



QCW Macrochannel Water-Cooled Horizontal Diode Laser Array LDHxxxQxWA

Data Sheet



Description

The LDHxxxQxWA is four-bar horizontal linear diode laser array providing up to 300W/bar QCW and generating output powers up to 1200W. The QCW diode laser array employs macro-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/940nm Macro-Channel Water-Cooled Horizontal Linear Array
- 4 bars (Up to 300W QCW/bar)
- High output power: Up to 1200W
- Spectral width: <5 nm
- High reliability, High efficiency

Applications

- Pumping
- Industrial
- Medical

Product Overview

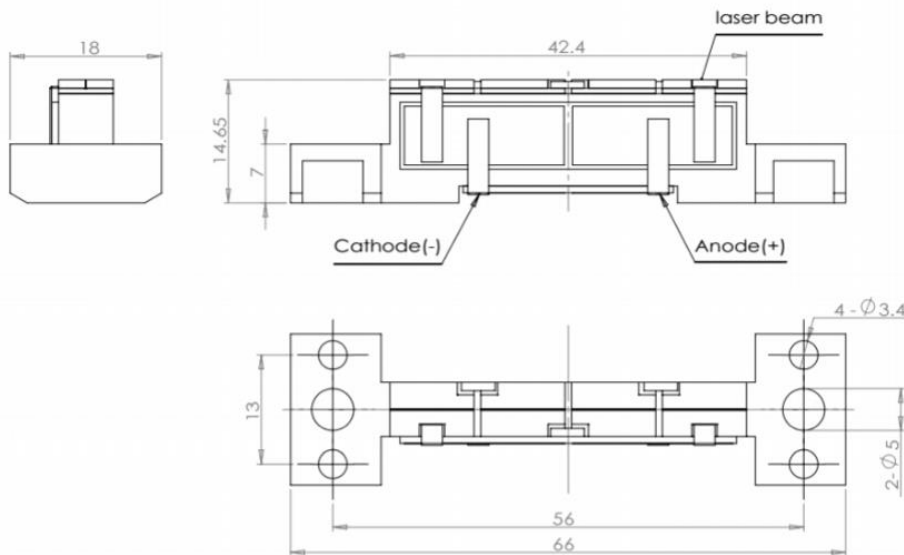
The following table lists the available part numbers, as well as the total output power, output power per bar, number of bars, and cooling method of each of the part numbers.

Part Number	Total Output Power	Output Power per Bar	Number of Bars	Cooling Method
LDH808Q400WA	400W	100W	4	Macrochannel Water-Cooled
LDH808Q800WA	800W	200W	4	Macrochannel Water-Cooled
LDH808Q1200WA	1200W	300W	4	Macrochannel Water-Cooled
LDH940Q400WA	400W	100W	4	Macrochannel Water-Cooled
LDH940Q800WA	800W	200W	4	Macrochannel Water-Cooled

Specifications ($T_c = 25^\circ\text{C}$)

Optical Characteristics					
Parameter	Symbol	Value			Unit
Center wavelength	λ_c	808/940			nm
Operation mode		QCW			-
Output power	P_o	400	800	1200	W
Output power/bar	P_o/bar	100	200	300	W
Spectral width	$\Delta\lambda$	<5			nm
Bar quantity		4			-
Wavelength Temperature coefficient		0.28			nm/ $^\circ\text{C}$
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	<30	<30	A
Operating current	I_{op}	<110	<200	<300	A
Operating voltage/bar	V_{op}	<2.0	<2.0	<2.0	V
Thermal Characteristics					
Parameter	Symbol	Value			Unit
Operating temperature	T_{op}	15 to 35			$^\circ\text{C}$
Storage temperature	T_{stg}	-10 to +60			$^\circ\text{C}$

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 $^\circ\text{C}$ and 35 $^\circ\text{C}$, 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.