

STR Series 10-100W Q-Switched Pulse Fiber Laser

The STR Series 10-100W Q-Switched Pulse Fiber Laser is the industrial marking and micromachining laser. This series pulse laser has high peak power, high single-pulse energy and optional spot diameter and can be widely applied in the fields, such as marking, precision processing, graphic engraving of non-metal, gold, silver, copper and aluminum with altitude stress resistance, stainless materials without altitude stress resistance. Its marking process features lower cost and more stable performance compared with traditional laser. All components of the 10-100W Q-switched pulse fiber laser are developed by us independently, with high product reliability. And its good compatibility has well recognized by the market and its quality has reached the international advanced level.

Features:

- Highly stable laser output
- High single-pulse energy
- High marking efficiency
- Short pulse setup time
- High reliability
- Maintenance-free operation



Technical specifications:

Model	STR-P10	STR-P20	STR-P30	STR-P50	STR-P50B	STR-P100
Average output power (W)	10	20	30	50	50	100
Central wavelength	1064					
Pulse repetition rate (kHz)	20-60		30-60	50-100		20-200
Output power stability	<3%					<5%
Output beam diameter (mm)	7±1					6.5±1
Polarization	Random					
Pulse width (ns)	80-100	90-130		90-150		50-130
Maximum pulse energy (mJ)	0.5	1				
Delivery cable length (m)	2					
Power supply (VDC)	24					
Power range (%)	10-100					
Power consumption (W)	120	170	240	340	340	450
Size (mm)	391x260x120			396x360x123	391x260x120	396x360x123
Cooling	Air					
Operation temperature (°C)	0-40					



STR Series Short-Pulsed Fiber Lasers

The brand-new Short-Pulse Fiber Laser Series has a variety of pulse width options, including high average power (10-100W), high-peak power ($\leq 15\text{kW}$) and 2-350ns, adjustable repetition frequencies of 10-1000kHz, short pulse setup time ($\leq 100\mu\text{s}$), online modifiable pulse width and other characteristics. It is ideal for industrial applications in the field of solar photovoltaic, thin film cutting, sheet material cutting, welding, surface cleaning of materials, fine marking and material deepening, etc.

Features:

- Common control interface
- Extremely wide operating frequency range
- A variety of pulse width options
- Online modifiable pulse width
- Short pulse setup time
- High light beam quality
- Air cooling design



Technical specifications:

Model	STR-SP20	STR-SP60	STR-SP100
Central Emission wavelength (nm)	1064	1064	1064
Polarization	Random	Random	Random
Nominal average output power (W)	20	60	100
Maximum Pulse energy (mJ)	0.5	1.0	1.0
Pulse repetition rate (kHz)	10-1000	20-1000	20-1000
Pulse width (ns)	2-350	10-350	10-350
Typical beam quality (M^2)	<1.3	<1.6	<1.6
Collimated beam diameter (mm)	6-8	6-8	5.5-7.5
Output power tunability (%)	10-100	10-100	10-100
Long term power stability (8hrs)	$<3\%$	$<3\%$	$<5\%$
Length of beam delivery fiber (m)	2.0	2.0	2.0
Operating voltage	24VDC	24VDC	220VAC
Typical power consumption (W)	150	350	450
Cooling	Air	Air	Air
Operating temperature ($^{\circ}\text{C}$)	0-40	0-40	0-40
Dimension WxDxH (mm)	286x215x95	340x260x120	396x360x123

STR Series Single Mode CW Fiber Lasers

STR series high power single mode CW fiber laser is up to 2000W output power with fiber delivery through a near diffraction limited beam. The excellent beam quality and power stability make this series laser a multipurpose tool with cost effective performance and maintenance free operation.

