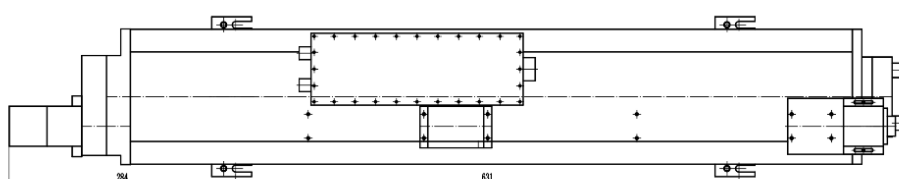
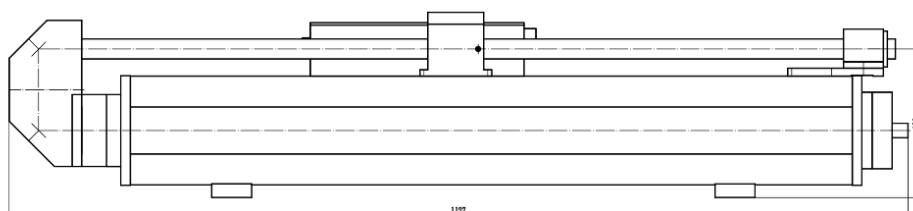
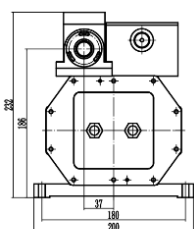


500W – M50 RF CO2 Laser

The M50 RF CO2 laser is a pulsed laser with an average power of more than 550W and a peak power of more than 1000W. The product adopts a slat discharge design, has high product reliability, and can work continuously for 7×24 hours in harsh industrial environments. The M50 laser has excellent beam quality and fast pulse rise/fall time, which can minimize the heat affected zone. The laser wavelength ranges from 9.3 to 10.6μm, and the power stability is good, which can achieve excellent processing results and improve process efficiency. These characteristics make it the laser of choice for high-performance laser processing systems, and it only requires very low use and maintenance costs. The M50 laser is an ideal choice for laser processing of many materials. Applications include laser cutting, glass splintering, automotive parts processing, cloth cutting, laser cleaning, large-format marking, medical beauty and 3D printing.



Model M50 Specification

MODEL	M50	M50h
Wavelength (μm)	10.5 - 10.7 μm	10.2 - 10.3 μm
Output Power (W) ^①	540 W	490 W
Power Stability (%) ^{②③}	< ±5%	
Peak Power(W)	1100 W	1000 W
Mode Quality (M ²)	< 1.2	
Beam Elipticity	< 1.2	
Beam Diameter(1/e ²)	11.5 ± 1 mm	
Full-Angle Beam Divergence (mrad)	< 2	
Light Outlet Height (mm)	186 mm	
Typical Polarization (parallel to baseplate)	> 100:1	
Pulse Rise/Fall Time(μs)	< 60 μs	
Pulse Width	2 - 400 μs	
Pulse Frequency (kHz)	1 - 130 kHz	
Duty Cycle Limit (%)	0 - 50%	
Weight	Laser Cavity 50 kg / RF Power 20 kg	
Dimensions (L x W x H)	Laser Cavity 1130 × 200 × 232 mm / RF Power 410 × 290 × 380 mm	
Cooling	Water	
Heat Load (W)	< 8kW	
Input Power		
DC Input Voltage (VDC)	48 VDC	
DC Input Current (A)	170 A	
Peak Current (A)	340 A	
Environment Condition		
Maximum Case Temperature	< 60°C	
Environment Temperature	5°C ~ 40°C	
Altitude	< 2000m	
Humidity	< 95%, Non-Condensing	
Shipping / Storage Environment	-10°C ~ 60°C, Non-Condensing	
Coolant		
Dynamic Coolant Flow Rate (l/min.)	24L / min	
Coolant Temperature Range	20 - 25 °C	
Coolant Maximum Pressure (kPa)	< 0.6 MPa	

The above specifications are subject to change without prior notice.

① Measured at temperature of 25°C. For every 1°C increase above 25°C, the output power decreased by approximately 1%

② Power Stability definition: At a constant water temperature, $\pm (P_{max}-P_{min})/(2P_{max})$

③ Power Stability measurement conditions: At normal working conditions, with a constant duty cycle, after 10 minutes of laser output