

Single Mode High Power Fiber Laser with Dynamic Beam for Material Processing

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, include: beam spot size and shape, focal distance and power modulation. **The dynamic beam allows faster processing with better quality and finish.**



Capabilities

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

Applications

- Remote materials processing
- 2D/ 3D Thin and thick metal processing
- Processing of aluminum, stainless steel, copper and brass
- Cutting, welding, drilling and sintering
- Additive manufacturing
- Surface treatment

Features

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|-------------------------------|--|
| • Single Mode CW output power | 8kW -16kW |
| • Wavelength | 1.06 μm |
| • Beam Quality | Variable, from single-mode diffraction limited spot size |
| • Spot size | 50- 300 μm |
| • Controllable parameters | Steering, shaping and focusing |
| • Beam control and speed | Better than 0.1 |
| • Mid process | Tailored laser beams adaptable as process require |

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Optical Characteristics	OPA6 - 8 KW	OPA 20 - 4 KW
Total optical power, kW	16	8
Power in main lobe, kW	8	4
Operating Mode	CW	CW
Laser Wavelength, nm	1065 ± 5	1065 ± 5
Polarization	Linear	Linear
Spot Diameter, μ	50 – 300	50 – 300
Range of Beam steering - beam diameter multiplier	5.9	16
Point to point jump speed, ns	25	25
General Characteristics		
Optical Cabinet Dimensions (W*D*H) m ³	1.6*1.6*0.8	2.0*1.6*0.8
Weight, Kg	1100	1200
Applications		
	Cutting	Metal additive manufacturing, Welding

Possible beam shapes

