



MFSC-300L Product specification

1. Product Name and Mode

Product name: 300W fiber laser

Product mode: MFSC-300L

2. Specifications

2.1. Use function

The main functions of this product are as follows:

- Red lead function
- RS232 communication
- State monitoring and alarm function
 - ✓ Over current alarm and current monitoring
 - ✓ Over voltage alarm and voltage monitoring
 - ✓ Over temperature alarm and temperature monitoring
 - ✓ Front light PD monitoring and abnormal alarm
 - ✓ Emergency stop alarm
 - ✓ QBH Contact alarm function

2.2. Detail Specification Table

2.2.1.1 Optical Properties

SN.	Properties	Testing conditions	Min. value	Typical value	Max. value	Unit
1	Working mode		Continuous/pulse			
2	Polarization		Random			
3	Range of output power	100% output power	200		220	W
4	Output power tuning range		10%		100%	
5	Central wavelength	100% output power	1070	1080	1090	nm
6	Emission bandwidth	100% output power		3	5	nm
7	Short-term power	100% output		+/-1	+/-3	%



	stability	power,1hr				
8	Long-term power stability	100% output power,24hrs		+/-2	+/-5	%
9	Turn-on time of laser	100% output power		50	80	us
10	Turn-off time of laser	100% output power		30	50	us
11	Repetition frequency	100% output power			20	kHz
12	Power of red laser	100% output power	150			uW
13	Beam Quality (M2)	100% output power			1.3	

2.2.1.2 Optical Output

SN.	Properties	Testing conditions	Min. value	Typical value	Max. value	Unit
1	Length of output fiber cable	MFSC-200		10		m
2	Bending radius of output fiber		200			mm
3	Ending of output fiber		QBH air-cooled connector			

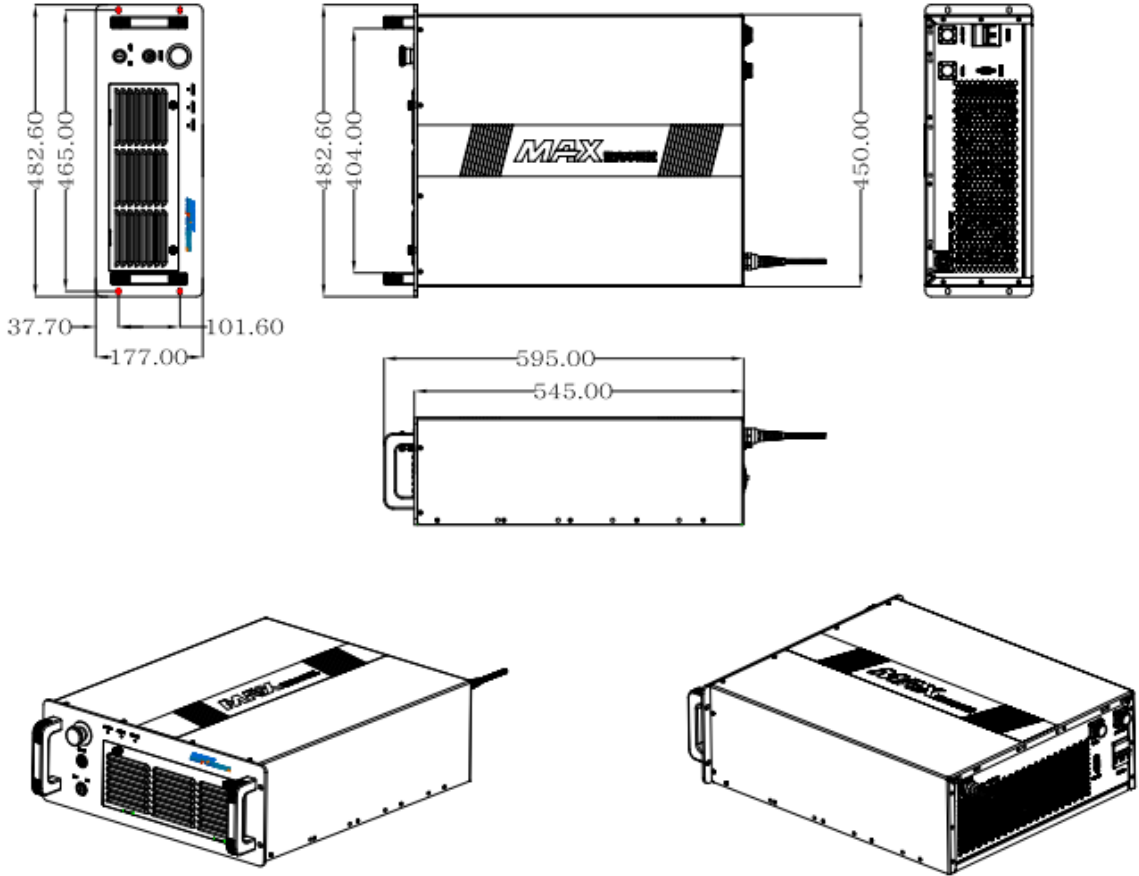
2.2.1.3 General Properties

SN.	Properties	Min value	Typical value	Max value	Unit
1	Working environment temperature	0	25	35	□
2	Humidity	10		90	%
3	Storage temperature	-10	25	60	□
4	Size: W*D*H	595*483*177			mm
5	Weight		35		kg
6		Air cold			
7	Power supply voltage of laser Single phase	200-240V AC, 50/60HZ power-frequency AC current			
8	Maximum power consumption	MFSC-200	1200	W	