Features:

- High Electro-optical Conversion Efficiency
- Altitude Stress-resisting Capacity
- Sheet Cutting Efficiency
- Customized Output Fiber Length
- Optional Air Cooling or Water Cooling
- Maintenance-free Operation
- Wide Modulation Frequency Range



Technical specifications:

Model	STR-C300	STR-C500	STR-C750	STR-C1000	STR-C1500	STR-C2000
Mode of operation	CW/Modulated	CW/Modulated	CW/Modulated	CW/Modulated	CW/Modulated	CW/Modulated
Central Emission wavelength (nm)	1075-1085	1075-1085	1075-1085	1075-1085	1075-1085	1075-1085
Polarization	Random	Random	Random	Random	Random	Random
Nominal output power (W)	250	500	750	1000	1500	2000
Max. modulation frequency (kHz)	20	20	20	5	5	5
Output head	QBH	QBH	QBH	QBH	QBH	QBH
Beam quality (M^2)	<1.1	<1.1	<1.1	<1.3	2.1-2.7	2.1-2.7
Output power tunability (%)	10-100	10-100	10-100	10-100	10-100	10-100
Long term power stability (8hrs)	<3%	<3%	<3%	<3%	<3%	<3%
Red pointer	yes	yes	yes	yes	yes	yes
Length of beam delivery fiber (m)	15	15	15	20	20	20
Operating voltage (VAC)	220-240	220-240	220-240	340-420	340-420	340-420
Typical power consumption (W)	1000	2000	3000	4000	6000	8000
Cooling	Water	Water	Water	Water	Water	Water
Operating temperature (°C)	10-40	10-40	10-40	10-40	10-40	10-40
Dimension WxDxH (mm)	450x240x680	450x240x680	450x240x680	485x240x765	520x620x986	520x620x986
Weight	<50kg	<50kg	<50kg	<50kg	<90kg	<90kg
External Control	RS232/AD	RS232/AD	RS232/AD	RS232/AD	RS232/AD	RS232/AD

STR Series High Power Multi-Mode CW Fiber Lasers

The High-Power Multimode Continuous Fiber Laser Series ranges from 1500W to 12000W, with high electro-optical conversion efficiency, high light beam quality, high energy density, wide modulation frequency, high reliability, long lifetime.

Features:

- High electro-optical conversion efficiency
- Customized output fiber length
- QBH connector
- Maintenance-free operation
- Wide modulation frequency range
- Small size, easy to install



Technical specifications:

Model	STR-MC1500	STR-MC2200	STR-MC3300	STR-MC4000	STR-MC6000	STR-MC12000
Mode of operation	CW/Modulated	CW/Modulated	CW/Modulated	CW/Modulated	CW/Modulated	CW/Modulated
Central Emission wavelength (nm)	1075-1085	1075-1085	1075-1085	1075-1085	1075-1085	1075-1085
Polarization	Random	Random	Random	Random	Random	Random
Nominal output power (W)	1500	2200	3300	4000	6000	12000
Max. modulation frequency (kHz)	5	5	5	5	2	2
Output head	QBH	QBH	QBH	QBH	QBH	QBH
BBP (mrad)	≤5	≤5	≤5	≤5	≤5	≤10
Output power tunability (%)	10-100	10-100	10-100	10-100	10-100	10-100
Long term power stability (8hrs)	<3%	<3%	<3%	<3%	<3%	<3%
Red pointer	yes	yes	yes	yes	yes	yes
Length of beam delivery fiber (m)	20	20	20	20	20	20
Operating voltage (VAC)	340-420	340-420	340-420	340-420	340-420	340-420
Typical power consumption (W)	6000	8800	13200	16000	24000	48000
Cooling	Water	Water	Water	Water	Water	Water
Operating temperature (°C)	10-40	10-40	10-40	10-40	10-40	10-40
Dimension WxDxH (mm)	650x890x1000	650x890x1000	650x1000x1450	650x1000x1450	1200x1000x1230	1620x1000x1560
Weight	<150kg	<150kg	<200kg	<250kg	<450kg	<900kg
External Control	RS232/AD	RS232/AD	RS232/AD	RS232/AD	RS232/AD	RS232/AD

STR Series Quasi-Continuous Fiber Lasers

The Quasi-Continuous Fiber Laser Series ranges from 75W to 600W, with higher electro-optical conversion efficiency, better optical quality and lower maintenance cost. This series product is a perfect alternative of existing light-pumped YAG laser and is an ideal choice for spot welding, seam welding, boring and other industrial applications needing wide pulse and high peak due to its diversified compatibility and the convenience for most YAG systems to use it with simple transformation.

