

STLY Series Fiber Laser Seed

1. STLY Series 780nm Femtosecond Fiber Laser Seed

The 780nm femtosecond fiber seed source is a modular near-infrared femtosecond laser light source. It has an output wavelength of 780nm, a pulse width of less than 100fs, a spectral width of more than 9nm, and a repetition frequency of 80MHz. This 780nm femtosecond fiber laser is based on key technologies such as fully automatic mode-locked pulse generation, low-nonlinearity and low-noise fiber amplification, high-precision dispersion compensation, and high-efficiency frequency conversion. It has achieved a miniaturized and integrated design of the laser's optics, mechanics, and electronics, featuring extremely high reliability and stability. In addition, our same type of laser also supports the dual-wavelength synchronous output function of 780/1560nm, and the repetition frequency can be selected within the range of 10-100MHz, meeting the requirements of a variety of application scenarios.



Features

- Optoelectronic integrated design
- Ultrashort pulses ≤ 100 fs
- Spectral width > 9 nm
- High pulse contrast ratio

Applications

- THz time-domain spectroscopy
- Laser ranging, micro-nano 3D printing
- Fiber/solid-state laser seed source

Specifications

Model	STLY-780-FS-10	STLY-780-FS-20	STLY-780-FS-40	STLY-780-FS-60	STLY-780-FS-80	STLY-780-FS-100	STLY-780-FS-120
Laser wavelength	780 nm						
Pulse duration	≤ 100 fs						
Pulse repetition rate	80 MHz (standard)				80 MHz	100 MHz	120 MHz
Average power	10 mW	20 mW	40 mW	60 mW	80 mW	100 mW	120 mW
Pulse energy	0.12 nJ	0.25 nJ	0.50 nJ	0.75 nJ	1.00 nJ		
Polarization extinction ratio	linear, > 15 dB						
Power stability/RMS	$< 1\%$						

Optical output	Free space, beam diameter 1 mm	
Temperature	18 – 32 °C	
Pulse monitoring	TTL signal for laser output	
PC connector	RS232	
Voltage	12V	
Laser module size /mm ³	190 × 135 × 50	224 × 165 × 60
SHG module size /mm ³	69.5 × 52 × 44	

2. STLY Series 1030/1053/1064 nm Picosecond Fiber Laser Seed



The picosecond fiber seed source is a picosecond seed source with a fixed repetition frequency in the near-infrared band. Its output wavelengths are 1030nm, 1053nm and 1064.3nm, the pulse width is 10ps, the spectral width is less than 0.5nm, and the repetition frequency is 20MHz. Based on key technologies such as high-isolation pump protection, fully automatic mode-locked pulse generation, low-nonlinearity and low-noise fiber amplification, this picosecond fiber seed source has achieved a compact and integrated design. It can be used right away after being plugged in and features extremely high reliability and stability. In addition, our lasers of the same type also provide optional parameter outputs within the range of a wavelength from 1030nm to 1080nm, a pulse width from 4ps to 120ps, and a repetition frequency from 10MHz to 80MHz, meeting the requirements of various industrial and scientific research application scenarios.

Specifications

Model	STLY-1030-PS-10	STLY-1030-PS-20	STLY-1030-PS-40
Laser wavelength	1030 ± 0.5 nm (Optional: 1030 - 1080 nm)		
Pulse duration	10 ps (Optional: 4 - 120 ps)		
Spectral bandwidth (3dB)	< 0.5 nm		
Chirp	Fourier transform limited		
Pulse repetition rate	20 MHz (Optional: 10 - 80 MHz)		
Average power	> 1 mW	> 20 mW	> 40 mW
Pulse energy@20MHz	> 0.05 nJ	> 1.0 nJ	> 2.0 nJ
Polarization extinction ratio	linear, > 20 dB		
Power stability/ RMS	< 1%		
Optical output	0.5-m length PM fiber with FC/APC connector		
Temperature	18 – 32 °C		
Pulse monitoring	TTL signal for laser output		
PC connector	RS232		
Voltage	12V/3A		
Laser module size /mm ³	190 × 135 × 50		

