



JENOPTIK

Vertical diode laser stacks: qcw, actively cooled JOLD-x-QANN-xA

Designs

- 210480424 (4 submounts)
- 210480624 (6 submounts)
- 210480824 (8 submounts)
- 210481024 (10 submounts)
- 210481224 (12 submounts)

Features

- High optical output power up to 100 W qcw per bar
- Wavelengths: 808 and 938 nm
- High efficiency, low divergences
- Lifetime > 1 GShot, high reliability

Applications

- Pumping of solid-state lasers and fiber lasers
- Material processing
- Medical applications (e.g. hair removal)

Vertical diode laser stacks | qcw, actively cooled

JOLD-x-QANN-xA

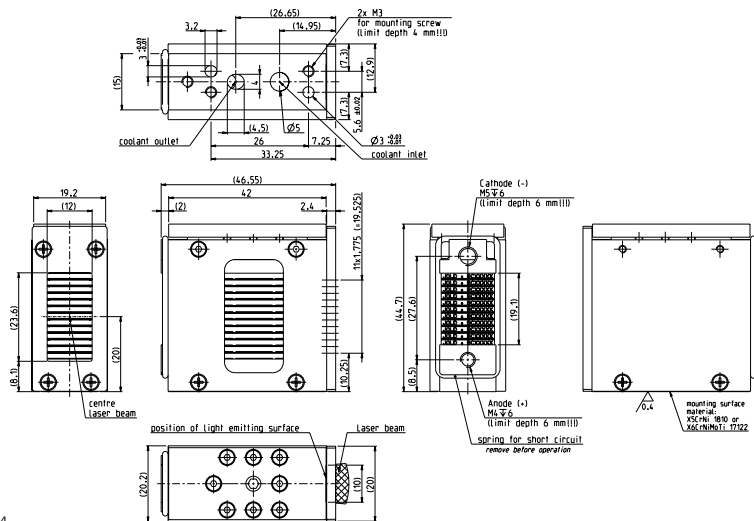
Specifications (start of life)

JOLD-x-QANN-xA Designs 210480424 (4 submounts), 210480624 (6 submounts), 210480824 (8 submounts), 210481024 (10 submounts), 210481224 (12 submounts)

Operation Mode	qcw											
Maximum Pulse Length/Duty Cycle	≤ 0.3 ms/≤ 20 %											
Maximum Optical Output Power	400	600	800	1000	1200	400	600	800	1000	1200	W	
Number of Submounts	4	6	8	10	12	4	6	8	10	12		
Power per Submount	100	100	100	100	100	100	100	100	100	100	W	
Center Wavelength at 25 °C	808										938	nm
Center Wavelength Variation at 25 °C	5	5	5	5	5	5	5	5	5	5	nm	
Typical Spectral Bandwidth (FWHM)	3	3	3	3	3	3	3	3	3	3	nm	
Maximum Spectral Bandwidth (FWHM)	5	5	5	5	5	5	5	5	5	5	nm	
Typical Operation Current	105	105	105	105	105	110	110	110	110	110	A	
Maximum Operation Current	120	120	120	120	120	125	125	125	125	125	A	
Typical Threshold Current	14	14	14	14	14	12	12	12	12	12	A	
Maximum Threshold Current	18	18	18	18	18	14	14	14	14	14	A	
Typical Slope	4.4	6.6	8.8	11.0	13.2	4.1	6.2	8.2	10.3	12.3	W/A	
Minimum Slope	3.7	5.6	7.5	9.4	11.3	3.5	5.3	7.0	8.8	10.6	W/A	
Maximum Operating Voltage	8	12	16	20	24	9	14	18	22	27	V	
Typical Fast Axis Divergence FWHM	37	37	37	37	37	27	27	27	27	27	°	
Typical Fast Axis Divergence 86 %	48	48	48	48	48	34	34	34	34	34	°	
Typical Fast Axis Divergence 95 %	63	63	63	63	63	46	46	46	46	46	°	
Typical Slow Axis Divergence FWHM	6	6	6	6	6	7	7	7	7	7	°	
Typical Slow Axis Divergence 86 %	7	7	7	7	7	8	8	8	8	8	°	
Typical Slow Axis Divergence 95 %	8	8	8	8	8	9	9	9	9	9	°	
Operation Conditions	Cleanroom class ISO 5, non-condensing atmosphere											
Expected Lifetime	> 1 GShot											
Cooling												
Number of Submounts	4	6	8	10	12							
Flow Rate	1.7	2.3	3.0	3.6	4.3						l/min	
Flow Rate Tolerance	± 10 %											
Water Temperature	15 ... 35 °C											
Maximum Inlet Pressure	400 kPa											
Pressure Drop	< 200 kPa											
Water Quality	Deionized 2 ... 6 µS/cm, mixed bed ion exchanger, particle filter < 25 µm (not included)											

See general user information!

Options on request: 915 nm; for additional designs or specifications please visit our website: www.jenoptik.com



Design 210481224