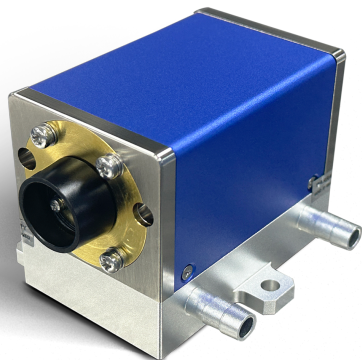


CW Diode-Pumped Solid-State Laser

01 Features



High-power
pumping capability



High Gain
Uniformity



Macrochannel
water cooling



Low Maintenance
Cost



Compact Design



Long Lifespan

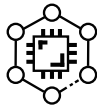
02 Applications



Nano/picosecond
laser amplifier



High-gain Pulse-
Pumped Amplifier



Micro-nano
Fabrication



Laser Cutting



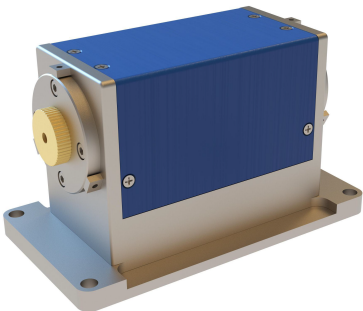
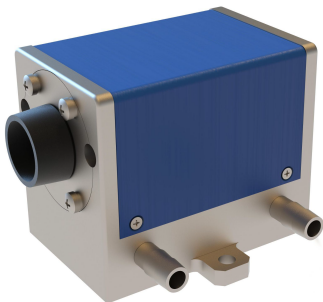
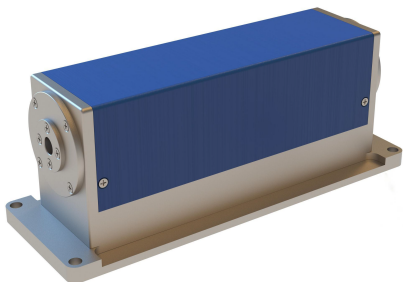
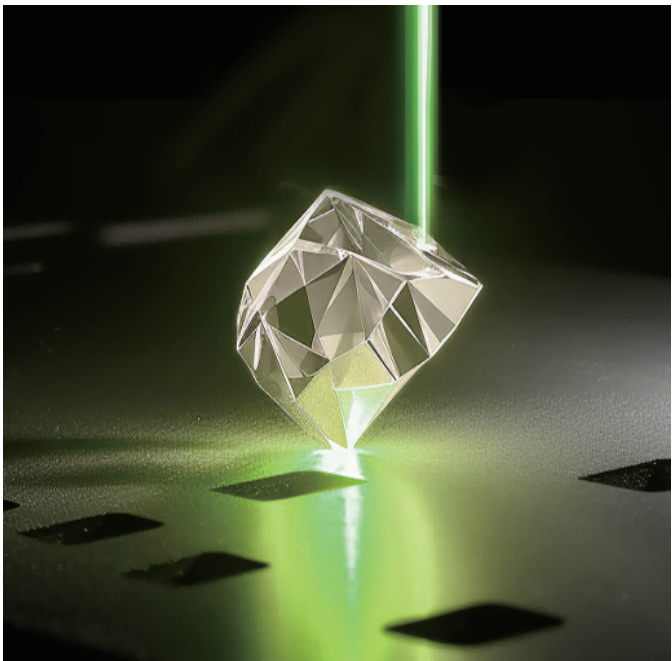
Environment



