

Pulse TFL

New Era Of
Urology Management



Thulium

Fiber Laser System

Applications

Lithotripsy

- Fragmentation
- Dusting
- Popcorning

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 40W 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 the Urinary 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.

We don't just build **Technology**
We build **Confidence**



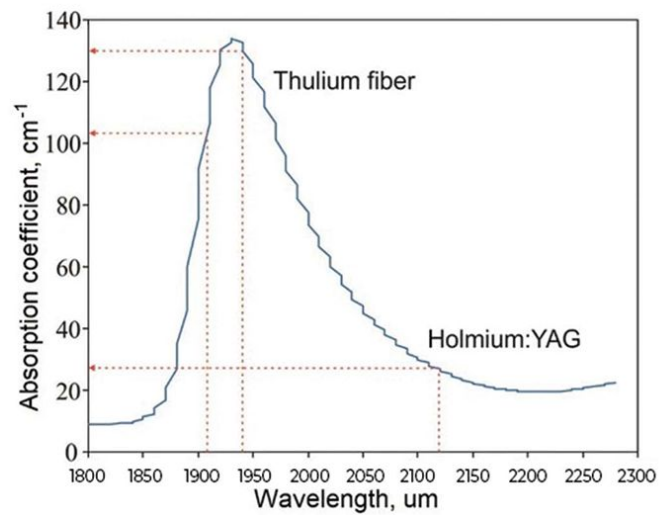
Advantages

High Efficiency

The unique wavelength of 1940 nm corresponds to the maximum absorption 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

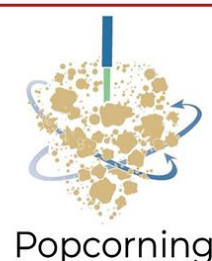
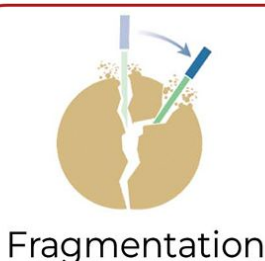
Accuracy of Exposure

- 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

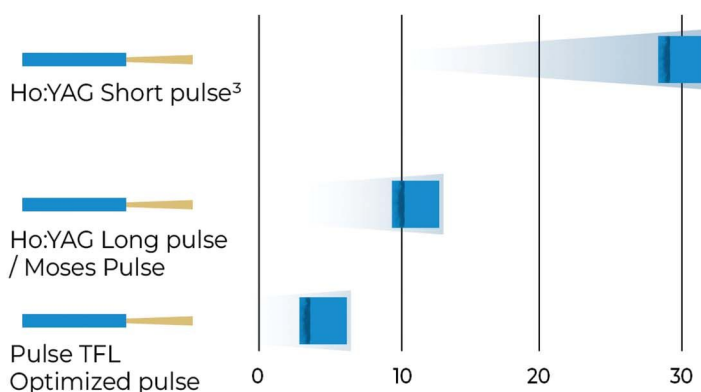
Orange and blue pedals facilitate easy switching, for instance, between "Power Fragmentation" and "Popcorning." An extra standby function enables the user to activate or deactivate the laser as required.



Lithotripsy

No Retropulsion

$$1 \text{ J} \times 15 \text{ Hz} = 15 \text{ W}$$



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.



FIBER CORE

Delivers full energy to the target

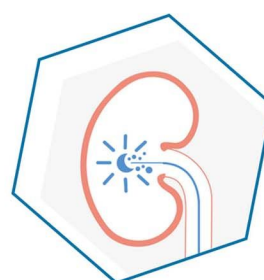
CLADDING

Maintains radiation energy within the core

JACKET

Helps in recognizing fiber position and improves probe stiffness

SOFT TISSUES



LITHOTRIPSY

Technical Specifications

Model Name	PulseTFL40
Average power	Up to 40 WATTS
Repetition rate	1 Hz-1500 Hz
Energy per pulse	0.02 J-5 J
Wavelength	1940 nm
Pulse Duration	Adjustable
Peak Pluse Power	500W in 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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