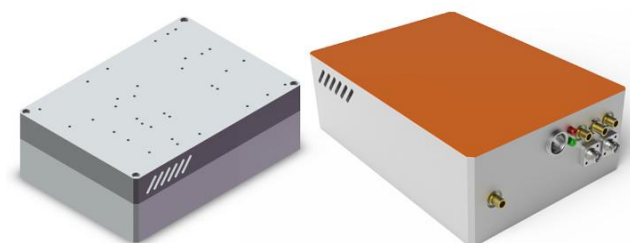
Ordering Information / Product Code

Model	Wavelength (nm)	PS	Average power
STLY-X-PS-YY	X = 1030/1053	PS = Picosecond	10/20/40

1064 nm Ps Fiber Laser Seed Specifications

Model	STLY-1064-PS-10	STLY-1064-PS-50	STLY-1064-PS-80
Laser wavelength	1064.3 ± 0.2 nm (Optional: 1030-1080 nm)		
Pulse duration	10 ps (Optional: 4 - 120 ps)		
Spectral bandwidth (3dB)	< 0.5 nm		< 0.1 nm
Chirp	Fourier transform limited		
Pulse repetition rate	20 MHz (Optional: 10 - 60 MHz)		
Average power	> 1 mW	> 50 mW	> 80 mW
Pulse energy@20MHz	> 0.05 nJ	> 2.5 nJ	> 4.0 nJ
Polarization extinction ratio	linear, > 20 dB		
Power stability/RMS	< 1%		
Optical output	0.5-m length PM fiber with FC/APC connector		
Temperature	18 – 32 °C		
Pulse monitoring	TTL signal for laser output		
PC connector	RS232		
Voltage	12V/3A		
Laser module size /mm ³	190 × 135 × 50		

3. STLY Series 1030/1053/1064 nm Tunable Repetition Frequency Picosecond Fiber Laser Seed



The tunable repetition frequency picosecond fiber seed source has an output wavelength of 1030/1053/1064.3nm. The repetition frequency is adjustable within the range of 50kHz to 10MHz, and the pulse width can be customized within the range of 10ps to 120ps. The spectral width is less than 1nm, and it features a burst trigger mode. This 1064nm tunable repetition frequency picosecond fiber seed source is based on key technologies such as high-isolation pump protection, fully automatic mode-locked pulse generation, low-nonlinearity and low-noise fiber amplification, etc. It has achieved a compact and integrated design and possesses extremely high reliability and stability.

Specifications

Model	STLY-PS-T10	STLY-PS-T30
Central wavelength	1030, 1053, 1064.3 nm	
Pulse duration	10 ps (Optional: 10 - 120 ps)	
Spectral bandwidth (3dB)	< 1nm	
Chirp	Transform - limited pulse	
Pulse repetition rate	50 kHz - 10 MHz (with selective pulse interval 20 - 50 ns)	
Average power	> 1.0mW@100kHz > 10mW@1MHz	> 3.0mW@100kHz > 30mW@1MHz
Pulse energy	> 10nJ	> 30nJ
Polarization extinction ratio	linear, > 20dB	
Power stability / RMS	< 2%	
Optical output	0.5-m length PM fiber with FC/APC connector	
Temperature	18 - 32°C	
Pulse train monitoring	TTL synch pulses for laser output and pulse picker	
Pulse picker	Internal AOM, external AOM driver	
PC connector	RS232	
Voltage	24V/12V/5V	
Size / mm ³	190 × 135 × 63	

4. STLY Series 1030 nm Femtosecond Fiber Laser Seed



The 1030nm femtosecond fiber seed source is a femtosecond seed source with a fixed repetition frequency. Its output wavelength is 1030nm, the repetition frequency is 25MHz, the spectral width is 10nm, and it has a linear chirp. The pulse width directly output by the laser is 2ps, and the pulse width after de-chirping is less than 300fs. This 1030nm femtosecond fiber seed source is based on key technologies such as high-isolation pump protection, fully automatic mode-locking pulse, low-nonlinearity, and low-noise fiber amplification. It achieves a compact and integrated design, has extremely high reliability and stability, and meets the requirements of a variety of industrial and scientific research application scenarios.

