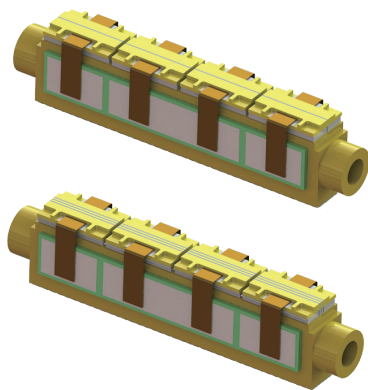


# WA-4 Series Water Cooled Diode Laser Array



WA-4 Series water cooled diode laser array is a narrow linewidth, high peak power diode laser array product developed by RealLight. The WA-4 series is composed of 4 stacks arranged in a linear configuration, with 1-3 bars in each stack, and each bar has a power of 120W/250W. Other powers, wavelengths and packaging forms can be customized.

## Key Features

- ◆ AuSn solder for packaging
- ◆ Compact design
- ◆ High peak power
- ◆ High reliability

## Applications

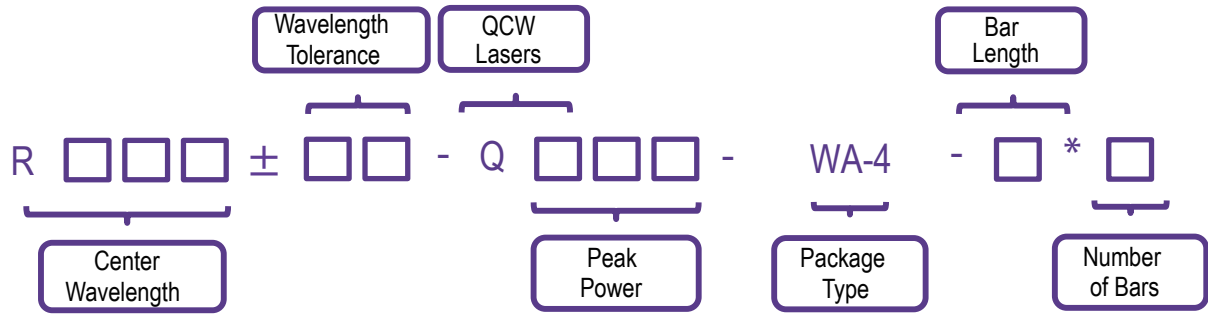
- Pumping source
- Scientific research

## Technical Specifications

Optical Parameters	
Center Wavelength $\lambda_c$ (nm)	790-812
Wavelength Tolerance $\delta\lambda_c$ (nm)	$\pm 3$
Output Power per Bar (W)	120      250
Number of Stacks	4
Stack-to-Stack Pitch (mm)	0.5
Maximum Peak Power (W)	1500      2000
Number of Bars per Stack	1-3      1-2
Bar-to-Bar Pitch (mm)	0.43      0.55
Spectral Width (FWHM) (nm)	<6
Fast Axis Divergence Angle (FWHM) ( $^\circ$ )	$\leq 40$
Slow Axis Divergence Angle (FWHM) ( $^\circ$ )	$\leq 10$
Wavelength Temperature Coefficient (nm/ $^\circ$ C)	$\sim 0.3$
Electrical Parameters	
EO Conversion Efficiency (%)	$\geq 50$
Threshold Current $I_{th}$ (A)	$\leq 20$ $\leq 30$
Operating Current $I_{op}$ (A)	120      220
Operating Voltage $V_{op}$ of each Bar (V)	$\leq 2.1$
Duty Cycle (%)	$\leq 3$
Pulse Width ( $\mu$ s)	$\leq 300$
Repetition Rate (Hz)	$\leq 100$
Environment Parameters	
Water Flow Rate (L/min)	$\geq 3$
Water Pressure (Mpa)	$\leq 0.5$
Operating Temperature ( $^\circ$ C)	10-40
Storage Temperature ( $^\circ$ C)	-20~60

1. Wavelengths from 940nm to 960nm available upon request.
2. Custom number of bars and bar-to-bar pitch are available upon request.
3. The installation and wiring can be customized to meet the customer's requirements.
4. All the data in the above table are the typical values obtained from the tests at room temperature of 25  $^\circ$ C, and the final data is subject to the final test report.

## Part Numbering Schema



## Mechanical Drawings (in mm)

