



CW Microchannel Water-Cooled Vertical Diode Laser Stack LDVxxxCxWI

Data Sheet



Description

The LDVxxxCxWI is a vertical stacked diode laser providing 40W/bar, 80W/bar, or 100W/bar CW and generating output powers up to 1600W. The CW diode laser array employs micro-channels and enables water-cooling. The diode laser array is designed to provide the highest reliability and efficiency in pumping, industrial and medical applications.

Features

- 808nm/915nm/940nm/980nm/1064nm Micro-Channel Water-Cooled Vertical Stack
- Containing up to 16 bars (Up to 100W CW/bar)
- High output power: Up to 1600W
- Spectral width: <5 nm
- High reliability, High efficiency

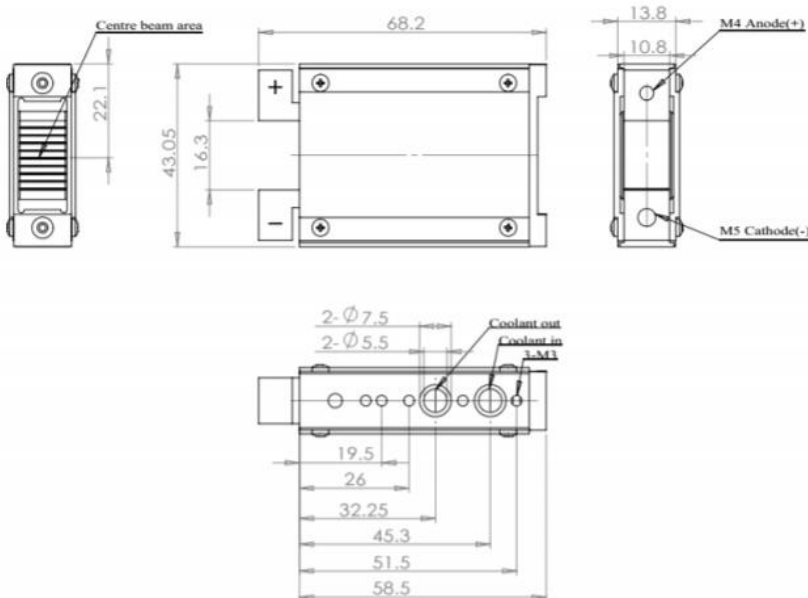
Applications

- Pumping
- Industrial
- Medical

Specifications (T_C = 25°C)

Optical Characteristics											
Parameter	Symbol	Value									Unit
Center wavelength	λ_c	808/9xx/1064			808/9xx			808/9xx			nm
Operation mode		CW									-
Maximum output power	P _o	200	360	640	400	720	1280	500	900	1600	W
Output power/bar	P _o /bar	40	40	40	80	80	80	100	100	100	W
Bar quantity		5	9	16	5	9	16	5	9	16	-
Bar space		1.8									mm
Spectral width	$\Delta\lambda$	<5									nm
Fast axis divergence	θ_{\perp}	<39									deg
Slow axis divergence	θ_{\parallel}	<10									deg
Electrical Characteristics											
Parameter	Symbol	Value									Unit
Threshold current	I _{th}	<7			<25			<25			A
Operating current	I _{op}	<40			<95			<110			A
Operating voltage/bar	V _{op}	<2.0			<2.0			<2.0			V
Thermal Characteristics											
Parameter	Symbol	Value									Unit
Max. inlet pressure		65									psi
Cooling rate/bar		≥0.3									1/min
Cooling medium particle size		≤15									μm
Cooling medium conductivity		5 to 10									μs/cm
Operating temperature	T _{op}	15 to 35									°C
Storage temperature	T _{stg}	-10 to +60									°C

Mechanical Outline (unit: mm)



Notes

- Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.
- Please make sure that the laser diode is operated under the temperature between 15 °C and 35 °C, as high temperature will increase threshold current, decrease exchange rate and accelerate the aging.
- Please take measures to avoid condensation, which will cause aging of laser diode.
- Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- Observing visible or invisible laser beams with human eye directly, or indirectly, can cause permanent damage. Do not look directly into the laser output port.