Features:

- High electro-optical conversion efficiency > 30%
- Two work modes: continuous and pulse
- Extremely stable output performance
- Excellent light beam quality
- Optional QCS / QBH output connector and output length



Technical specifications:

Model	STR-QCW75/750	STR-QCW150/1500	STR-QCW450/1500	STR-QCW300/3000	STR-QCW450/4500	STR-QCW600/6000
Operation mode	CW/Modulation					
Average power(CW), (W)	120	250	500	500	750	800
Average power(Pulse), (W)	75	150	450	300	450	600
Maximum output power, (W)	750	1500	1500	3000	4500	6000
Maximum pulse energy,(J)	7.5	15	45	30	45	60
Wavelength (nm)	1080±5					
Repetition rate (Hz)	0-5000		500-5000	0-5000		
Pulse width (ms)	0.05-50					
Output power stability	<3%					
Red laser	Yes					
Beam delivery connector	QBH					
BBP (mrad)	0.4, 2, 5			5, 10		
Power supply	200-240			340-420		
Control mode	RS232/AD					
Power output range (%)	10-100					
Power consumption (W)	500	1000	2000	2000	3000	3500
Size (mm)	485x240x680			650x890x1000	650x1000x1450	
Weight (kg)	<30	<50		<150	<200	<250
Cooling	Air			Water		
Operation temperature (°C)	10-40					

STJ LP-Series Fiber Lasers

STJ LP-Series Fiber Lasers adopts MOPA (Master Oscillator Power Amplifier) structure, diode laser as seed light, and fiber based power amplification. This laser integrates independence adjustment of pulse width and frequency, to make sure a constant pulse energy output, which provides a good combining solution to the requirements of high power laser source and high marking speed.

The extremely flexible pulse width and frequency adjustment, which plays a significant impact on colour formation, enables colour or silver shining marking on stainless steel.

Features:

- Flexible & independent control of pulse width & frequency
- Selectable pulse shape
- High repetition frequency
- No laser leakage

Applications:

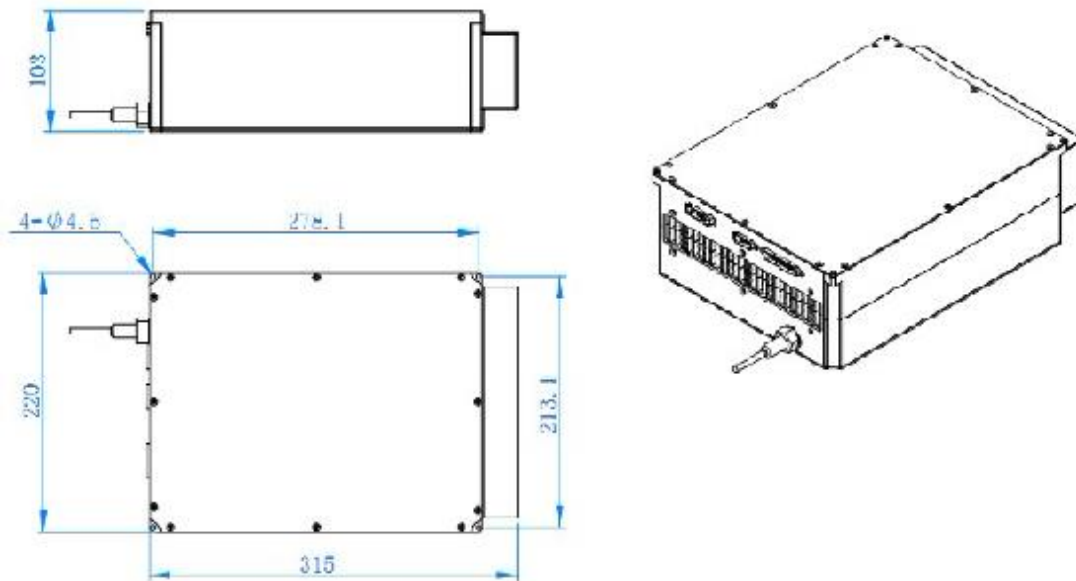
- Marking / Colour marking
- Ablation
- Cutting
- Drilling
- Scribing
- Soldering
- Trimming
- Engraving



