

Oriental-laser(Beijing)Co.,Ltd is engaged in high power diode pumped solid state laser system and laser marker design for economic applications. Our products are now widely used in industry, medical, research and defense applications. Our solutions offer a competitive advantage in performance, reliability and efficiency.

Oriental-laser(Beijing)Co.,Ltd has a facility of 5,000 square feet of class 10K clean room & class 100 local clean zone (according to Federal Standards 209E). oriental-laser has full production lines of high power laser diode, DPSS laser module, laser marker equipment and etc.

With China advantages of human resources and strict manufacture management, oriental-laser is pleased to offer a wide range of diode laser, DPSS laser module, diode laser marker to global users with stable quality & competitive price.

Our product lines include:

- 1) High Power Laser Diode Bars, Arrays, Stacks (808nm / 20W,40W,60W.....600W / CW, QCW)
- 2) High Power DPSS Laser Modules (1064nm / 35W, 50W, 75W, 100W, 150W, 200W.....500W / CW)
- 3) Diode Pumped Solid State Laser Systems (Q-switched DPSS Lasers)
- 4) High Power Laser Diode laser marker equipment.(Diode pumped laser marker, lamp-pumped laser marker, CO2 laser marker and etc)

Product application area:

- 1) Industry applications, such as laser marking, cutting, welding, resistor trimming and etc.
- 2) Medical applications, such as infrared illumination, cosmetology, laser surgery and etc.
- 3) Academy applications, such as laser oscillator & amplifiers, customized DPSS lasers and etc.
- 4) Defense applications, such as high power pulsed lasers, infrared detectors and etc.

CONTACT US

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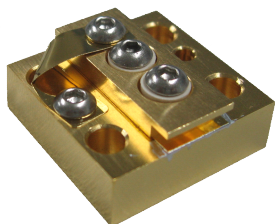
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● Laser Diode Bar



Model No.	CS20	CS40	CS60	CS100Q	CS200Q	CS300Q
Output Power	20W	40W	60W	100W	200W	300W
Wavelength	808 / 880 / 915 / 976 / 980 nm					
Operation Mode	CW			QCW		
Duty Circle	CW			≤5%		
Pulse Width	CW			≤300μs		
Typical Current	25A	40A	60A	100A	180A	260A

Note: Wavelength tolerance is ±3nm or ±10nm. Wavelength is measured at full rated power with a heat sink temperature of 25°C. The heat sink can be customized. Diode can be delivered with FAC or SAC.

● Laser Diode Horizontal Stacks

1. HSCW Series, CW Laser Diode Horizontal Stacks

MODEL NO.	HSCW-20-3	HSCW-20-4	HSCW-40-3	HSCW-40-4
Output Power	60W	80W	120W	160W
Typical Current	25A	25A	38A	38A
Operation Voltage	<6V	<8V	<6V	<8V

Note: **HSCW-20/40-N** can be customized. N≤20.



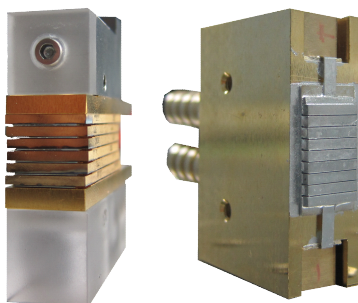
2. HSQCW Series QCW Laser Diode Horizontal Stacks

Model No.	HSQCW-100~300-N
Output Power	QCW 100W~300W*N
Repetition Rate	0-1000Hz
Pulse Width	50-300μs
Duty Circle	≤10% or ≤20%



Note: **HSQCW-100~300-N** can be customized. Single unit can be mounted with 1, 2 or 3 pcs of laser diode bar. Typical wavelength of the diode bar is 805±3nm. However, the wavelength must be specified according to the special pulse width, repetition rate and heat sink designs.

● VS Series CW/QCW Laser Diode Vertical Stacks



Model No.	VSQCW-MI/MA-100~300-N	VSCW-MI/MA-20~80-N
Single Bar Power	100W,150W,200W,300W QCW	20W,40W,60W,80W CW
Bar Total / Stack	N=1~20	N=1~20
Bar Pitch	0.5mm~2mm	1.8mm
Wavelength	808nm	808nm

Note: **VSQCW/CW-MI/MA-100~300-N** can be customized. We provide micro channel water cooling technology and high reliability macro channel water cooling technology. Single unit can be mounted with 1~10pcs of laser diode bar with macro channel heatsink. Typical wavelength of the diode bar is 808±3nm. However, the wavelength must be specified according to the special pulse width, repetition rate and heat sink designs.

