OPA 6

Single Mode Laser with Dynamic Beam

High Power Single Mode Laser with Dynamic Beam for material processing. By using Coherent Beam Combining (CBC) technology, we are able to offer high-power, high brightness fiber laser with ultra fast beam steering, beam shaping and power modulation. The dynamic beam high power laser enables mid-process control of the laser output. Configurable parameters, at MHz speed, including: beam spot size and shape, focal distance and power modulation. **The dynamic beam allows faster processing with better quality and finish.**

Capabilities

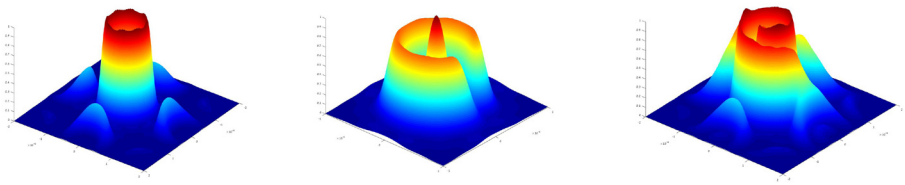
- Beam steering, shaping and focusing at MHz speed
- Variable beam shape and size at MHz speed
- Power modulation at 5KHz speed
- Full digital, real time control over beam shape and position
- Remote operation
- Large depth of focus
- Obliteration of post processing operation

Applications

- Remote materials processing
- 2D/ 3D Thin and thick metal processing
- Processing of aluminum, stainless steel and other metals
- Cutting, Welding, Drilling, Sintering
- Additive Manufacturing
- Surface treatment

Possible beam shapes

The OPA 6 arrives with 20 different beam shapes, more shapes can be added by demand using software



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Advanced Technologies

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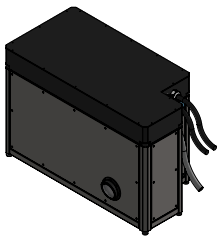
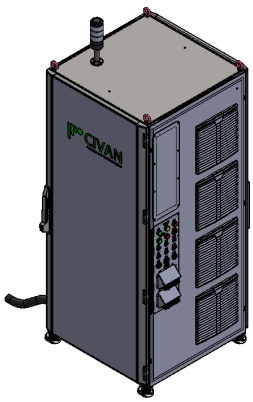
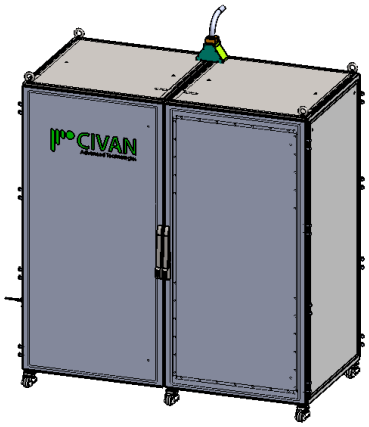
Laser Characteristics	OPA6 – 8kW	OPA6 - 14 kW	OPA6 - 21 kW
Power Output, kW (Min, Typical, Max)	7, 8, 9.5	12.7, 14, 15	20, 22, 23
Power Tunability (%)	10-100		
Power Stability (%)	±2		
M^2	<1.1		
Operating Mode	CW-QCW (5KHz)		
Central Wavelength, nm	1065 ± 5		
Polarization	Circular		
Spot Diameter (depends on the lens and according to the customer's demand)	50 – 300		
Range of Beam Steering - Beam Diameter Multiplier	5.9		
Point to Point Jump Speed, ns	25		
Electrical Characteristics			
Voltage, 3-phase, VAC	230		
Typical Consumption (kW)	40	60	90
Cooling			
Cooling Capacity (kW)	22	44	66
Water Flow Rate (LPM)	173	235	379
Temperature (C°)	20 ± 0.5		
Dimensions and Weight			
Optical Cabinet Dimensions (W*D*H) mm	1940*966*1405		
Power Supply Cabinet Dimensions (W*D*H) mm	8kW – 567*817*700 14kW - 567*817*1350 21kW – 1135*817*1350		
Optical Head Dimensions (W*D*H) mm	675*745*635		
Weight (Optical cabinet, Power supply cabinet, Optical head-AOH)	1.2T (Optical cabinet) 8kW - 220Kg, 14kW – 300kW, 21kW – 600Kg (Power supply cabinet) 115Kg (Optical head – AOH)		







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