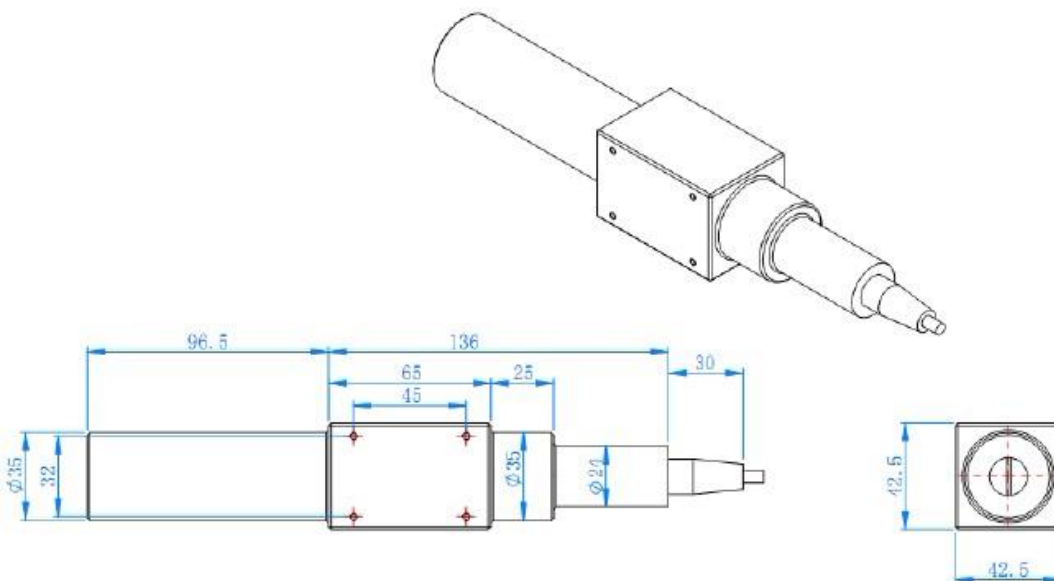
Technical specifications:

Model	STJ-LP-20	STJ-LP-30	STJ-LP-60	STJ-LP-100
M ²	< 1.3		< 1.8	
Output cable length (m)	2		3	
Average output power (W)	> 20	> 30	> 60	> 100
Maximum pulse energy (mJ)	0.8		1.2	
Pulse repetition rate at Maximum power (kHz)	25~ 400	37 ~ 400	50 ~ 400	83 ~ 400
Pulse repetition rate (kHz)	1 ~ 400			
Pulse width (ns)	200		250	
Output power stability (%)	< 5			
Cooling	Air			
Power supply (V)	24			
Current (A)	< 8	< 10	< 15	< 20
Maximum power consumption (W)	120	140	300	450
Central wavelength (nm)	1064			
Pulse width @3dB (ns)	< 15			
Polarization	Random			

Resist of high reflection	Yes		
Beam diameter (mm)	7±0.5	6±0.5	
Power range (%)	0 ~ 100		
Operation temperature (°C)	0 ~ 40		
Storage temperature (°C)	-10 ~ 60		
Weight (kg)	8	10	13.4
Size (mm)	315 × 220 × 99	315 × 275 × 99	337 × 278 × 120

Dimension:


