



JENOPTIK

## Horizontal diode laser stacks: cw, passively cooled with tap water, wave guide JOLD-310-HS-4L

Design 215850424

### Features

- High optical output power of 310 W cw
- Wavelengths: 807 and 938 nm
- High efficiency, low divergences
- Long lifetime > 2 years, high reliability

### Applications

- Pumping of solid-state lasers
- Material processing

# Horizontal diode laser stacks | cw, passively cooled with tap water, wave guide

## JOLD-310-HS-4L

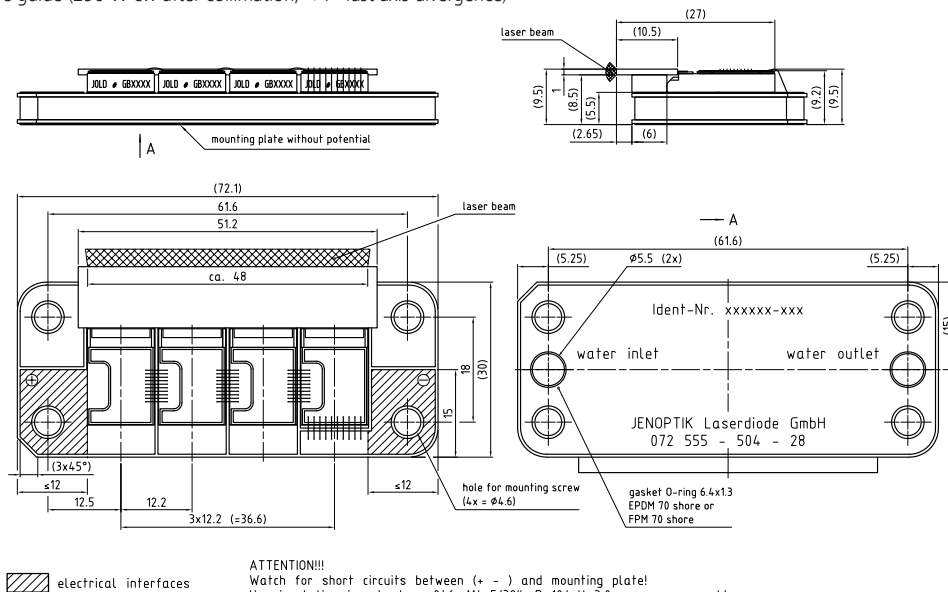
### Specifications (Start of life)

### JOLD-310-HS-4L Design 215850424

Operation Mode	cw, power modulation only between threshold and maximum current		
Maximum Optical Output Power after Wave Guide	310	310	W
Center Wavelength at 25 °C	807	938	nm
Center Wavelength Variation at 25 °C	3	5	nm
Typical Spectral Bandwidth (FWHM)	5	5	nm
Maximum Spectral Bandwidth (FWHM)	6	6	nm
Typical Operation Current	92	92	A
Maximum Operation Current	102	102	A
Typical Threshold Current	20	15	A
Maximum Threshold Current	24	19	A
Typical Slope	4.4	4.1	W/A
Minimum Slope	3.7	3.5	W/A
Maximum Operating Voltage	8	8	V
Anode, Cathode Connectors	Thru holes		
Notes	Heat exchanger is potential free, watch current connectors for shortening		
Wave Guide	Thickness: 1 mm, length: 10.5 mm		
Operation Conditions	Cleanroom class ISO 5, non-condensing atmosphere		
Expected Lifetime	> 2 years, under qualification		
<b>Cooling</b>			
Flow Rate	2 l/min		
Flow Rate Tolerance	± 10 %		
Typical Pressure Drop	60 kPa		
Maximum Inlet Pressure	500 kPa		
Water Temperature at Inlet	15 ... 35 °C		
Water Quality	Industrial grade, anti-freeze possible, particle filter < 100 µm (not included)		
Coolant Inlet/Outlet Diameter	App. 6 mm, to be sealed via o-rings (6.4 mm x 1.3 mm)		
Cooling System	Any materials that in combination with copper would form galvanic elements (e.g. Al, Zn, Brass) are not allowed.		
Note	Drawing of connecting base plate on request		

### See Safety and General User Manual Information!

Options on request: 976 nm; designs with different number of submounts; other wave guide sizes and geometries; fast axis collimation instead of wave guide (290 W cw after collimation, < 1° fast axis divergence)



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