Specifications

Model	STLY-1030-FS-25	STLY-1030-FS-50
Central wavelength	1030 nm (Optional: 1030 - 1080 nm)	
Pulse duration	2 ps	
Spectral bandwidth (3dB)	> 10 nm	> 15 nm
Chirp	Linear chirped, dechirped to less than 300 fs	
Pulse repetition rate	25 MHz standard	
Average power	> 25 mW	>50 mW
Pulse energy	> 1.0 nJ	>2.0 nJ
Polarization extinction ratio	linear, > 20 dB	
Power stability/RMS	< 1%	
Optical output	PM980 fiber with FC/APC connector	
Temperature	18 - 32°C	
Pulse train monitoring	TTL synch pulses for laser output	
PC connector	RS232	
Voltage/Current	12V/3A	
Size / mm ³	224 × 165 × 60	

5. STLY Series 1030 nm Tunable Repetition Rate Femtosecond Fiber Laser Seed



The 1030nm tunable repetition rate femtosecond fiber seed source is a femtosecond laser light source in the near-infrared band, and it is the best seed source for high-energy femtosecond lasers. The output wavelength is 1030nm, with a directly output pulse width of 4ps or it can be broadened to several hundred picoseconds through CFBG. After de-chirping, the pulse width is less than 300fs. The repetition rate can be adjusted within the range of 50kHz to 10MHz, and it has a burst trigger mode. This 1030nm tunable repetition rate femtosecond fiber seed source is based on key technologies such as high-isolation pump protection, fully automatic mode-locked pulse generation, low-nonlinearity and low-noise fiber amplification, etc. It realizes the output of highly stable and reliable seed pulses, and can meet the needs of various industrial and scientific research application scenarios.

Specifications

Model	STLY-1030-FS-T10	STLY-1030-FS-T30	STLY-1030-FS-T70	STLY-1030-FS-T140	STLY-1030-FS-T210	STLY-1030-FS-T800
Central wavelength	1030 ± 5 nm					
Pulse duration	4 ps (dechirp to < 300 fs)		70 ps	140 ps	210 ps	800 ps
Spectral bandwidth (3dB)	> 10 nm		6 nm	12 nm	18 nm	18 nm
Chirp	Pulse with linear chirped					
Pulse repetition rate	50 kHz- 10 MHz (with selective pulse interval 20 - 50 ns)					
Average power	> 1 mW@100 kHz > 10 mW@1 MHz	> 3 mW@100 kHz > 30 mW@1 MHz	> 50 mW @1 MHz			
Pulse energy	> 10 nJ	> 30 nJ	> 50 nJ			
Polarization extinction ratio	linear, > 20 dB					
Power stability/RMS	< 2%					
Optical output	0.5-m length PM fiber with FC/APC connector					
Temperature	18 - 32 °C					
Pulse train monitoring	TTL synch pulses for laser output and pulse picker					
PC connector	RS232					
Voltage/Current	24V/ 5A					
Size / mm ³	224 × 185 × 70					

6. STLY Series 1560 nm Femtosecond Fiber Laser Seed



The 1560nm femtosecond fiber seed source is a femtosecond laser in the near - infrared band. It has an output wavelength of 1560nm, a pulse width of up to 50fs, and a repetition rate of 80MHz. This 1560nm femtosecond fiber laser integrates core technologies such as high - isolation pump protection, fully automatic mode-locked pulses, low-nonlinearity/low-noise fiber amplification, and high-precision dispersion compensation. It boasts extremely high reliability and stability.

Specifications

Model	STLY-1560-FS-D	STLY-1560-FS-70	STLY-1560-FS-140	STLY-1560-FS-210
Central wavelength	1560 ± 10 nm			
Pulse duration	100 fs	80 fs	60 fs	50 fs
Pulse repetition rate	80 MHz (standard)			
Average power	30/35 mW 30/40 mW	70 mW	140 mW	210 mW
Polarization extinction ratio	linear, > 20 dB			
Power stability/RMS	< 1%			
Optical output	PM1550, FC/APC connector (endcap available) Fiber length 0.5-4 m			
Temperature	10 - 40 °C			
Pulse monitoring	TTL signal for laser output			
PC connector	RS232			
Voltage	12V			
Size / mm ³	190 × 135 × 50			224 × 165 × 60

*STLY-1560-FS-D is a model with two output ports. The power ratio between the two ports can be preset by an inset fiber coupler, such as 40:60 or 50:50.