AR PHOTONICCS®

Pulse TFL

New Era Of Urology Management

Thulium

Fiber Laser System

www.photoniccs.com

Applications

Lithotripsy

- Fragmentation
- Dusting
- Popcorning

Soft tissues

- BPH enucleation *(Available in 65w)*
- BPH vaporization *(Available in 65w)*
- Resection of bladder tumor
- Vaporization of bladder and upper urinary tract tumors
- Stricture dissection

Features

Compact design vs. solid-state lasers, easy to carry, fits in small spaces.

Lowest Maintenance cost

No special connection needed plugs directly into a standard power socket.

Efficient air cooling and reduced weight

- Unique Super Pulsed Mode with 65W power for efficient stone treatment.
- 1940 nm wavelength : Optimal water absorption for precise results.
- Minimal retropulsion : Effective for all stone types.
- Faster recovery and shorter hospital stays, enhancing quality of life.
- Green pilot laser ensures high visibility in blood-rich tissues.

Pulse TFL – for the Most Effective Lithotripsy in theUrinary Tract and Kidneys.

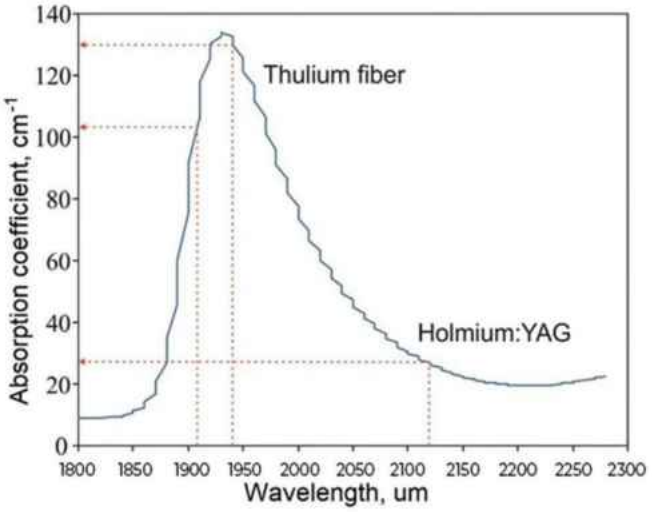
Pulse TFL is a reliable, accurate, efficient, and safe laser system designed for lithotripsy.

The laser energy, delivered at the 1940 nm wavelength in Super Pulsed mode, ensures highly effective lithotripsy of urinary tract and kidney stones.

Advantages

High Efficiency

The unique wavelength of 1940 nm corresponds to the maximum abortion spectrum of Water, resulting in highest efficiency but lower risk.



Outstanding Performance

- Wide range of pulse duration and frequency adjustments.
- High reliability with an almost unlimited laser source lifespan.
- Compact and lightweight design.
- Highly visible green pilot beam, spot-on blood-saturated tissue.
- Ergonomic design for ease of use.
- No need for regular maintenance.

Functionality

- Capability to store personalised user settings
- Easy-to-use interface with a large, vibrant colour display
- Touchscreen functionality for smooth operation
- Case-saving option for convenient data handling

Accuracy of Exposure

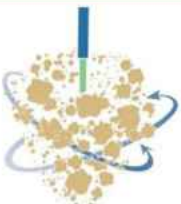
- A portable and streamlined laser system designed for easy integration into an endoscope rack
- Reduced penetration depth of emission into soft tissue guarantees optimal precision
- Well-suited for use with endoscopic impact control technology

Dual Pedal Foot Switch

Orange and blue pedals facilitate easy switching, for instance, between "Power Fragmentation" and "Popcorning." An extra standby function enables the user to activate or deactivate the laser as required.

