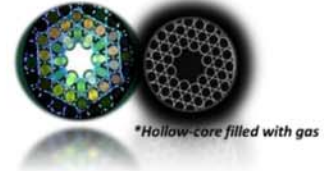


## FastLas 超短脉冲压缩器

Hollow-core fiber technology for new family of pulse compressors

**Shorter pulses with the most scalable nonlinear pulse compressor in the market**

Based on a disruptive & proprietary fiber & Photonic Micro Cell (PMC™) technology



**Exceptional *compression ratio* & *spectral-broadening***

**Input-Laser *Wavelength* coverage UV to IR**

**Large input laser *pulsewidth* range**

**Large pulse-*energy* range**

***One-stage* compression**



### FEATURES

- Input pulsewidth range 1ps-30 fs
- Compression down to a few cycles
- Input pulse energy range nJ-mJ nJ- mJ
- >1 Octave Spectral broadening
- Tailorable to all USP lasers
- Ultra-high average power
- Easy-to-use module
- Stand-alone module or Integrable OEM

### APPLICATIONS

- Ultra-fast lasers
- Ultra-fast optics
- Femtochemistry
- High field science
- Laser micromachining
- High harmonic generation

## Demonstrated with FastLas technology

Input Laser					Compressed output				Performance		
Central wavelength (nm)	Spectral bandwidth (nm)	Input pulse energy (μJ)	Pulsewidth (fs)	Average power (W)	Central wavelength [nm]	Spectral bandwidth* (nm)	Energy (μJ)	Pulsewidth (fs)	Compression ratio	Spectral broadening factor	Ref.
343	1.2	4.5	250	1	343	23.5	2.5	50	5	20	[1]
800	60	2600	30	0.07	775	160	1300	10**	3	2.6	[2]
1030	3	100-1000	600	0.1-1	1050-1080	1030-1100	80-650	50	12	23	[3]
	1.6	16.8	740	118	1030	30	15.8	84	9	19	[4]
	3	158	600	0.158	1030-1040	30	126	22	27	10	[5]
1550	15	105	850	4.2	1550	50	78	300	2.8	3.3	[6]
1800	80	35	80	0.07	2000***	1000-2200	28	4.5	20	15	[7]

\*1/e<sup>2</sup> width

\*\*Estimation based on the transform limit.

\*\*\*Soliton wavelength

1. M. Chafer *et al.*, "Pulse-compression down to 50 fs of femtosecond UV laser using Inhibited-Coupling hollow-core PCF," in Conference on Lasers and Electro-Optics, 2018, p. JTh5A.6.
2. B. Debord *et al.*, "2.6 mJ energy and 81 GW peak power femtosecond laser-pulse delivery and spectral broadening in inhibited coupling Kagome fiber," in CLEO: 2015, 2015, p. STh4L.7.
3. B. Debord *et al.*, "Multi-meter fiber-delivery and pulse self-compression of milli-Joule femtosecond laser and fiber-aided laser-micromachining," Opt. Express, vol. 22, no. 9, p. 10735, May 2014.
4. F. Emaury *et al.*, "Efficient spectral broadening in the 100-W average power regime using gas-filled kagome HC-PCF and pulse compression," Opt. Lett., 2014. F. Emaury *et al.*, "Beam delivery and pulse compression to sub-50 fs of a modelocked thin-disk laser in a gas-filled Kagome-type HC-PCF fiber," Opt. Express, vol. 21, no. 4, p. 4986, 2013.
5. M. Maurel *et al.* « Giant compression of high energy optical pulses using a commercially available Kagome fiber". In The European Conference on Lasers and Electro-Optics (p. CJ\_4\_6). Optical Society of America (2017, June).
6. Y. Y. Wang *et al.*, "Design and fabrication of hollow-core photonic crystal fibers for high-power ultrashort pulse transportation and pulse compression," Opt. Lett., vol. 37, no. 15, p. 3111, 2012.
7. T. Balciunas *et al.*, "A strong-field driver in the single-cycle regime based on self-compression in a kagome fibre," Nat. Commun., vol. 6, no. May 2014, pp. 1–7, 2015.

## Mechanical & Physical Specifications

Physical module\*

Table-top rectangular module (Dimensions: 470\*288\*98 mm, Weight: 9Kg)

Gas and thermal handling

Equipped with connections for gas pressure control, and water cooling for high average power lasers

Operations

Pre-aligned system for quick and easy fiber coupling

\* Contact us for smaller package or Integrable OEM version

All specifications may be changed without notice

联系人:王小姐

电话: 021-62486110-22/18616772132

邮箱: christy.wang@sinoptix.fr

QQ:492880434

西诺光学: www.sinoptix.com.cn

微信公众号: sinoptix