SUPERLASERS FOR THE REAL WORLD

LASER INDUCED DAMAGE THRESHOLD (LIDT) MEASUREMENT

Laser Induced Damage Threshold (LIDT) is a key parameter for the optical components of high power laser systems and their beam distribution systems. The LIDT value indicates the maximum amount of energy (power) that a surface can withstand before damage occurs. Substantial effort worldwide is invested into the development of materials and components with superior optical performance. LIDT is at present the major limiting factor for increasing the performance of laser systems and their applications.

hilase

EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
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MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

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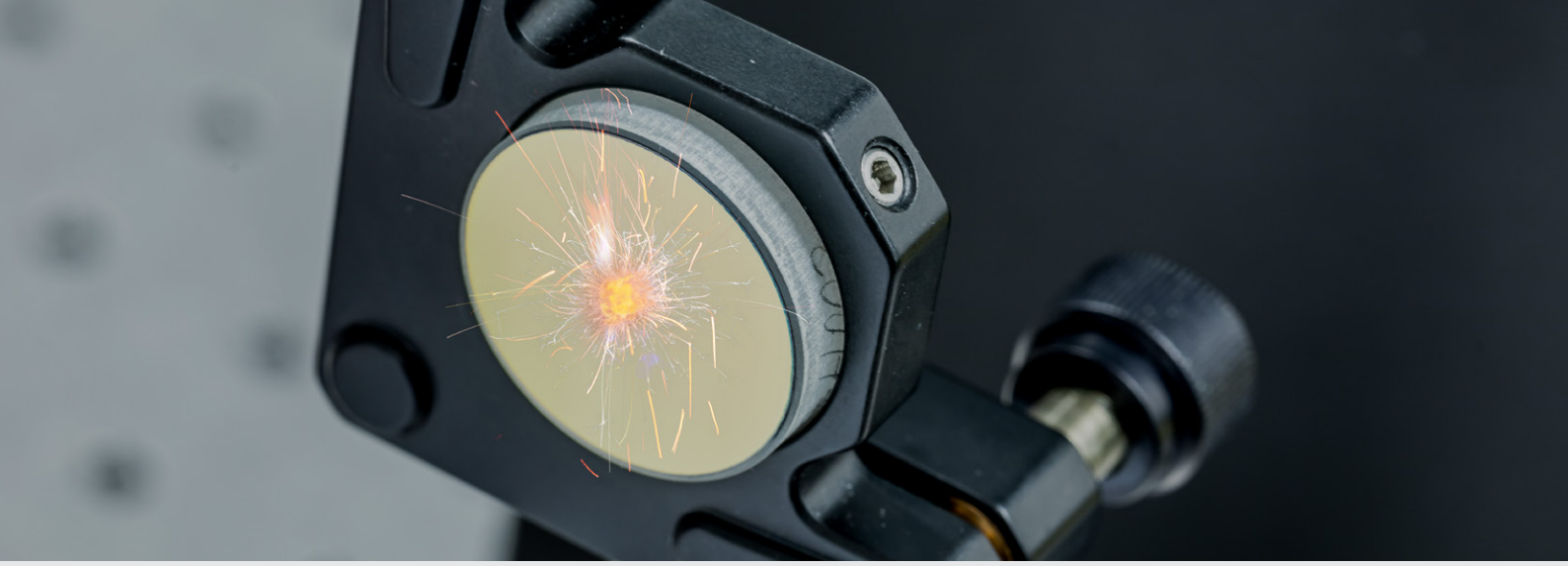
FZÚ



FEATURES / ADVANTAGES

- Picosecond pulsed laser @1030 nm, <3 ps, 1 kHz rep. rate, up to 100 mJ energy in pulse
- Nanosecond pulsed laser @ 1030 nm, 10 ns, 10 Hz rep. rate, up to 5 J energy in pulse
- Samples with surface areas up to 100 x 100 mm and 1.5 kg weight
- Variable spot sizes from 0.4 mm to 15 mm
- Advanced on-site and ex-post samples monitoring and analysis – 1k fps 1.3 Mpix camera, beam profilers, confocal microscope

SPECIFICATIONS

- Standard ISO 21253 for LIDT testing
- Tests operated in a class 10,000 (FED STD 209E) ISO 7 (ISO 14644-1. ISO 14698) clean laboratory
- Vacuum and cryo-temperatures available

APPLICATIONS

- Damage threshold testing of various components and materials
- High-power optical components development
- Defect identification
- Large scale optics testing
- Material analysis

OFFERED SERVICES

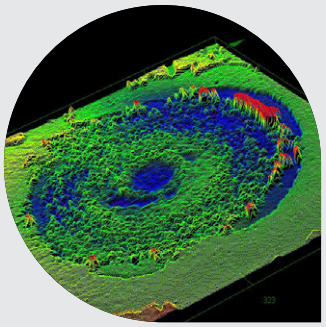
- Damage threshold testing of various components and materials
- High-power optical components development
- Defect identification
- Large scale optics testing
- Material analysis

For more information please contact: solutions@hilase.cz

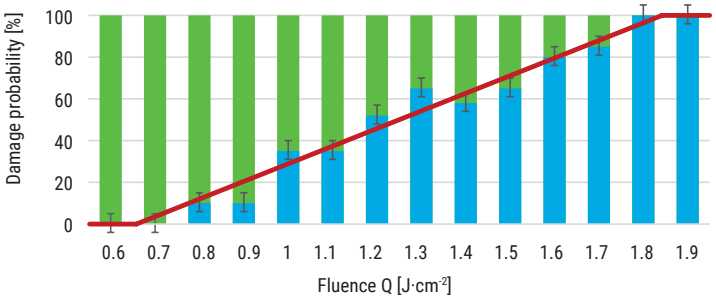
LIDT STATION – OPTICS ALIGNING

DAMAGED SURFACE OF TESTED MIRROR

NOMARSKI MICROSCOPE IMAGE OF DAMAGED SITES



3D VISUALIZATION OF DAMAGED SITE



DAMAGE PROBABILITY CURVE

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