● **GN Series, 35W-500W CW 1064nm DPSS Laser Modules**

Model No.	Output Power(W)	Nd:YAG(mm)	Operating current(A)	Voltage(V)
GN35	35	Φ2	18	<18
GN50-H	50	Φ3	20	<18
GN50-E	50	Φ3	25	<18
GN75-H	75	Φ3	20	<24
GN75-E	75	Φ3	25	<24
GN100	100	Φ3,Φ4	25	<30
GN120	120	Φ4	25	<36
GN160	150	Φ4	25	<50
GN200	200	Φ5	25	<70
GN300	300	Φ5,Φ6.35	25	<100
GN400	400	Φ6,Φ6.35	25	<120
GN500	500	Φ7,Φ6.35	25	<168

Note: The typical Nd:YAG doping for GN Series CW DPSS Laser Modules is 0.6% and other doping levels(0.6% ~ 1.1%) can be customized. The output power is measured with regular 300mm cavity length with flat-flat or concaved-flat resonator. The expected life time is 10,000 hours and the warranty is 13 months from the date of delivery.

Applications:

1. Metal & non-metal marking & engraving.
1. Metal & plastic welding, thin metal cutting, laser cleaning.
2. PCB, ceramic and solar cell engraving % cutting.
3. Lab & medical applications.



● **DIAMOND-PRO Series, High Beam Quality DPSS Laser for Diamond Cutting**

Model No.	Diamond-Pro-A	Diamond-Pro-B
Initial Output Power	≥35WTEMoo, M2<1.3	≥25WTEMoo, M2<1.3
Life Time Deadline	20W	15W
Test Conditions	Q-switched at 6KHz. 1000nm cavity. 2pcs 1.2mm aperture mode-selection. With polarizer.	
Typical Current	25A	16A
Max Current Allowed	35A	22A
Operation Voltage	<24V	<30V
For Diamond Type	High & Medium Quality Diamond	Medium & Low Quality Diamond

● GQ Series, mJ Level QCW / Pulsed DPSS Laser Modules

Model No.	Nd:YAG(mm)	Pumping Power(808nm)	Pulse Energy (200us)	Current(A)	Voltage(V)
GQ9	Φ2-4	900W	>30-40mJ	110	18
GQ12	Φ2-4	1200W	>40-50mJ	110	24
GQ15	Φ2-4	1500W	>60-70mJ	110	30
GQ30	Φ3-5	3KW	>120-140mJ	110	60
GQ50	Φ3-5	5KW	>200-250mJ	110	100
GQ50B	Φ3-5	5KW	>200-250mJ	200	50
GQ100B	Φ4-8	10KW	>400-500mJ	200	100
GQ200B	Φ4-8	20KW	>800-1000mJ	200	200
Customized Stack / Planar Array Side/End-Pumping QCW Module					

Note: The doping level of Nd:YAG can be customized from 0.6% to 1.1%. Pulse energy listed above is measured at 200μs/100Hz at 1064nm. Typical QCW modules are designed with duty circles ≤5% and higher duty circle modules must be customized. Small signal gain may be various according to different designs.

● MQ Series, Joule Level QCW / Pulsed DPSS Laser Modules

Model No.	Nd:YAG Diameter	Pulse Energy	Operation Voltage	Peak Current
MQ1	5-10mm	> 1J	250V	200A
MQ2	5-10mm	> 2J	500V	200A
MQ3	5-10mm	> 3J	750V	200A
MQ5	5-10mm	> 5J	1250V	200A
MQ10	5-10mm	> 10J	2500V	200A

Note: MQ Series are usually driven by a group of QCW Laser Diode Drivers synchronously and the operation voltage is the sum of these voltages. Pulse energy listed above is measured at 200μs/20Hz at 1064nm. Typical QCW modules are designed with duty circles ≤2%. MQ series are custom products.

Applications:

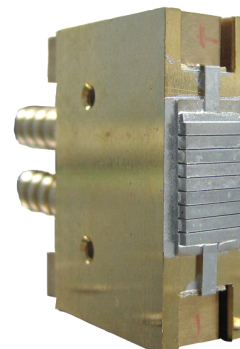
1. Direct industry applications.
2. As laser oscillator or laser seed.
3. As laser amplifiers
4. To get high peak power with Q-switch.
5. Other lab & medical applications.
6. High repetition rate laser rangefinder.
7. High pulse energy military applications.



● Diode Lasers for Medical & Aesthetic Applications

1. 808nm Diode Laser Module for Hair Removal(Macro channel cooling technology)

Output Power	360W	480W	600W
Wavelength	808nm(800-810nm)		
Typical Pulse Width	1ms		
Rpetition Rate	200 Hz		
Max Duty Circle	20%		
Operation Current	35A	35A	35A
Operation Voltage	<12V	<16V	<20V
Cooling Requirement	1. Flow Rate: 4L/min +-20%. 2. Water quality: Industrial grade, anti-freeze possible, particle filter<100µm 3. Chiller water Temperature: 15°C-25°C.		