Meteorology

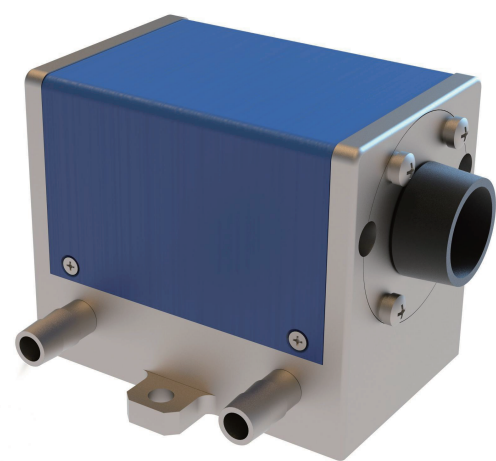


Medical



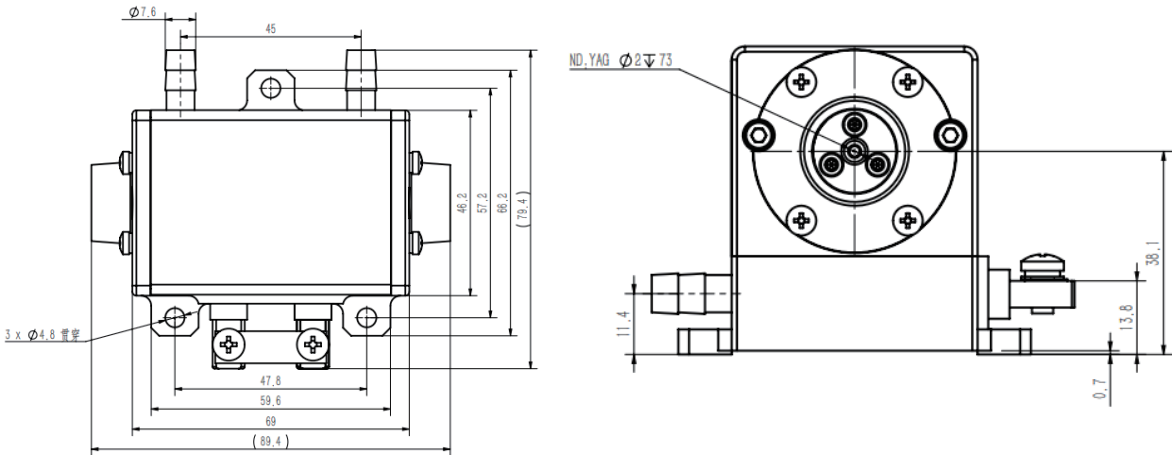
CW Diode-Pumped Solid-State Laser

Technical Datasheet

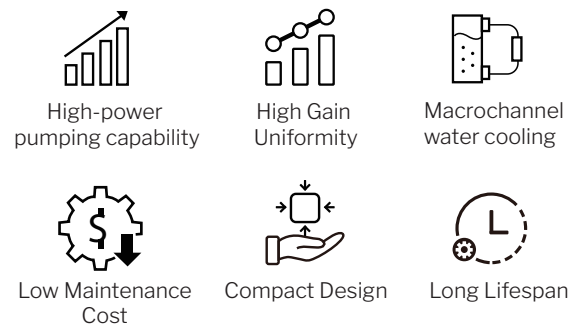
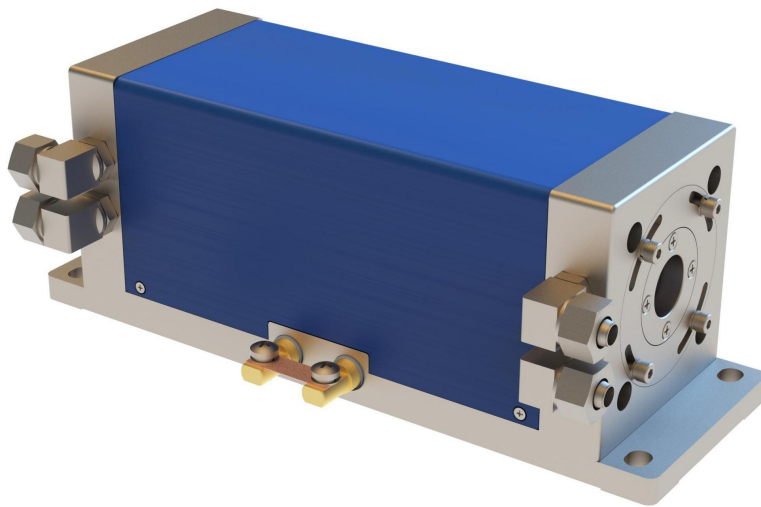


