



# 1064/1550nm Nanosecond Pulse Fiber Laser

## STNSPL Series



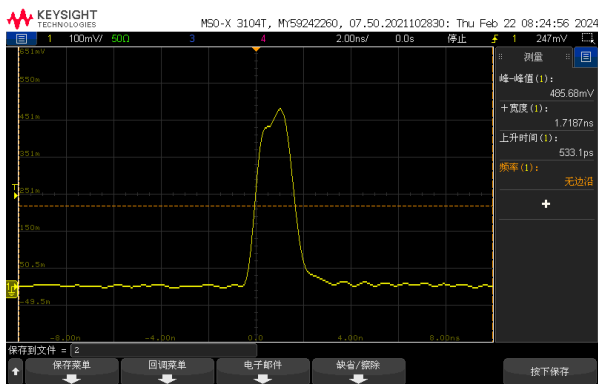
**2024 V1**

For customized projects please Contact us:

[info@simtrum.com](mailto:info@simtrum.com)

## 1064nm Nanosecond Pulse Fiber Laser

SIMTRUM's STPSPL series adopts unique circuit and optical optimization design. The pulse width, peak power and repetition frequency of the output laser are all adjustable. Single mode fiber output and modular packaging make the laser easy for system integration and suitable for distributed optical fiber sensing system applications.



Pulse diagram (2ns/100kHz)



### Features

- All-fiber structure
- Pulse width, repetition rate, and power adjustable
- Desktop or module packaging

### Application

- Lidar
- Nonlinear optics
- Fiber optic sensing

### Specifications

Optical Parameters	Unit	Typical Value	Remark
Center Wavelength	nm	1064±2	
Spectral Width	nm	≤ 1	
Pulse Peak Power	W	10 ~ 50 Tuneable	Maximum power can be customized
Pulse Duration	ns	2 ~ 50 Tuneable	
Pules Repetition Rate	kHz	1 ~ 1000	
Short-term Stability (15min)	dB	≤ ± 0.02	Power stability ≤ ± 0.5%
Long-term Stability (8hrs)	dB	≤ ± 0.05	Power stability ≤ ± 1.2%
Coupling Mode	-	External/Internal Modulation	SMA Interface
Fiber Type	-	Hi-1060	
Connector Type	-	FC/APC	

## Specifications

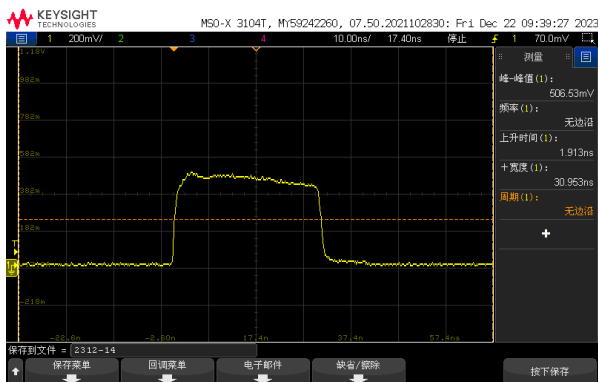
General Parameters	Desktop	Module
Control Function	Keystroke / RS232 Serial Communication	RS232 Serial Communication
Remote Control Port	DB9 Female	DB9 Female
Power Supply	AC100~240V, <30W	DC5V, <15W
Dimensions	260(W)×280(D)×120(H)mm	200(W)×150(D)×65(H)mm
Operation Temperature	5 ~ 35°C	
Operation Humidity	0~70%	

## Ordering Information/Product Code

Series	Wavelength (nm)	Maximum Output Power (mW)	Fiber	Packaging
STNSPL	1064	10/30/50	SM = Hi-1060	M - Module
				B - Desktop

## 1550nm Nanosecond Pulse Fiber Laser

SIMTRUM's STPSPL series adopts unique circuit and optical optimization design. The pulse width, peak power and repetition frequency of the output laser are all adjustable. It features stable working wavelength and power output, single-mode fiber output, and a modular design that facilitates system integration. It is suitable for use in distributed fiber optic sensing systems.



