

Coming
July 2022

Applications

Ophthalmology

Material microprocess-
ing

Stainless steel black
and colour marking

Volume modification of
transparent materials

Optogenetics

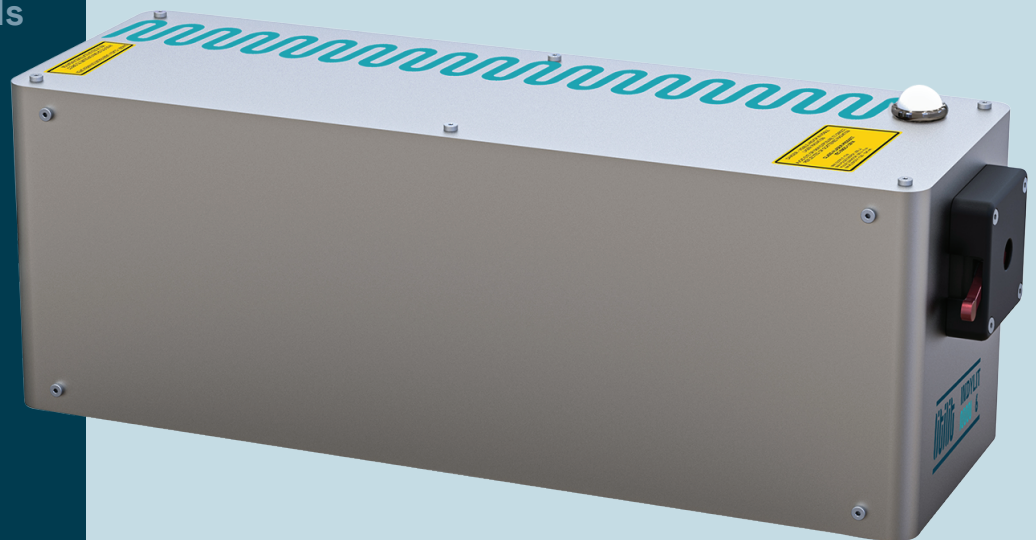
FBG writing

Scientific research

lilit

INDYLIT 6

Femtosecond laser for industrial and medical applications
1030nm, 350fs, 6W, 20uJ



Features

Very compact and
efficient

Excelent beam quality

Maintenance-free &
turn-key

Passively air cooled

Adjustable pulse
duration and power

Best value on the market

Punching above its weight

For many applications the speed of femtosecond pulse processing is limited not by laser power but by sample constrains. In these cases Indylit 6 laser offers great value - very short (and widely tuneable) femtosecond pulse duration, perfect beam quality, excellent long term stability of optical parameters. All this is delivered in ultracompact passively air cooled fiber platform designed to withstand many years of operation.



Distributor



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Specifications

	Indylit 6
Central wavelength	1030 ± 2 nm
Average power	>6 W @ 300 kHz
Max. pulse energy ¹⁾	>20 µJ
Pulse duration	<350 fs
Pulse duration tunability	350 fs - 10 ps
Pulse repetition rate ²⁾	10 kHz - 300 kHz
Pulse picker	integrated
Triggering mode	Pulse picker control via TTL gate
Burst length	1..10 pulses
Max. energy in burst	>60 µJ
Power attenuation ³⁾	100 - 0.1%
Beam quality	M ² <1.2
Beam circularity ⁴⁾	>0.9
Beam diameter (at 1/e ² level)	1.5 ± 0.5 mm
Beam divergence (full angle)	< 1 mrad
Beam pointing (pk-to-pk) ⁵⁾	< 50 µrad
Beam pointing vs-temp. (pk-to pk)	< 20 µrad/°C
Pulse Energy Stability (RMS) ⁶⁾	<1.0 %
Power Stability (RMS) ⁷⁾	<1.0 %
Warm-up time (cold start)	<10 min

Warm-up time (warm start)	<1 min
Laser control interface	CAN, USB
Operating voltage	100...240 V AC, 47...63 Hz
Average power consumption (after warm-up)	<200 W
Operating temperature	15 – 35 °C
Humidity	non condensing
Transportation/storage temperature	-20 – +70 °C
Dimensions: Laser head (LxWxH) Control unit (WxDxH)	375 x 130 x 150 mm 449 x 368 x 140 mm
Umbilical length	3 ± 0.3 m
Colling: Laser head Control unit	air (passive) forced air (fans)

Footnote

- ¹⁾ Please refer to the power and energy vs. pulse repetition rate curves for typical values.
- ²⁾ Higher repetition rates are available on request
- ³⁾ Attenuation can be controlled by a few different methods: a) via PC user interface, b) by CAN register, c) by analog input (0-1V, real time).
- ⁴⁾ Defined as the worst case ellipticity along the z-scan ($\pm 5 \times L_{\text{Rayleigh}}$) of the beam.
- ⁵⁾ At constant environmental temperature (temperature stability within $\pm 1^\circ\text{C}$) after 30 min. from the start.
- ⁶⁾ Measured within 10s time interval .
- ⁷⁾ Measured within a 24h time interval with integration time of <5s. Environment temperature stability should be within $\pm 2^\circ\text{C}$.
- ⁸⁾ Indylit lasers are class 4 laser products. Avoid eye or skin exposure to direct or scattered laser light.
- ⁹⁾ Technology is protected by international patents: LT6261 (B); JP6276471 (B2); US10038297 (B2); EP3178137; DK3178137 (T3); CN106575849 (B); PL3178137 (T3); LT6639 (B); LT2020 563