	C240-3	C270-3	C300-2	C300-3	C600-4	C1500-5	Remarks
Pump Wavelength	808±3nm						@25°C water temp.
Pump Spectral Width	4nm						
Wavelength/Temp. Coefficient	0.28nm/°C						Customizable Power Options
Rated Pump Power	270W	270W	300W	300W	600W	1500W	
Threshold Current	8A	8A	15A	8A	8A	8A	
Operating Current	25A	20A	25A	25A	30A	30A	
Operating Voltage	24V	28V	24V	24V	40V	100V	
Nd:YAG Doping	0.6at.%						
Excitation Wavelength	1064nm						Customizable Doping and Concentration
Output Power	75W(1)	75W(1)	50W(1)	120W(2)	230W(2)	500W(2)	
Crystal Size	ø3×67mm	ø3×78mm	ø2×73mm	ø3×67mm	ø4×95mm	ø5.25×167mm	Other size is customizable
Recommended Water Cooling Temp.	25°C						
Recommended Water Pressure	0.25~0.4MPa						
Recommended Water Flow	>8L/min	>8L/min	>8L/min	>8L/min	>10L/min	>14L/min	
Module Weight	1kg	1kg	1.5kg	1.5kg	3kg	4.5kg	

(1) The output power test condition is: 900mm cavity length, T=20%, parallel plane mirrors.
(2) The output power test condition is: 300mm cavity length, T=20%, parallel plane mirrors.
(*) For more information on pump power, operating current, gain medium specifications, and doping conditions, please contact Lumispot Optoelectronics Group.

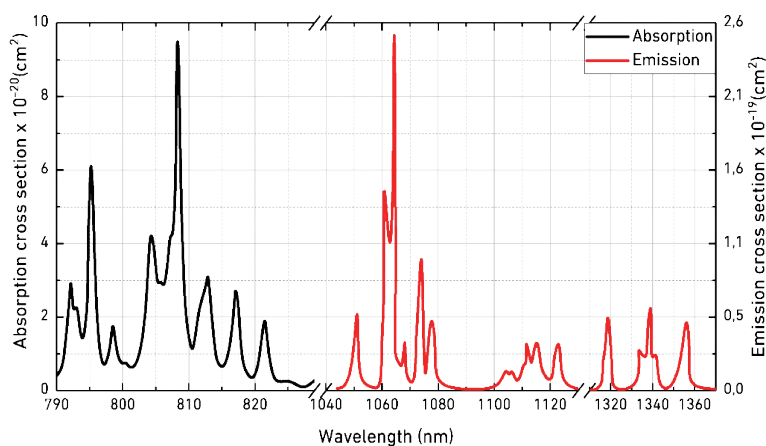
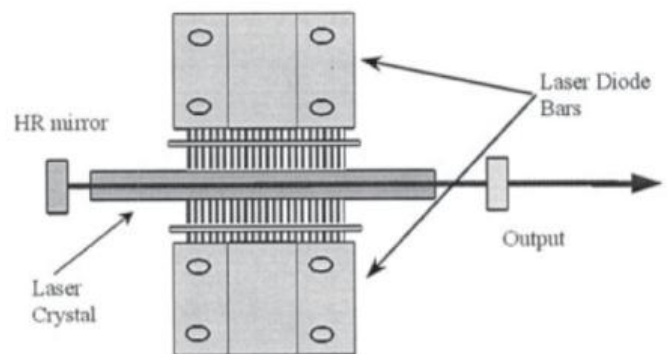


QCW Diode Pumped Nd: YAG Laser



Side pumping, also known as transverse pumping, refers to the process where the pumping light from the side of the gain medium is directed into the gain medium, and the laser mode oscillates along the length direction of the gain medium.