Laser cabinet



Isolator

STJ M1-Series Fiber Lasers

STJ M1-Series MOPA pulsed fiber lasers make use of master oscillator power amplifier (MOPA) configuration, and show excellent laser performance as well as high level of temporal pulse shaping controllability. As compared to the Q-switching technology, the pulse repetition frequency (PRF) and pulse width can be controlled independently in MOPA configuration, while the peak power of the fiber laser can be well maintained. This feature is crucial for material processing applications, such as laser marking. Besides, its good pulse width tunability enables minimum pulses deformation, increases the thresholds of nonlinearities, and hence makes the laser more reliable and robust.

Features:

- >50,000 hours lifetime
- Excellent beam quality
- Adjustable pulse width (6~200ns)
- Adjustable pulse frequency (1~1000kHz)
- Precise pulse control, first pulse usability
- Anti-reflection protection
- Flexible and customizable control

Applications:

- Alumina black etching
- ITO etching
- Thin metal surface processing
- Flexible oriented circuit processing
- Fine processing

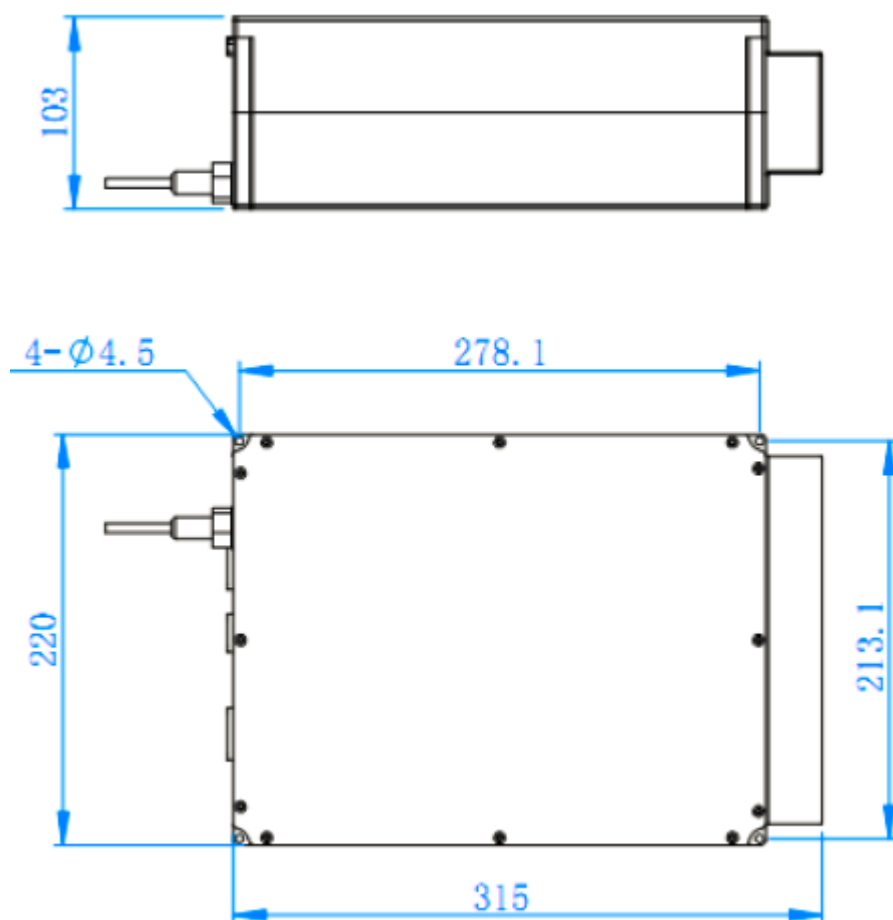


Technical specifications:

