

Femtosecond Microjoule Class Fiber Laser FemtoLux 3

Preliminary



FEATURES

- ▶ Up to 3 W output power
- ▶ 300 fs ... 5 ps tunable pulse duration
- ▶ Up to 2 μJ /pulse and 10 μJ /burst
- ▶ Excellent beam quality $M^2 < 1.2$
- ▶ Individual pulse control
- ▶ Burst shape control
- ▶ Passive cooling (convective)
- ▶ 24/7 operation

APPLICATIONS

- ▶ Marking and structuring
- ▶ Micromachining
- ▶ Ophthalmologic surgery
- ▶ Photopolymerization
- ▶ Biological Imaging
- ▶ Pumping femtosecond OPO/OPA

SPECIFICATIONS ¹⁾

Model	FemtoLux3
Central wavelength	1030 nm
Min pulse duration	< 300 fs
Pulse duration control	300 fs ... 5 ps
Average output power	3 W
M^2	< 1.2
Laser repetition rate (PRR _L) ²⁾	1 – 5 MHz
Pulse repetition rate after pulse picker ³⁾	$\text{PRR} = \text{PRR}_L / N$, $N=1, 2, 3, \dots, 10^6$
Pulse energy	2 μJ
Burst mode ⁴⁾	up to 10 pulses
Burst energy	up to 10 μJ
Burst shape control	internal ⁵⁾ or external ⁶⁾
Laser head dimensions	400 × 267 × 105 mm
Control unit dimensions	483 × 436 × 140 mm (19" rack)
Cooling	passive (convective)

¹⁾ Due to continuous improvement all specifications are subject to change without notice.

²⁾ When pulse picker is set to transmit every pulse.

³⁾ At fixed laser repetition rate.

⁴⁾ Time interval between the pulses is about 20 ns.

⁵⁾ Using provided software for burst shape control (slow control).

⁶⁾ By user provided signal using analog input (real time).