Characteristic of side pumping: The direction of the pumping light is perpendicular to the direction of laser output.

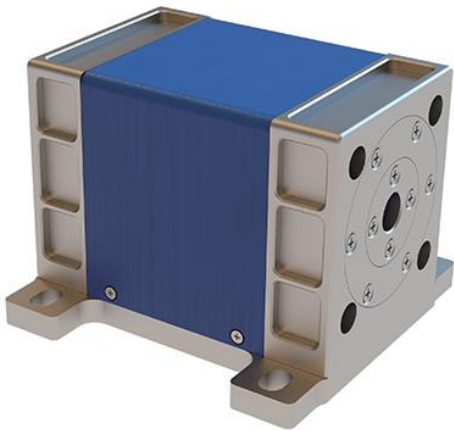


The DPSSL modules use Nd:YAG crystals as the laser medium. These crystals have the characteristic of absorbing light at the 808nm wavelength and then undergoing a four-level transition to emit a laser line at 1064nm. In conventional continuous-wave side-pumped solid-state lasers, the doping concentration of the Nd:YAG crystal is typically between 0.6atm% and 1.1atm%.

Our company's DPSSL Laser modules often use crystals with a doping concentration of 0.6atm%. The standard crystal lengths range from 30 to 200mm, and the crystal diameters vary from Ø2mm to Ø15mm.

QCW Diode Pumped Nd: YAG Laser

Technical Datasheet



	Q3000-3	Q6000-8	Q16000-10	Q10000-15	Remarks
Pump Wavelength /nm	808±3	808±3	808±3	808±3	@25°C water temp.
Pump Spectral Width /nm	4	4	4	4	
Rated Pump Power /W	3000	6000	16000	10000	Customizable Power Options
Pulse Width /μs	300	300	300	250	
Repetition Frequency /Hz	100	100	100	500	
Threshold Current /A	17	17	17	10	
Operating Current /A	100	100	100	50	
Operating Voltage /V	60	120	320	400	
ND:YAG Doping	0.6at.%	0.6at.%	0.6at.%	0.6at.%	Customizable Doping and Concentration
Excitation Wavelength /nm	1064	1064	1064	1064	
Crystal Size /mm	ø3×95	ø8×85	ø10×135	ø15×167	Low Power Mode Enabled
Recommended Water Cooling Temperature /°C	25	25	25	25	
Recommended Water Pressure /MPa	0.3~0.5	0.3~0.5	0.3~0.5	0.3~0.5	
Recommended Water Flow Rate / L/min	>12	>12	>12	>16	

*Parameters can be customized as demand.



