LightWire FP10 / FP100 FP100CHI

Compact Picosecond Fiber Lasers

FEATURES

- *2 ps or 8 ps pulse duration*
- *1064 nm or 1030 nm output wavelength*
- *30 MHz repetition rate*
- *Up to 60 mW output power*
- *Spectral bandwidth close to transform limit*

APPLICATIONS

- *Seeding of solid state and fiber amplifiers (e.g. Nd:YAG, Yb:YAG)*
- *Metrology*

OPTIONS

- *Integrated fiber pulse picker option (repetition rate 30 kHz – 30 MHz) with separate control electronics box and TTL synchronization interface is available for all models [code: FP10/100-AOM]*

LightWire FP10 is cost effective seeding solution for solid state regenerative amplifiers. Monolithic polarization maintaining oscillator design ensures turn-key operation with no alignment and no adjustment ever required. Wavelength tunability ensures that seed pulses are always spectrally overlapped with the amplification spectrum of your amplifier.

LightWire FP100 is an amplified version of FP10 model. It is optimized for high repetition rate solid state regenerative amplifiers which require higher seed power. MOPA design makes laser very stable and reliable.

LightWire FP100CHI is chirped pulse version with bandwidth around 8 nm and pulse compressibility down to 300 fs for seeding femtosecond CPA systems.

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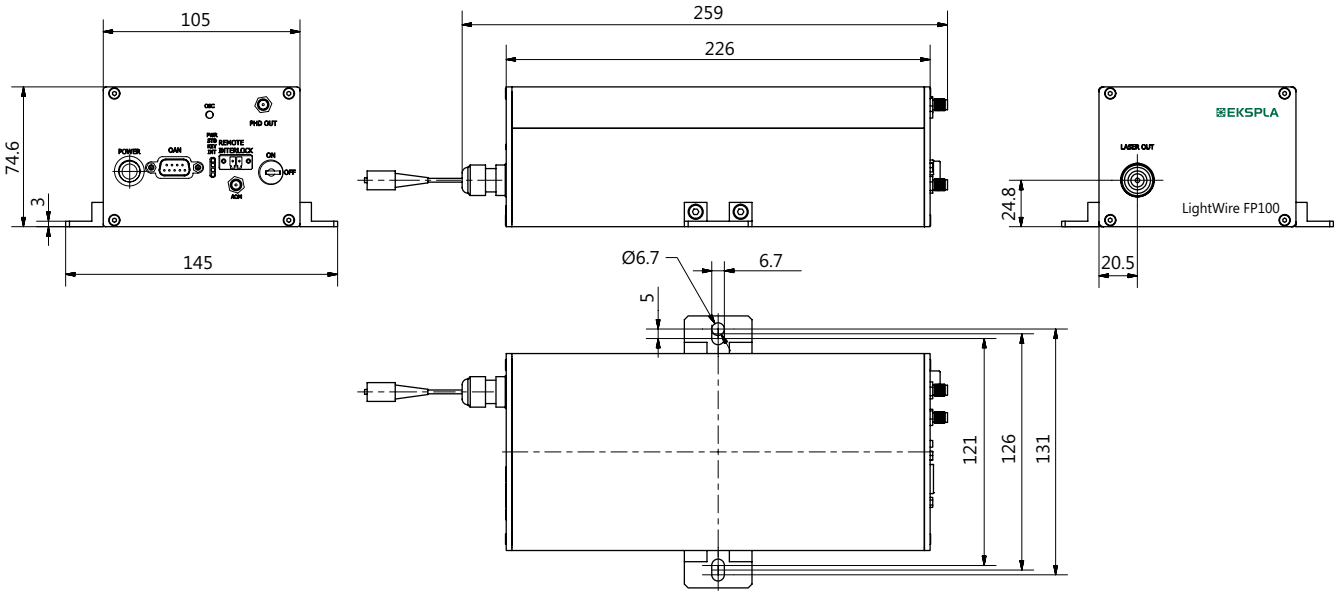
LightWire **FP10 / FP100 / FP100CHI**