Model	STJ-M1-20	STJ-M1-30
M ²	< 1.3	
Output cable length (m)	2	
Average output power (W)	> 20	> 30
Maximum pulse energy (mJ)	0.5	
Pulse repetition rate at Maximum power (kHz)	40 ~ 2000	60 ~ 2000
Pulse repetition rate (kHz)	1 ~ 2000	
Pulse width (ns)	6 ~ 250	
Output power stability (%)	< 5	
Cooling	Air	
Power supply (V)	24	
Current (A)	< 8	< 10
Maximum power consumption (W)	120	140
Central wavelength (nm)	1064	
Pulse width @3dB (ns)	< 15	
Polarization	Random	
Resist of high reflection	Yes	
Beam diameter (mm)	7±0.5	
Power range (%)	0 ~ 100	
Operation temperature (°C)	0 ~ 40	

Storage temperature (°C)	-10 ~ 60
Weight (kg)	8
Size (mm)	315 × 220 × 99

Dimension:



STJ M6-Series Fiber Lasers

STJ M6-Series make use of master oscillator power amplifier (MOPA) :

- NEW GUI software: user friendly interface, realizing human-machine interaction
- First pulse usable and adjustable
- Zero time delay: faster response speed
- Precise pulse control: pulse-to-pulse controllable
- Broader pulse width range:2~250ns
- Wider pulse frequency range:1~1000kHz
- No ghost image configuration

Features:

- >20W nominal power
- >50,000 hours lifetime
- Excellent beam quality
- Adjustable pulse width (2~250ns)
- Adjustable pulse frequency (1~1000kHz)
- Precise pulse control, first pulse usability
- Anti-reflection protection
- Flexible and customizable control



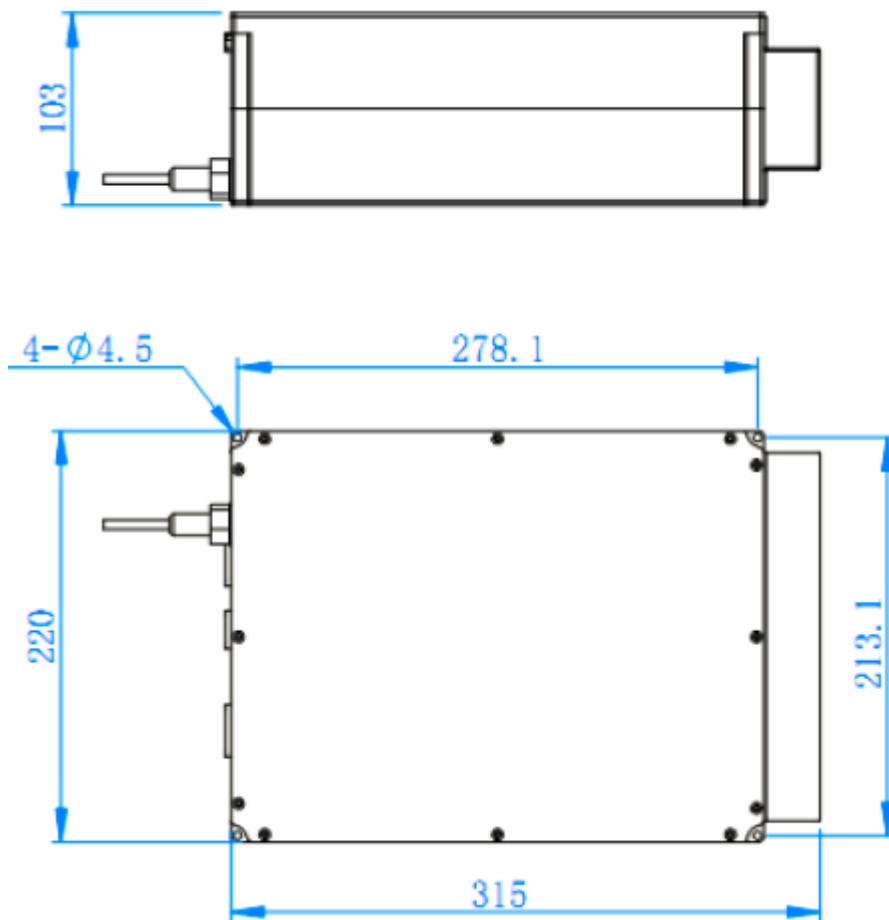
Applications:

- First pulse usability and adjustability
- Fast on/off time
- No ghost image
- High speed bitmap scanning
- Anti-reflection protection
- No photon darkening effect

Technical specifications:

Model	STJ-M6-20	STJ-M6-30	STJ-M6-30-L1	STJ-M6-70
M ²	<1.3		<1.8	
Output cable length (m)	2		3	
Average output power (W)	> 20	> 30		> 70
Maximum pulse energy (mJ)	0.5		0.96	1
Pulse repetition rate at Maximum power (kHz)	40 ~ 2000	60 ~ 2000	31 ~ 2000	70 ~ 2000
Pulse repetition rate (kHz)	1 ~ 2000			
Pulse width (ns)	1 ~ 250	2 ~ 250		
Output power stability (%)	< 5			
Cooling	Air			
Power supply (V)	24			
Current (A)	< 8	< 10		< 13
Maximum power consumption (W)	120	140		310
Central wavelength (nm)	1064			
Pulse width @3dB (ns)	< 15			
Polarization	Random			
Resist of high reflection	Yes			

Beam diameter (mm)	7±0.5	6±0.5
Power range (%)	0 ~ 100	
Operation temperature (°C)	0 ~ 40	
Storage temperature (°C)	-10 ~ 60	
Weight (kg)	8	10
Size (mm)	315 × 220 × 99	315 × 275 × 99

Dimension:


STJ M6-Series Fiber Lasers

STJ M6-Series Fiber Lasers use the control interface and standard software, which can be monitored and alarmed in real time, and the running data can be collected and recorded. The laser adopts water-cooling heat dissipation and cabinet design, and has many advantages such as high electro-optical conversion efficiency, low energy consumption, maintenance-free maintenance, flexible fiber-coupled output, easy handling and lifting, etc. It is an ideal laser source for industrial laser cutting, welding and other applications.

Medium power:



Technical specifications:

Model	STJ-CW-500	STJ-CW-800	STJ-CW-1000	STJ-CW-1200	STJ-CW-1500	STJ-CW-2000
Average output power (W)	500	800	1000	1200	1500	2000
Beam parameter product (mm*mrad)	<0.4	<4.5			<1.5	
Central wavelength (nm)	1080					
Pulse width @3dB (nm)	<6					
Output cable length (m)	15				20	
Cooling	Pure water					
Power supply (V)	Single phase, 220(AC)±10%					3 phases, 380(AC)±10%
Maximum power consumption (kW)	1.8	2.7	3.3	3.8	5	7
Switch time (μs)	20					
Modulation frequency (kHz)	20					
Ambient temperature (°C)	23 ~ 26					
Storage temperature (°C)	-10 ~ 60				-20 ~ 50	
Weight (kg)	41		60		90	110
Size (mm)	600 × 483 × 196		760 × 483 × 196		864 × 483 × 241	864 × 483 × 267

High power:

Technical specifications:

Model	STJ-CW-3000	STJ-CW-3000-1	STJ-CW-4000	STJ-CW-4000	STJ-CW-8000
Average output power (W)	3000	3000	4000	6000	8000
Beam parameter product (mm*mrad)	4.5	≤ 4.5			
Central wavelength (nm)	1080				
Pulse width @3dB (nm)	<6				
Output cable length (m)	20				
Cooling	Pure Water				
Power supply (V)	3 phases, 380(AC)±10%				
Maximum power consumption (kW)	11		16	24	32
Switch time (μs)	20				
Modulation frequency (kHz)	20	5			
Ambient temperature (°C)	23 ~ 26				
Storage temperature (°C)	-20 ~ 50				
Weight (kg)	250	450	525	600	800
Size (mm)	900 × 650 × 800	1000 × 930 × 1300			1215 × 1100 × 1382