

AVAILABLE LIDT TESTING CONDITIONS

Most popular standard LIDT testing conditions with fast turnaround

Pulse range	Laser	Effective pulse duration ⁽¹⁾	Wavelengths, nm	Pulse repetition rate, Hz
CW	CW Ytterbium (Yb) Fiber Laser	30 s	1070	Single shot
ns	Nd:YAG (single mode)	10 ns 5 ns 5 ns	1064 532 355	100
ps-fs	Yb:KGW (Kerr lens mode-lock)	Tunable 180 fs - 12 ps ⁽²⁾	1030 ⁽³⁾ 515 343	50000
fs	Ti:Sapphire ⁽³⁾ (Kerr lens mode-lock)	50 fs	800	100 - 1000

Available irradiation conditions (check for availability)

CW Ytterbium (Yb) Fiber Laser	Tunable: 1 ms - 30 s ⁽⁴⁾	1070	Single shot
Nd:YAG (single-and multi-mode)	10 ns 5 ns 5 ns 4 ns 4 ns	1064 532 355 266 213	1 - 100
Nd:YAG OPO (single mode)	~ 4 ns	710 - 810 1500 - 2100	1 - 100 ⁽²⁾
Yb:KGW (Kerr lens mode-lock)	Tunable 180 fs - 12 ps ⁽²⁾	1030 ⁽³⁾ 515 343 258	Tunable 1 - 200000 ⁽²⁾
Ti:Sapphire ⁽³⁾ (Kerr lens mode-lock)	Tunable 45 fs - 12 ps ⁽²⁾ 45 fs - 1 ps 45 fs - 500 fs	800 400 266	Tunable 10, 100, 1000
Ti:Sapphire OPO (Kerr lens mode-lock)	~ 40 - 80 fs	250 - 2500 ⁽⁵⁾	Tunable 10, 100, 1000 ⁽²⁾

(1) effective pulse duration measured at Full Width Half Maximum

(2) maximum energy and pulse duration depend on the selected wavelength

(3) non-compressed pulses are available on demand (~135 ps) @1030 nm

(4) limited due to safety reasons by 1kW of average power (for higher powers 1s is used by default): longer pulse durations are available on demand

(5) pulse duration at wavelengths <500 nm and >1600 nm is relative between 40 - 80 fs (please ask for availability at specific wavelength).

(6) at the CW regime currently only: 1) random polarization is available 2) the smallest available AOI is 12°

Available for all pulsed laser irradiation conditions.⁽⁶⁾ Polarization State: Circular/Linear (S, P); Different AOI: 0 - 75°; Test Environment: Air (room temperature), Vacuum (down to 10⁻⁶ mbar).

- **Fast turnaround** (with 24 hours) upon request
- **Typical turnaround** 3-5 business days on standard testing configurations (ns regime: 1064nm, 532nm, 355nm; fs regime: 1030nm, 532nm, 343nm)
- Within 10 business days 95% of all non-standard orders

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AVAILABLE TESTING PROCEDURES

ISO 1-on-1



The 1-on-1 test is a relatively simple technique for a "non-fatigue" LIDT determination.

ISO S-on-1



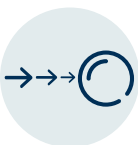
The S-on-1 test is the most common LIDT test. It is a multipulse procedure, which considers optics aging (fatigue) effects.

ISO Pass/Fail (Damage certification)



Pass/Fail test is designed to separate good and bad optics at predefined laser fluence.

R-on-1



The R-on-1 is a non-standard test. It provides rough information about LIDT for surface limited samples (e.g. fibers, small crystals).

Raster scan



The raster scan technique helps to detect very rare defects, which could be missed by applying the S-on-1 test.

Custom LIDT test



The custom LIDT test is designed to provide the maximum information about LIDT in specific cases.