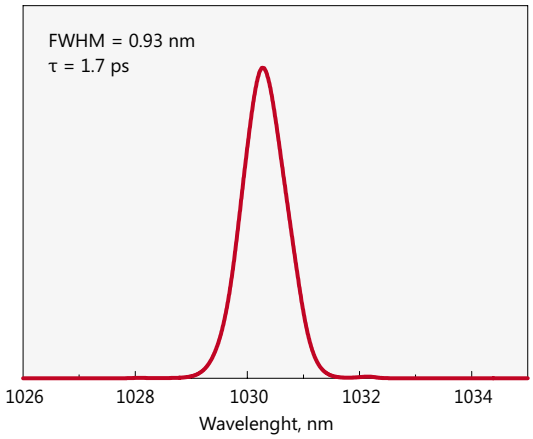
SPECIFICATIONS [1)]

Model	LightWire FP10	LightWire FP100	LightWire FP100CHI
Central wavelength	1030 nm or 1064 nm tunable ±0.2 nm	1064 nm	1030 nm
Pulse duration	< 2 ps	< 7 ps	< 8 ± 2 ps
Bandwidth	< 1 nm	< 0.4 nm	4.5 ± 0.5 nm
Pulse repetition rate	30 MHz		
Output power	> 2 mW at 1064 nm > 1 mW at 1030 nm	> 60 mW	> 40 mW
Pulse energy	> 70 pJ at 1064 nm > 35 pJ at 1030 nm	> 2 nJ	> 1.3 nJ
Polarization	linear, >100 : 1 extinction		
Optical output	FC/APC connector or collimated beam		
Beam quality	M^2< 1.1		
Pulse train monitoring	photodiode output		
Dimensions (L×W×H)	228×104×75 mm		228×104×85 mm
Weight	< 2 kg		
Power supply (AC/DC adapter included)	100–240 V, 50–60 Hz AC		
Operating conditions	10–30 °C, humidity – not condensing		

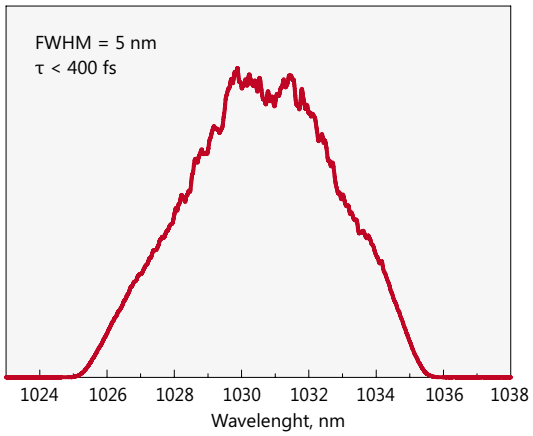
1) Due to continuous improvement all specifications are subject to change without notice.



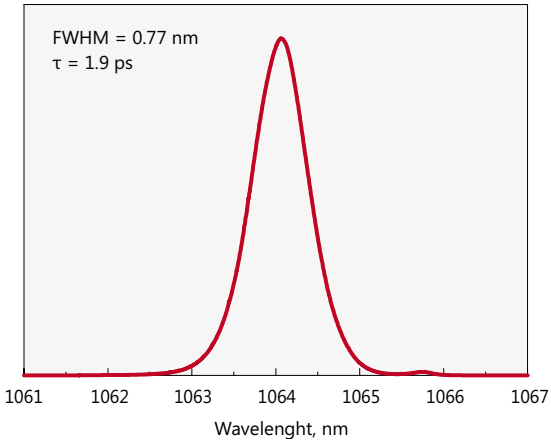
Technical drawing of FP10/FP100 laser



1030 nm 1.7 ps pulses



Chirped 9 ps pulses at 1030 nm.
Compressible to <400 fs



1064 nm 1.9 ps pulses

Typical spectra of three different FP10 laser configurations