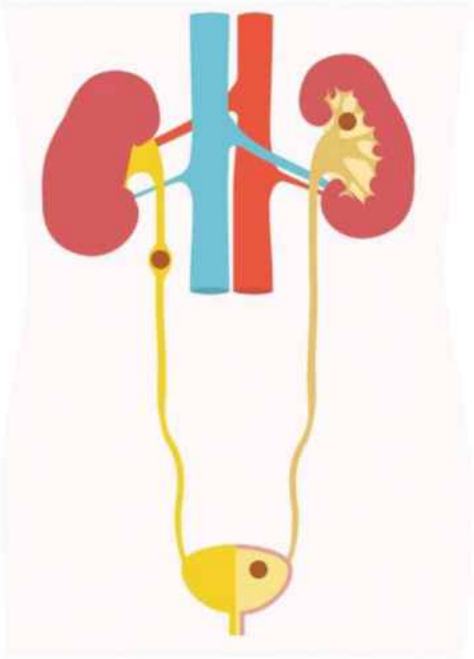
Fragmentation

Dusting



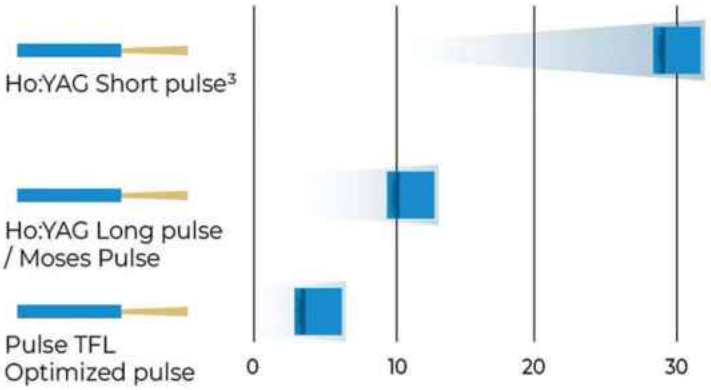
Popcorning

Lithotripsy



No Retropulsion

1 J x 15 Hz =15 W



Stone retropulsion after 1 second of laser exposure, mm

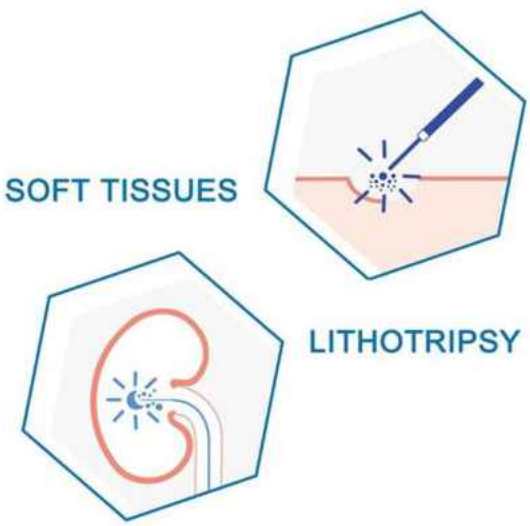
No retropulsion effect during stone fragmentation due to a special optimized pulse

Twice the Speed in Lithotripsy

An emission with a unique wavelength of 1940 nm corresponds to the same local maximum in the water absorption spectrum.

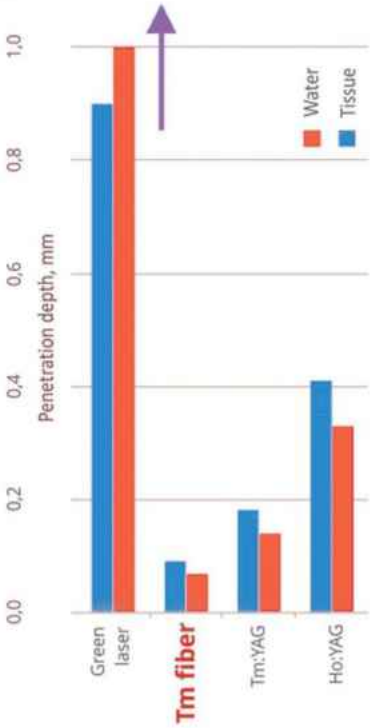
Four Times Higher Water Absorption

A notable characteristic of radiation at a wavelength of 1940 nm is its fourfold higher absorption in water, ensuring maximum efficiency in lithotripsy.



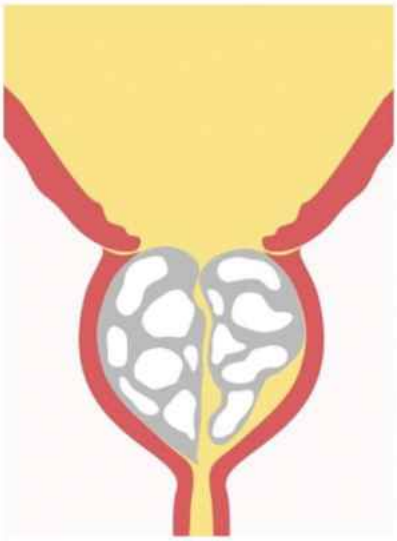
Soft Tissues

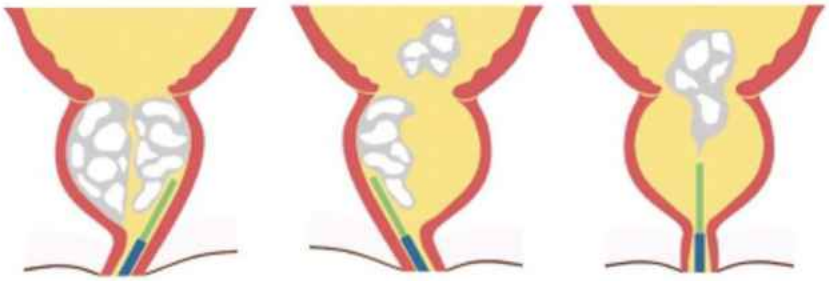
A comparison of penetration depths for lasers with various wavelengths indicates that thulium fiber lasers exhibit minimal penetration depth, making them more controllable and safer for surgical procedures in urology.



Radiation at a wavelength of 1940 nm penetrates in tissues to a depth of approximately 100 μm^3, which is 4.5 times less than that of Ho:YAG lasers. This characteristic enables maximum controlled removal of biological tissue down to the prostate capsule. Additionally, this wavelength offers excellent hemostatic properties, minimizing blood loss during soft tissue surgeries. Consequently, adapting to, BPH laser enucleation becomes straightforward and efficient.

BPH Enucleation





- Air-Cooling System
- Standard Plug
- Lower Noise
- High Performance

Technical Specifications

Model Name	PulseTFL65
Average power	Up to 65 WATTS
Repetition rate	1 Hz-2500 Hz
Energy per pulse	0.02 J-7J
Wavelength	1940 nm
Pulse Duration	Adjustable
Peak Pluse Power	500W in Super Pulse Mode
Laser Type	Thulium Fiber Laser
Beam delivery	200, 276, 365, 550, 800, and 1000 µm Fiber
Aiming beam	532 nm (adjustable <5 mW) -Class 3R
Activation	Double footswitch
Cooling	Air cooling system
Electrical requirements	100-240 Vac; 50/60 Hz: 1000VA
Screen Size & Resolution	7.8 Inch & 1280×800
Weight	35 kg

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