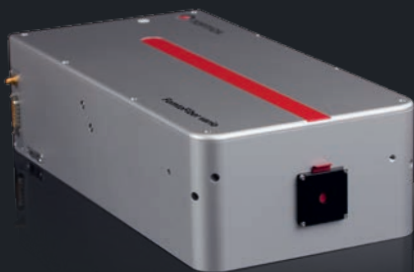


# excite.

Compact, turn-key, and optimized for 2-Photon Optogenetics

## 1030 nm

### Femtosecond Fiber Laser



### Excite more than 200 neurons simultaneously!

Integrated AOM  
and GDD

FemtoFiber  
vario

SLM



learn more...



[www.toptica.com/lasers4neuroscience](http://www.toptica.com/lasers4neuroscience)

# FemtoFiber vario 1030 HP



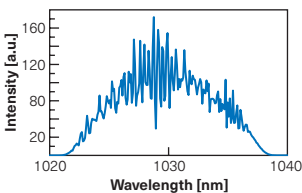
DANGER – INVISIBLE LASER RADIATION,  
AVOID EYE OR SKIN EXPOSURE TO DIRECT  
OR SCATTERED RADIATION, CLASS 4 LASER  
PRODUCT, EN60825-1:2014

Laser Specifications*	
Center wavelength	1030 nm
Pulse duration	< 300 fs (typ. 250 fs)
Average output power	> 8 W
Repetition rate	0.02 .. 10 MHz (tunable)
Dispersion precompensation (GDD)	-40 000 .. +1000 fs <sup>2</sup>
Integrated power control	> 1 MHz AOM modulation bandwidth
Beam shape	TEM <sub>00</sub> , M <sup>2</sup> < 1.2
Beam divergence	< 1 mrad
Beam size (1/e <sup>2</sup> )	Ø 2.3 (typ.)
Linear polarization	> 100:1 (> 20 dB), vertical
Output coupling	Free space
Dimensions laser head	105 x 189 x 380 mm <sup>3</sup> (H x W x D)
Weight laser head	< 10 kg

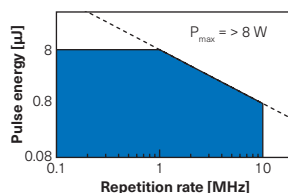
\*) Subject to change without notice

## Key Features

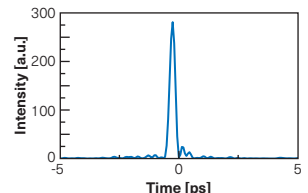
- Powerful - excite more than 200 neurons simultaneously
- Fully turn-key with integrated AOM and GDD
- No noise-stress for animals thanks to fully air-cooled design
- Compact laser design saving valuable table space
- Low cost of ownership using robust & reliable fiber-laser technology



Typical emission spectrum (linear).



Maximum pulse energy as function of repetition rate.



Typical retrieved pulse shape .