



# CW Macrochannel Water-Cooled Horizontal Diode Laser Array LDHxxxCxWA

Data Sheet



## Description

The LDHxxxCxWA is four-bar horizontal linear diode laser array providing up to 100W/bar CW and generating output powers up to 400W. The CW 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/915nm/940nm/980nm/1064nm Macro-Channel Water-Cooled Horizontal Linear Array
- 4 bars (Up to 100W CW/bar)
- High output power: Up to 400W CW
- Spectral width: <5 nm
- High reliability
- High efficiency

## Applications

- Pumping
- Industrial
- Medical

## Product Overview

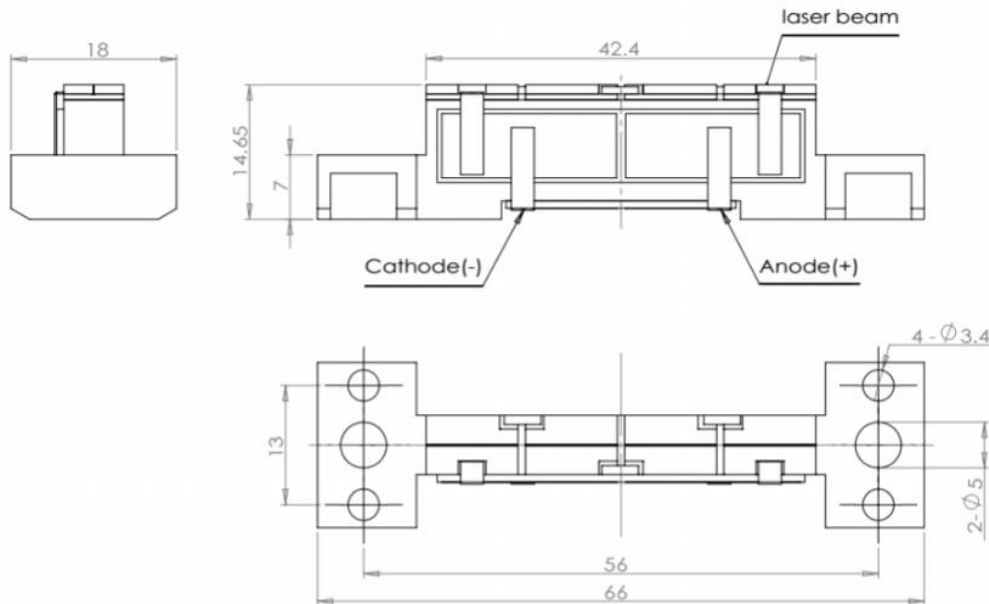
The following table lists the available part numbers, as well as the total output power, output power per bar, number of bars, and cooling method of each of the part numbers.

Part Number	Total Output Power	Output Power per Bar	Number of Bars	Cooling Method
LDH808C160WA	160W	40W	4	Macrochannel Water-Cooled
LDH808C240WA	240W	60W	4	Macrochannel Water-Cooled
LDH808C320WA	320W	80W	4	Macrochannel Water-Cooled
LDH808C400WA	400W	100W	4	Macrochannel Water-Cooled
LDH915C160WA	160W	40W	4	Macrochannel Water-Cooled
LDH915C240WA	240W	60W	4	Macrochannel Water-Cooled
LDH915C320WA	320W	80W	4	Macrochannel Water-Cooled
LDH915C400WA	400W	100W	4	Macrochannel Water-Cooled
LDH940C160WA	160W	40W	4	Macrochannel Water-Cooled
LDH940C240WA	240W	60W	4	Macrochannel Water-Cooled
LDH940C320WA	320W	80W	4	Macrochannel Water-Cooled
LDH940C400WA	400W	100W	4	Macrochannel Water-Cooled
LDH980C160WA	160W	40W	4	Macrochannel Water-Cooled
LDH980C240WA	240W	60W	4	Macrochannel Water-Cooled
LDH980C320WA	320W	80W	4	Macrochannel Water-Cooled
LDH980C400WA	400W	100W	4	Macrochannel Water-Cooled
LDH1064C160WA	160W	40W	4	Macrochannel Water-Cooled

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

Optical Characteristics						
Parameter	Symbol	Value				Unit
Center wavelength	$\lambda_c$	808/9xx/1064	808/9xx	808/9xx	808/9xx	nm
Operation mode		CW				-
Output power	$P_o$	160	240	320	400	W
Output power/bar	$P_o/\text{bar}$	40	60	80	100	W
Bar quantity		4				-
Spectral width	$\Delta\lambda$	<5				nm
Wavelength Temperature coefficient		0.28				nm/°C
Fast axis divergence	$\theta_{\perp}$	<39				deg
Slow axis divergence	$\theta_{\parallel}$	<10				deg
Electrical Characteristics						
Parameter	Symbol	Value				Unit
Threshold current	$I_{th}$	<7	<15	<25	<25	A
Operating current	$I_{op}$	<40	<70	<95	<110	A
Operating voltage/bar	$V_{op}$	<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.