10
Mode	Continuous, pulsed
Pulse duration, ms	2 ... 1000
Screen type	Touch
Fiber diameter, µm	365 ... 550
Dimensions (h x w x l), mm	253 × 310 × 419
Weight, kg	10





WORLD LEADER IN LASER INDUSTRY

IRE-Polus is one of the leaders in the field of fiber lasers and amplifiers, as well as devices and systems based on them. Fiber lasers have the highest performance, reliability, and practicality at a lower cost of ownership than other types of lasers.

Relying on professionalism and many years of experience in laser equipment manufacturing, "IRE-Polus" Ltd. sells medical laser devices and surgical fibers for a wide range of applications.

During the development of new medical laser devices, IRE-Polus goes through all stages: not only the device manufacturing, but also creation of methods for its application, conducting both in-vitro researches in its own research laboratories, and clinical research together with the leading clinical centers.



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