2. 808nm Diode Laser Module for Hair Removal(Micro channel cooling technology)



Output Power	350W	420W	560W	630W
Wavelength	808nm(800-810nm)			
Typical Pulse Width	10ms~400ms			
Rpetition Rate	0~40Hz			
Max Duty Circle	40%			
Operation Current	80A	80A	80A	80A
Operation Voltage	<10V	<12V	<16V	<18V
Cooling Requirement	1. Flow Rate:0.3L/min +-10% per Bar 2. Water quality: Deionized 2-10 µs/cm, mixed bed ion exchanger,particle filter<25µm 3. Chiller water Temperature: 15°C-25°C.			

● Diode Lasers for Industrial Applications

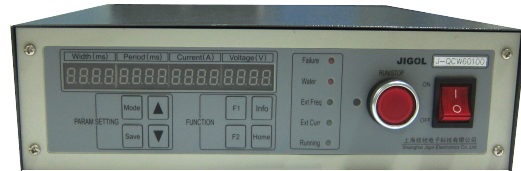
1. Diode Laser for Material Surface Treatment

Output Power	600W	1000W	2000W
Operation Mode	CW / Pulsed		
Wavelength	808nm / 940nm/ 980nm		
Spot Size	5×10mm~30×30mm		

Laser Diode driver & DPSS laser system

● LDD Series, CW DPSS Laser Diode Drivers

Model No.	Max Voltage	Max Current	For Laser Modules
GN520	24V	22A	GN35,GN50-H,GN75-H
GN720	24V	30A	GN50-E,GN75-E
GN920	36V	30A	GN100, GN120
GN600S	12V	50A	VSCW-MI-60-6



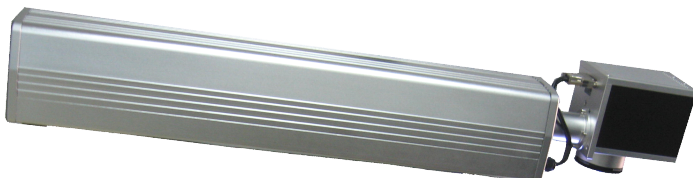
● LDDQ Series, QCW / pulsed Laser Diode Drivers

Model No.	Average Output Power	Max Current	Max Voltage	Pulse Width
LDDQ-100	≤100W	≤200A	≤100V	50μs-1ms
LDDQ-250	≤250W	≤200A	≤100V	50μs-1ms

Note: LDDQ Series are custom products.

● Industry DPSS Laser Systems

Model No.	SL-20T	SL-30M	SL-50M	DIAMOND-A	DIAMOND-B
Laser Type	1064nm Q-switched DPSS Lasers				
Average Power (10KHz)	20W	30W	50W	25W	35W
Repetition Rate	200Hz-50KHz				
Pulse Width	<200ns				
Beam Mode	TEM ₀₀	Multi-Mode	Multi-Mode	TEM ₀₀	TEM ₀₀
Beam Quality	M ₂ <1.5	M ₂ <6	M ₂ <6	M ₂ <1.3	M ₂ <1.3
Polarization	Random			Linear Polarization	
Dimension & Weight	20×20×75CM, ~10KG			20×20×120CM, ~15KG	
Applications	Metal & Plastic Marking & Engraving, PCB, Ceramic & Sola Cell Cutting			Diamond Cutting & Drilling	



● Custom DPSS Laser Systems

Oriental-Laser (Beijing) Co., Ltd is able to provide various types of custom DPSS lasers for special applications. Please contact our engineers for technical supports.



Oriental-Laser (Beijing) Co., Ltd is able to provide lasers diodes repair and refurbishment services for various laser heads from different manufacturers all over the world. Our experienced engineers are able to repair different laser heads and provide after-sale services, including:

- Northrop Grumman (Cutting Edge Optronics, CEO Laser)'s laser heads, including RB, RE and other series (Photo Top-Right 1 & Bottom-Right 2).
- LEE Laser's Diode Pumped Laser Heads (Photo: Top-Left 2)
- Rofin's Diode Pumped Laser Heads (Photo: Top-Left 1)
- FOBA's Diode Pumped Laser Heads (Photo: Bottom-Left 1)
- Han's Laser's Diode Pumped Laser Heads (Photo: Top-Right 2)
- Jenoptik's laser diode stack (Photo: Bottom-Left 2)
- Dilas's laser diode stack (Photo: Bottom-Right 1)
- Other DPSS laser heads from NEC and etc

Note: Northrop Grumman, Cutting Edge Optronics, CEO Laser, Rofin, FOBA, Han's Laser, Jenoptik, Dilas, NCE are trade marks which belong to the companies above.

Oriental-Laser (Beijing) Co., Ltd provides various services to both laser manufacturers and end users.

- Local Services with Fast Speed

Usually regular laser heads can be repaired and returned within 3 days. It will reduce the cost for cutting down the product lines for the industry manufacturers.

- High Quality Diodes

The repaired DPSS lasers will be equal or even better than original laser heads in performance, with powerful output power and excellent beam quality.

- Lower Cost

Reduce the cost for laser system maintenance

- Long Time Warranty

The repaired laser heads will be promised at least one year warranty.

- Flexible Customization for Special Laser Heads