Nano/picosecond laser amplifier



High-gain Pulse-Pumped Amplifier



Laser Cutting



Micro-nano Fabrication



Environment

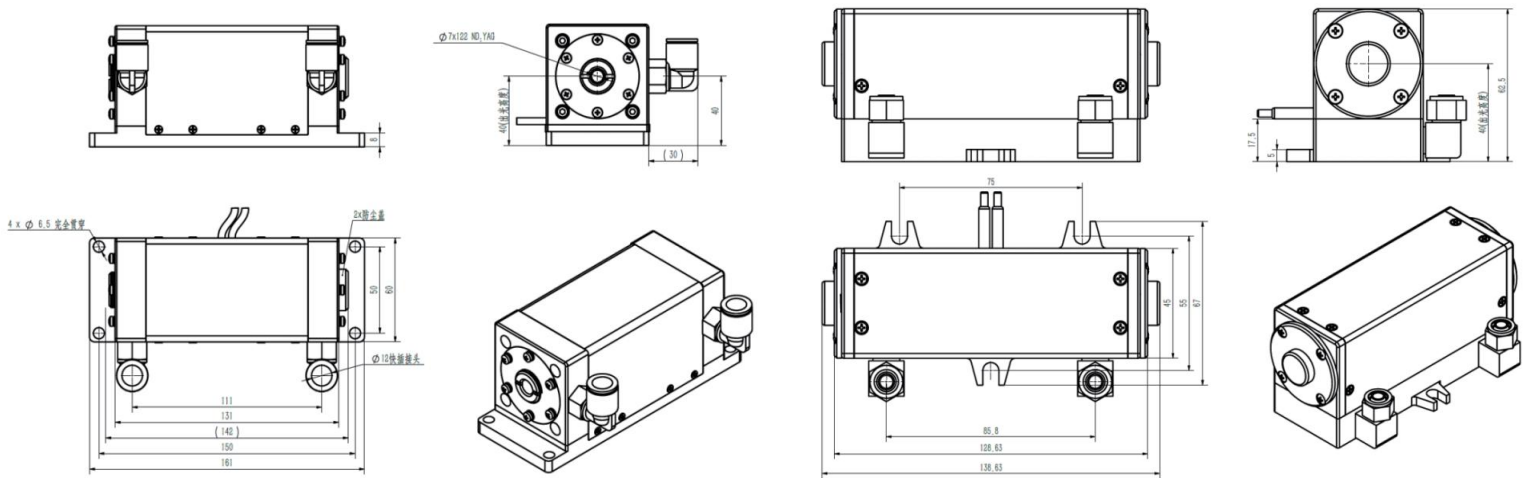


Meteorology



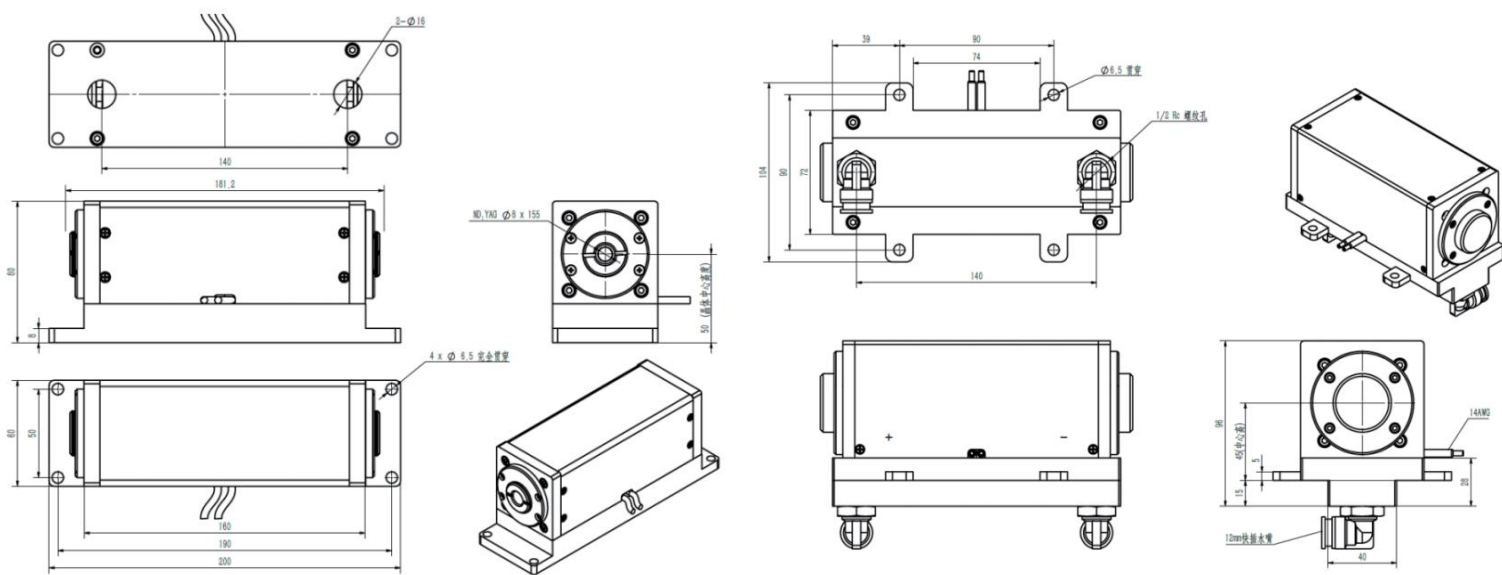
Medical

Dimensional Graph



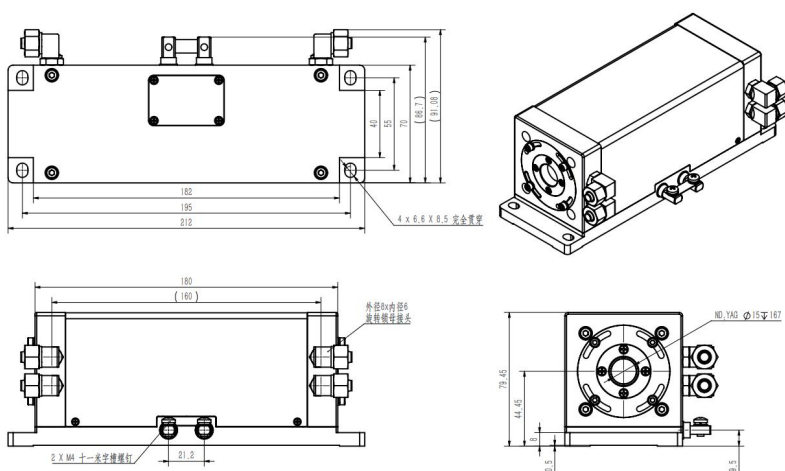
Q5000-7

Q6000-4



Q15000-8

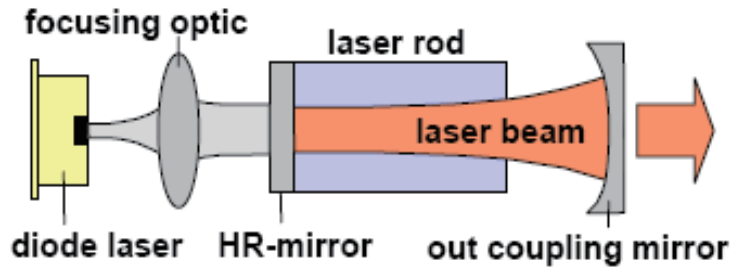
Q20000-10



Q10000-15

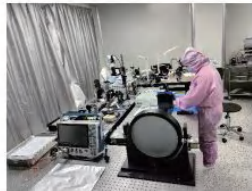
QCW Diode Pumped Nd: YAG Laser

Structure & Primary Production Procedures



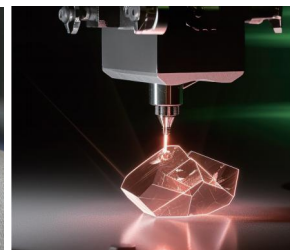
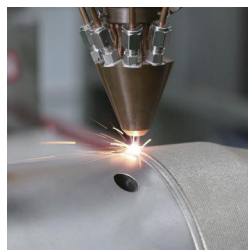
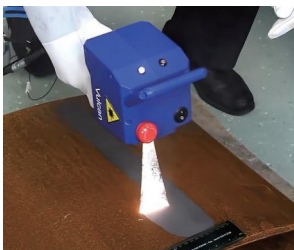
Primary Production Procedures

Undergoing rigorous pre-shipment quality testing



OEM Service

Customization Service available to support all kinds of needs



Laser cleaning, laser cladding, laser cutting, and gemstone cutting cases.