



QCW Conduction-Cooled Vertical Diode Laser Stack LDVxxxQxWC

Data Sheet



Description

The LDVxxxQxWC is a vertical stacked diode laser providing 100W/bar, 200W/bar or 300W/bar QCW and generating output powers up to 6000W. The QCW diode laser array is conduction-cooled and requires no water cooling. The diode laser array is designed to provide the highest reliability and efficiency in pumping, industrial and medical applications.

Features

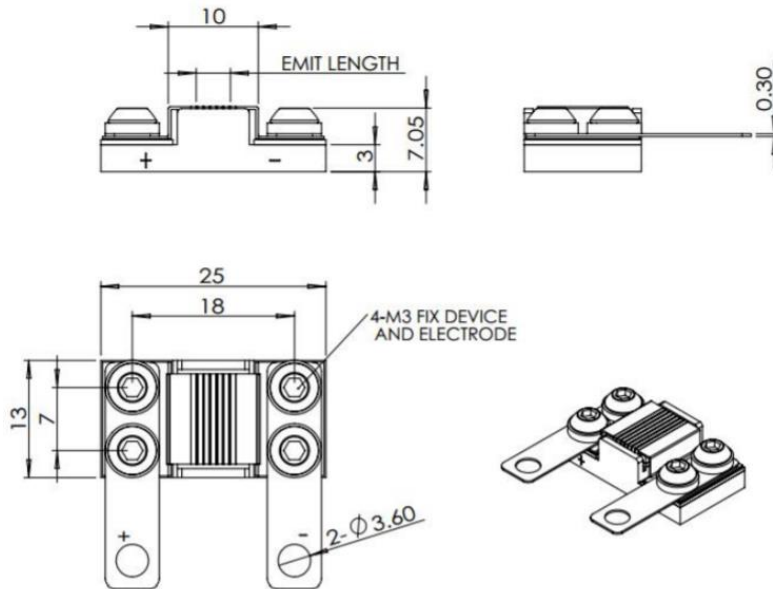
- 808nm/940nm Conduction-Cooled Vertical Stack
- Containing up to 20 bars (Up to 300W CW/bar)
- High output power: Up to 6000W
- Spectral width: <5 nm
- High reliability, High efficiency

Applications

- Pumping
- Industrial
- Medical

Specifications (T_c = 25°C)

Optical Characteristics									
Parameter	Symbol	Value							Unit
Center wavelength	λ_c	808/940				808			nm
Operation mode		QCW							-
Maximum output power	P _o	500	1000	2000	4000	1500	3000	6000	W
Output power/bar	P _o /bar	100	100	100	200	300	300	300	W
Bar quantity		5	10	20	20	5	10	20	-
Spectral width	$\Delta\lambda$	<5							nm
Wavelength Temperature coefficient		0.28							nm/°C
Pulse width		<500							μs
Duty ratio		≤4							%
Fast axis divergence	θ_{\perp}	<39							deg
Slow axis divergence	θ_{\parallel}	<10							deg
Electrical Characteristics									
Parameter	Symbol	Value							Unit
Threshold current	I _{th}	<25	<25	<25	<30	<30	<30	<30	A
Operating current	I _{op}	<110	<110	<110	<200	<300	<300	<300	A
Operating voltage/bar	V _{op}	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	V
Thermal Characteristics									
Parameter	Symbol	Value							Unit
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.