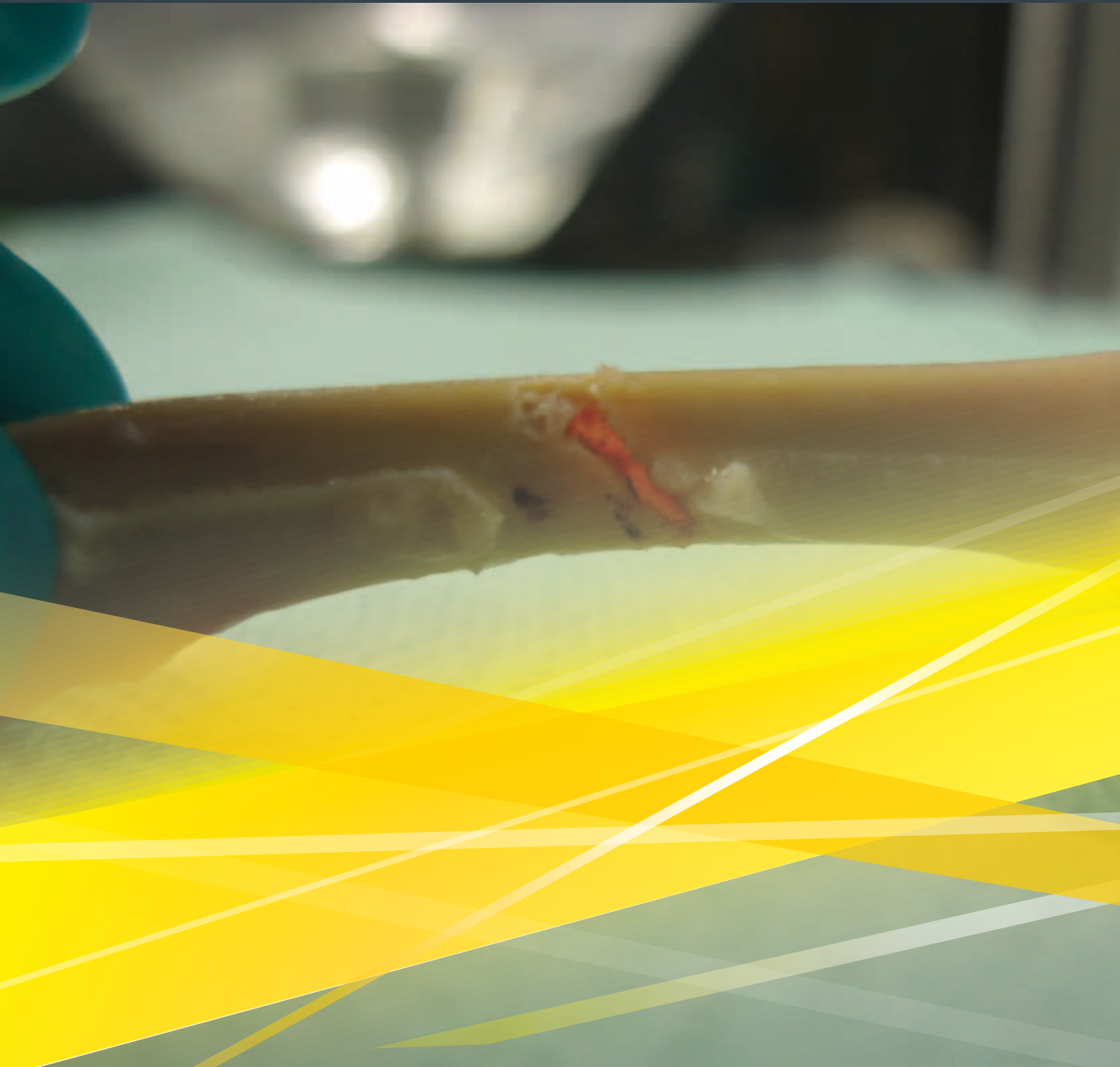


Medical Laser  
Innovative Laser Systems



## MEDICAL APPLICATIONS



## 3m.i.k.r.o.n.™

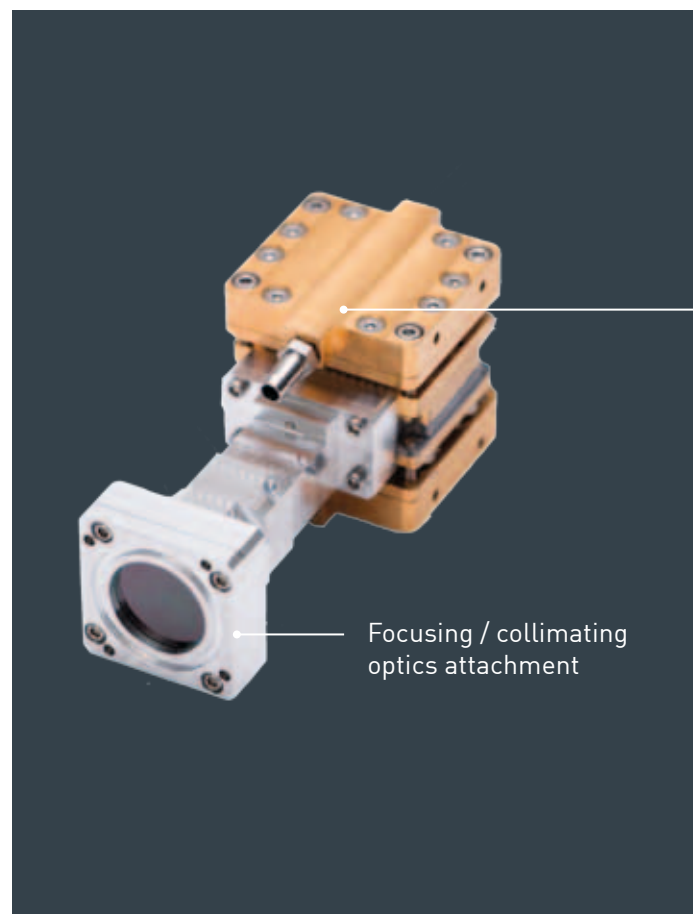
### High-power, diode-pumped laser technology

3m.i.k.r.o.n.™ is the technology platform for compact, efficient, fast and reliable lasers for a wide range of potential applications in the field of medical engineering. It enables a new generation of innovative mid-IR lasers based on diode-pumped solid-state technology, operating at wavelengths of 2 to 3  $\mu\text{m}$  using different types of laser crystals (e.g. Er:YAG, Er:YSGG, Er:YLF, Tm:YAG).

Compared to mechanical tools, traditional laser technologies (e.g. flash lamp pumped Er:YAG or CTH laser) and RF technology (e.g. CO<sub>2</sub> laser), 3m.i.k.r.o.n.™ offers several benefits within the particular field of application.

#### BENEFITS

- . Combines benefits of traditional Er:YAG and CO<sub>2</sub> lasers
- . Reduced down-time period, faster healing
- . Less invasive
- . Easier to use
- . Less heating of surrounding tissue
- . Precise treatments (cutting width < 100  $\mu\text{m}$ )
- . Controllable thermal impact by laser parameters
- . Cold ablation (cut like a scalpel)
- . Hot ablation (coagulation) by stacked pulses
- . Selective ablation
- . Maintains healthy tooth structure
- . Minor lateral thermal damage
- . No unwanted vibrations to the patient
- . Short operation time
- . Optimized for soft and hard tissue treatment



Focusing / collimating optics attachment