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	MOPA pulsed fiber laser	Date:	202312
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1. Optical characteristics

No.	Characteristics	Parameter value	Unit
1	Central wavelength	1060-1080	nm
2	Spectral width @3dB	<20	nm
3	Maximum pulse energy	2.0	mJ
4	Output power	1000	W
5	Power adjustment range	0-100	%
6	Frequency adjustment range	1-6000	kHz
7	Laser switching ON/OFF time	<20	μs
8	Pulse width	20-500	ns
9	Output power instability	<5	%
10	Beam quality M ²	<1.8	/
11	Polarization direction	Random	/
12	Anti-high reflection	Yes	/
13	Indicator red light	0.3-2	mW
14	Collimated beam diameter (4σ)	9-11	mm
15	Delivery cable length	5	m



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2. Electrical characteristics

No.	Characteristics	Parameter value	Unit
16	Power supply voltage	220	VAC
17	Working current	<16	A
18	Power consumption	<3520	W
19	220V mains current requirements	≥ 16	A

3. Environmental requirements

No.	Characteristics	Parameter value	Unit
20	Operating temperature	0 - 40	°C
21	Storage temperature	-10 - 60	°C
22	Cooling method	Water cooling	/
23	Low temperature water temperature (laser)	28 ± 1	°C
24	High temperature water temperature (isolator)	30 ± 1	°C
25	Water cooler flow rate (laser)	≥ 10	L/min
26	Water cooler flow rate (isolator)	≥ 2	L/min



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27	Laser water pipe diameter	10	mm	
28	Isolator water pipe diameter	6	mm	
29	Water cooler cooling capacity	>3	kW	

4. Structural characteristics

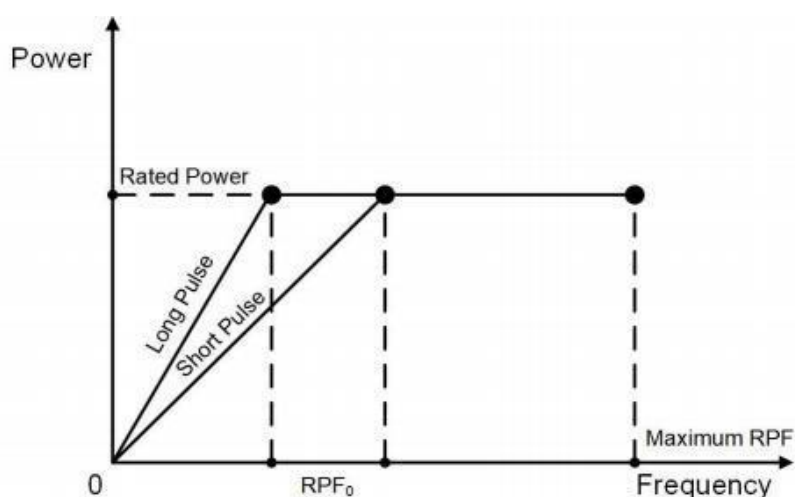
No.	Characteristics	Parameter value	Unit
30	Laser dimension	692*485*130	mm
31	Isolator dimension	297*70*76(87*Φ35)	mm
32	Net weight	<40	kg

5. The pulse width corresponds to the power reduction frequency point and the maximum single pulse energy

No.	Pulse width (ns)	Power reduction frequency (kHz)	Upper frequency limit (kHz)	Max single pulse energy (mJ)
1	1 (CW)	/	/	/
2	20	5000	6000	0.20
3	30	4000	6000	0.25
4	40	3200	4000	0.31
5	50	3050	4000	0.33
6	60	2800	3000	0.36



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7	80	2200	3000	0.45
8	90	2000	3000	0.50
9	100	1600	2000	0.63
10	120	1450	2000	0.69
11	150	1250	2000	0.80
12	200	1000	1500	1.00
13	250	850	1000	1.04
14	350	700	900	1.25
15	450	600	700	1.67
16	500	500	600	2.00