Pulse diagram (3ns/100kHz/0.3A)



### Features

- All-fiber structure
- Pulse width, repetition rate, and power adjustable
- Desktop or module packaging

### Application

- Lidar
- Nonlinear optics
- Distributed fiber optic sensing DTS

### Specifications

Optical Parameters	Unit	Typical Value	Remark
Center Wavelength	nm	1550±1	
Spectral Width	nm	≤ 1	
Pulse Peak Power	W	5 ~ 50 adjustable	Maximum power can be customized
Pulse Duration	ns	5 ~ 30 adjustable	
Pules Repetition Rate	kHz	1 ~ 100 adjustable	
Short-term Stability (15min)	dB	≤ ± 0.02	Power stability ≤ ± 0.5%
Long-term Stability (8hrs)	dB	≤ ± 0.05	Power stability ≤ ± 1.2%
Fiber Type	-	SMF-28	
Connector Type	-	FC/APC	

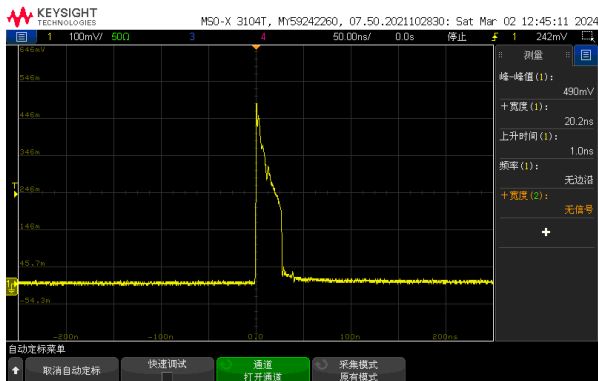
## Specifications

General Parameters	Desktop	Module
Control Function	Keystroke / RS232 Serial Communication	RS232 Serial Communication
Remote Control Port	DB9 Female	DB9 Female
Power Supply	AC100~240V, <30W	DC5V, <15W
Dimensions	260(W)×280(D)×120(H)mm	125(W)×150(D)×20(H)mm
Operation Temperature	5 ~ 35°C	
Operation Humidity	0~70%	

Ordering Information/Product Code				
Series	Wavelength (nm)	Maximum Output Power (mW)	Fiber	Packaging
STNSPL	1550	10/30/50	SM = SMF-28	M - Module
				B - Desktop

## 1550nm High Power Nanosecond Pulse Fiber Laser

SIMTRUM's STPSPL series High-power nanosecond pulse fiber laser uses high-power gain fiber module and cooperates with special drive and temperature control circuit to output high peak value and high energy laser pulse, laser wavelength and power are stable. It can be used for laser ranging radar, fiber optic sensing system, etc.



### Features

- All-fiber structure
- Pulse width, repetition rate, and power adjustable
- Pulse energy up to 100uJ

### Application

- Lidar ranging radar
- Nonlinear optics
- Fiber optic distributed sensing

### Specifications

Optical Parameters	Unit	Typical Value	Remark
Working Wavelength	nm	1550	
Wavelength Accuracy	nm	±1	
Maximum Single Pulse Energy	uJ	100	at Pulse Repetition Rate ≤ 10kHz, Pulse Width = 10ns
Maximum Single Pulse Power	kW	10	at Pulse Width = 3ns, Pulse Repetition Rate ≤ 10kHz
Maximum Average Power	W	2	at Pulse Width = 3ns, Pulse Repetition Rate ≤ 10kHz
Pulse Width	ns	1 ~ 200 adjustable	*1~3ns have partial energy loss, >3ns have full energy
Repetition Rate	kHz	1 ~ 3000 adjustable	
Beam Quality $M^2$	-	≤ 1.1	Depending on the output, actual values may vary
Output Polarization	-	Random	
Extinction Ratio	dB	≥ 30	
Short-term Stability (15min)	dB	≤ ± 0.05	Power stability ≤ ± 1.2%
Long-term Stability (8hrs)	dB	≤ ± 0.1	Power stability ≤ ± 2%
Output Fiber Type	-	SMF-28 fiber, 900μm loose tube	
Output Connector Type	-	FC/APC, length ≥ 0.3m	Depending on pulse width and power

## Specifications

General Parameters	Desktop	Module
Control Function	Keystroke / RS232 Serial Communication	RS232 Serial Communication
Remote Control Port	DB9 Female	DB9 Female
Modulation Method	TTL, Internal / External Modulation (Optional)	TTL, Internal / External Modulation (Optional)
Power Supply	AC100~240V, <30W	DC12V, <30W
Dimensions	260(W)×320(D)×120(H)mm	100(W)×100(D)×30(H)mm
Operation Temperature	5 ~ 35°C	
Operation Humidity	0 ~ 70%	

Ordering Information/Product Code							
Series	Wavelength (nm)	Pulse Width (fs)	Peak Power (mW)	Repetition Frequency (MHz)	Fiber	Output Method	Packaging
STFSPL	1550	1/3/10/100/200	1/5/10	1/100/1000	SM = SMF - 28	FA = FC/APC	M - Module
						C = Collimator	B - Desktop