



HANDPIECE WITH INTEGRATED MINI SCANNER FOR LASER-BASED THERAPY SYSTEMS

Technology

The Fraunhofer ILT has developed a compact handpiece for laser-based therapy systems using a novel mini scanner technology. Thanks to the modular construction, laser radiation can be guided to the handpiece through fibers as well as via articulated mirror arms. Since the mini scanner is integrated into the system, ergonomics and a large range of functions can be combined in the handpiece. A programmable electronic interface is deployed to implement scan patterns for use in dermatology and laser surgery.

The Fraunhofer ILT utilizes the most modern laser manufacturing processes with which tailored designs according to customer demands can be implemented for the mini scanner, without the scanner having to pass through complicated process lines. This concerns the scanner geometry as well as the coatings adapted to the radiation source to be applied.

Applications

- soft-tissue surgery
- coagulation of vascular lesions
- removal of moles and tattoos
- smoothing of wrinkles, skin regeneration

Specifications

scan field diameter	25 mm
scanning speed	≤ 8000 mm/s
optical opening	10 mm
damage threshold	≤ 10 J/cm ²
weight	290 g
wavelengths	customized

Contact

Dr. Achim Lenenbach
Telephone +49 241 8906-124
achim.lenenbach@ilt.fraunhofer.de

Lazar Bocharov M.Sc.
Telephone +49 241 8906-431
lazar.bocharov@ilt.fraunhofer.de

1 Handpiece with integrated 2D mini scanner.

2 Irradiation of skin with selectable scan patterns, adapted to the treatment mode.