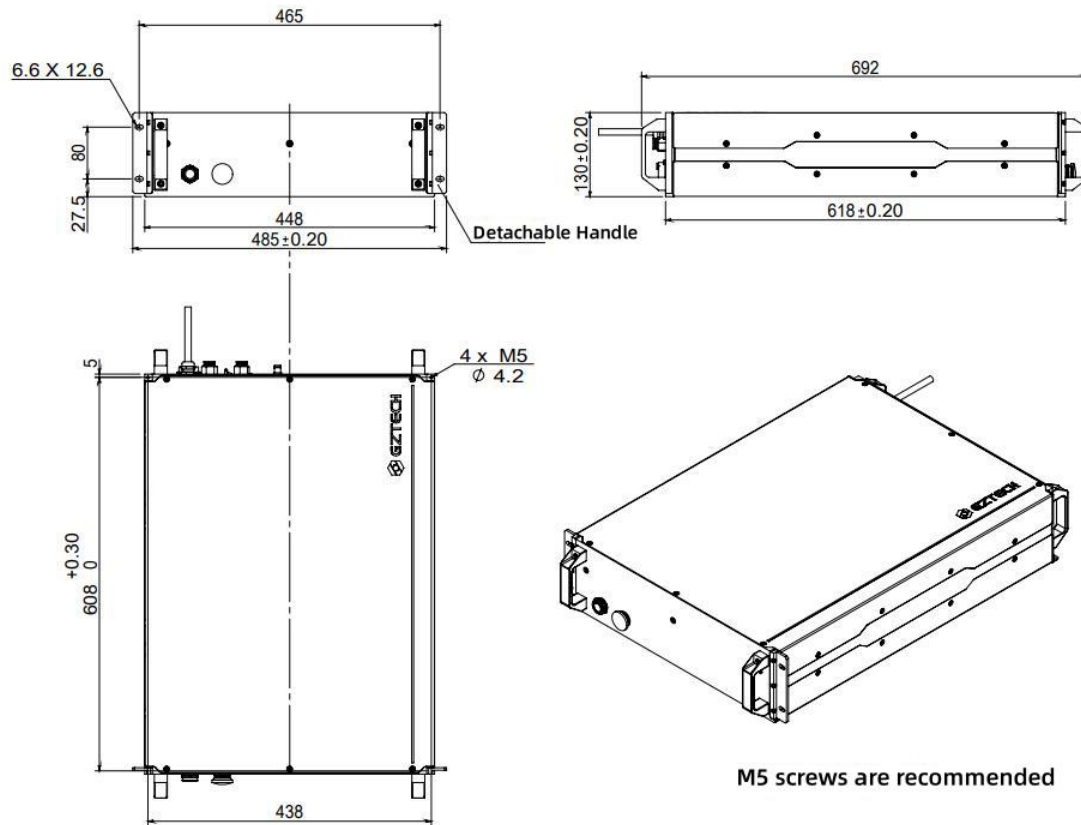
The definition of threshold frequency in the pulsed fiber laser



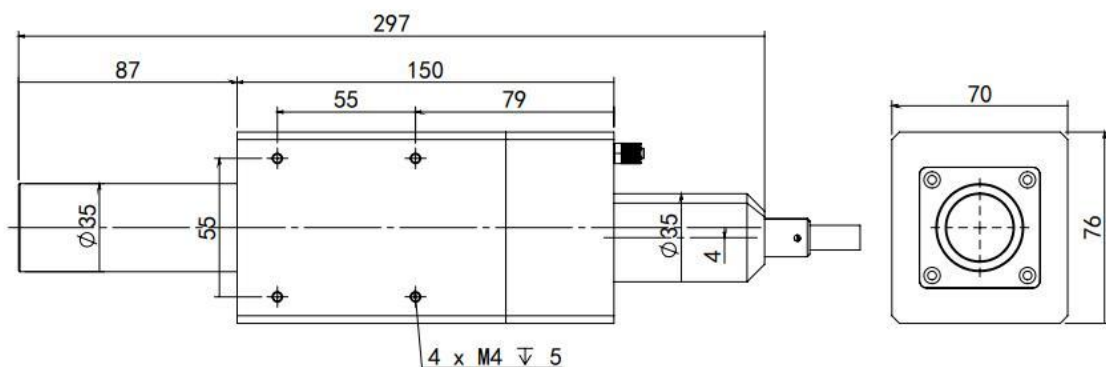
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6. Dimension



Laser dimension



Isolator dimension



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