

LIDT - LASER INDUCED DAMAGE THRESHOLD



FEATURES

Ultrashort pulses in vacuum

High repetition rate

Already tested and in use in ELI Beamlines

BENEFITS

Higher accuracy of results in the femtosecond and picosecond regime with respect to real operating conditions

Allows testing of the effects of ageing and long-term stress

The system has been used for internal research extensively and provides comparative results

APPLICATIONS

- Laser facilities
- Manufactures of optical components
- Manufactures of laser safety products

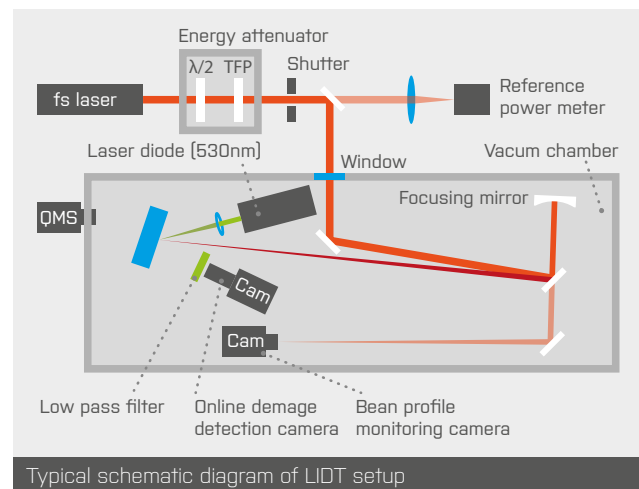
HOW DOES IT WORK?

The LIDT station is used for determining the laser induced damage threshold (LIDT) of optical components down to the femtosecond regime. The damages are verified offline by Normaski microscopy and the setup can be situated in high vacuum as all the components are optimized for low outgassing.



SPECIFICATION

800 nm	130 fs, single shot to 1 kHz, < 2 mJ 45 fs, single shot to 10 Hz < 0.9 J 50 fs, single shot to 1 kHz < 0.8 mJ ~15 fs, 1 kHz few mJ
1060 nm (tunable)	80-130 fs, single shot to 1 kHz, < 0.3 mJ
1030 nm	3 ps, 1 kHz, < 30 mJ 3 ns, 20 Hz, 50 mJ (from 1.4.2019) 0,5 ns, 1 kHz, 150 mJ (from 1.4.2019)
515 nm	< 3 ps, 1 kHz, < 15m J



ABOUT US

ELI Beamlines is an international user facility that is involved in development and application of multiple highly progressive laser systems including the most powerful systems in the world.

Our in-house development of high power lasers led to some new and unique engineering solutions for many highly demanding applications, where commercial solutions satisfying our stringent requirements did not exist.

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