3. Structure

MFSC-300L Product specification

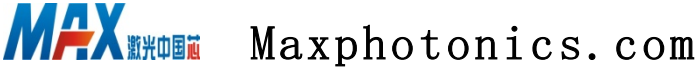
3. 1. Structure Layout (mm)



3. 2. Description of Front Panel

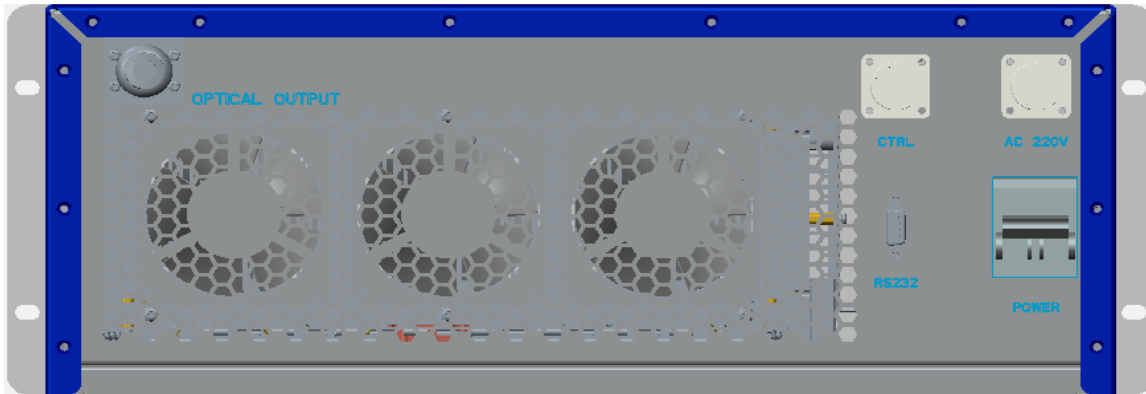


ITEMS	FUNCTION DESCRIPTION
Key Switch(OFF/ON)	Power switch of laser
Emergency Stop Switch(EMERGENCY STOP)	Emergency stop
Start Switch(START)	Start laser (on-off signal of hardware)

	编制部门	研发部
	版本	1.0
MFSC-300L Product specification	页次	4/7
	文件编号	CX-WI-YF-018

Alarm	Abnormal situation light of laser
Active	Normal situation light of laser
Power	Power light of laser

3.3. Description of Back Panel



ITEMS	FUNCTION DESCRIPTION
Key Switch(OFF/ON)	Power switch of laser
Emergency Stop Switch(EMERGENCY STOP)	Emergency stop
Start Switch(START)	Start laser (on-off signal of hardware)
Alarm	Abnormal situation light of laser
Active	Normal situation light of laser

3.4. Control signal interface definition

The CTRL interface of the laser is a multi core aerial socket, which provides a variety of signals for the functional control of the laser. The corresponding jack and wire are described as follows:

CTRL INTERFACE PIN	WIRE COLOR	FUNCTION DESCRIPTION	REMARK
1	Red	Emission enable input (positive)	24VDC high level voltage valid
2	Red and White	Emission enable input (negative)	
3	Black	Modulation input (positive)	24VDC high level voltage valid
4	Black and white	Modulation input (negative)	



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版本

1.0

MFSC-300L Product specification

页次

5/7

文件编号

CX-WI-YF-018

5	Yellow	External laser output (positive)	24VDC high level voltage valid (This function is same with auto switch START)
6	Black and yellow	External laser output (negative)	
7	Green	DA(0-10V) input (positive)	0-10V analog signal, control output power %
8	Green and white	DA(0-10V) input (negative)	
9	Brown	Fault output 1	Fault output 1 and 2 off when alarm on
10	Brown and white	Fault output 2	Fault output 1 and 2 on when alarm off
11	Blue	NC	
12	Blue and white	NC	



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版 本

1.0

MFSC-300L Product specification

页 次

6/7

文件编号

CX-WI-YF-018

Parameters	Unit	Date	Date
Type		MFSC-200	MFSC-300L
Mode Of Operation		cw	cw
Polarization		Random	Random
Central Emission Wavelength	nm	1080±5	1080±5
Nominal Output Power	W	>200	>250
Output Power Tunability	%	10~100	10~100
Output Power Stability (t>1h)	%	≤2%	≤2%
Beam Quality (M2)		≤1.3	≤1.3
Output Fiber Length	m	5~20	5~20
Operation Voltage (DC)	V	220VAC	220VAC
Power Consumption (at 20° C)	kW	<1.2	<1.5
Weight	kg	35	35
Cooling		Air Cooling	Air Cooling
Size (L*W*H)	mm	595*483*177	595*483*177