

Advanced
Surgical Holmium Laser



Power Shining in Extremely Compact Body

Applications

LASER LITHOTRIPSY

Calculi in the bladder, ureter or kidney are fragmented by rapid evaporation of residual water inside the stone upon absorption of the laser radiation. At the long pulse setting the ARPhotonics Holmium laser does not apply external kinetic force, thus preventing the calculi from being pushed further inside the ureter.

The ARPhotonics Flexible reusable laser fiber insertion sheath provides protection of the flexible scope against damage during insertion of the laser fiber. Please refer to our laser fiber brochure.

TREATMENT OF BPH/PROSTATE

ARPhotonics Holmium lasers offer different treatment modalities for BPH. Depending on the surgical situation and the delivery system used the adenoma may be resected, enucleated (HOLEP) or ablated (HoLAP). All treatment modalities benefit from the excellent haemostatic properties of the ARPhotonics Holmium laser which is provided by the long pulse duration in the tissue mode. The patient benefits from the bloodless laser treatment, early catheter removal, immediate symptomatic improvement, better urinary flow and a shorter hospital stay. Resected tissue is available for subsequent biopsy.

OPENING OF STRICTURES

Strictures in the ureter and the urethra are easily opened-virtually without any bleeding

TREATMENT OF BLADDER TUMOURS

Tumor Warwick incisions are quick and easy. Excellent vision is provided during the entirely bloodless procedure.

BLADDER NECK INCISIONS

The low penetration of the ARPhotonics Holmium laser makes it the ideal instrument for the treatment of bladder tumours. A special aiming beam setting allows the usage together with photo-dynamic-diagnosis under blue light illumination.

ABLATION OF CONDYLOMATA

Condylomata are precisely ablated by the ARPhotonics Holmium laser. The superficial tissue effect excises the tissue to the desired depth providing excellent haemostasis. Shallow necrosis enables immediate healing.

UROLOGY

Laser lithotripsy
HOLEP HOLAP
Opening of strictures
Excision of bladder tumours
Condylomata

SPINE

Minimally invasive spine surgery (MISS) Foraminoplasty
Discectomy PLDD

ENT

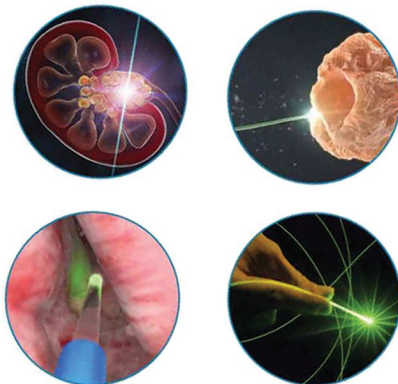
Endonasal surgery
Larynx surgery Ablation of nasal and laryngeal polyps

SPINAL SURGERY

ARPhotonics Holmium laser offers a variety of treatment options for cervical and lower back pain patients. The ARPhotonics Holmium laser ablates soft tissue such as disk material and hard tissue such as bone and osteophytes in Laser Foraminoplasty. In Laser Discectomy it removes residual nucleus pulposus material in preparation for stabilisations and fusions. The thermal load to the surrounding tissue is controlled by the shallow penetration of the Holmium laser radiation and the adjustable pulse duration.

ENT

Stenosis of the nose is treated by trimming of turbinates and the nasal septum, Nasal and laryngeal polyps can easily be removed. All of these procedures can be performed as outpatient treatments. Due to the narrow zone of necrosis, postoperative pain is significantly reduced compared to other laser techniques like Nd:YAG and Diode lasers and conventional procedures.



AR Photonics Portable Series

40 Watts Holmium: YAG For Lithotripsy

AR Photonics series surgical laser is a desktop device based on Holmium (Ho:YAG) laser with emission at 2100 nm wavelength. This wavelength is highly absorbed by water and biological tissue providing excellent cutting, ablation and hemostatic properties. The limited radiation penetration (0.3-0.4 mm) results in minimal damages to surrounding tissue. The Potent XP series surgical laser automatically adjusts the emission settings based on fiber diameter and selected mode.



Dual Pedal Foot Switch

Orange and blue pedals can be used to easily switch for example between "Power Fragmentation" and "Popcoming". An additional standby function allows the user to activate/deactivate the laser as needed.

Uses

ARPhotonics Series holmium laser system is the ideal solution for stone and BPH treatment in urology as well as other interventions across a range of specialties:

- › **Urology**
- › **Arthroscopy**
- › **Dermatology**
- › **Thoracic Surgery**
- › **Gynecology**
- › **Gastroenterology**
- › **General Surgery**
- › **Orthopedics**
- › **Oral Surgery**
- › **ENT**
- › **Vascular Surgery**
- › **Plastic Surgery**

Laser Fiber

ARPhotonics Laser System can be operated with a large range of fibers, depending on the application, flexibility and settings required.



STANDARD FIBERS

For general use in stone and soft tissue treatments



BALL TIP FIBERS

Strongly simplify the insertion in already bent scopes



PERFORMANCE FIBERS

Designed to deliver great power even with small fibers



GASTRO FIBERS

Specifically designed for the fragmentation of gallstones

Technical Data

| | | |
|---------------------------------|---|-----------|
| Output (max.) | 30 Watts | 40 Watts |
| Pulse frequency | 25 Hz | 30 Hz |
| Pulse energy | 0.1-4.0 J | 0.1-6.0 J |
| Laser type | Holmium laser (Ho:YAG) | |
| Wavelength | 2.1μm | |
| Pulse duration | 50~1500μs (Long, Medium and Short pulse modes) | |
| Aiming beam,green | 532nm,<1mW,can be fine-tuned | |
| Cooling system | Internal cooling system | |
| Main supply | AC 110V+10%,220V±22V / 50Hz+1Hz | |
| Fiber Length | 3M | |
| Weight | 14 Kg | |
| Holmium laser fiber | 200μm,275μm,365μm,550μm,800μm, 1000μm | |
| Numerical aperture (NA) | 0,12 0,02 0,22 ± 0,02 0,28 ± 0,02 or customised | |
| Operating temperature | -190° to +350°C | |
| Core diameter | Available from 25 μm to 2000 μm | |
| Standard core / cladding ratios | 1: 1,041 1,06 1: 1,11: 1,15 1: 1,2 1: 1,25 1: 1,4 or customised | |
| Standard proofstest | 100 kpsi (nylon, ETFE, acrylate cladding) 70 kpsi (polyimide cladding) | |
| Minimum bending radius | 50 x cladding diameter (short-term mechanical stress) 150 x cladding diameter (during use with high laser power) | |

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