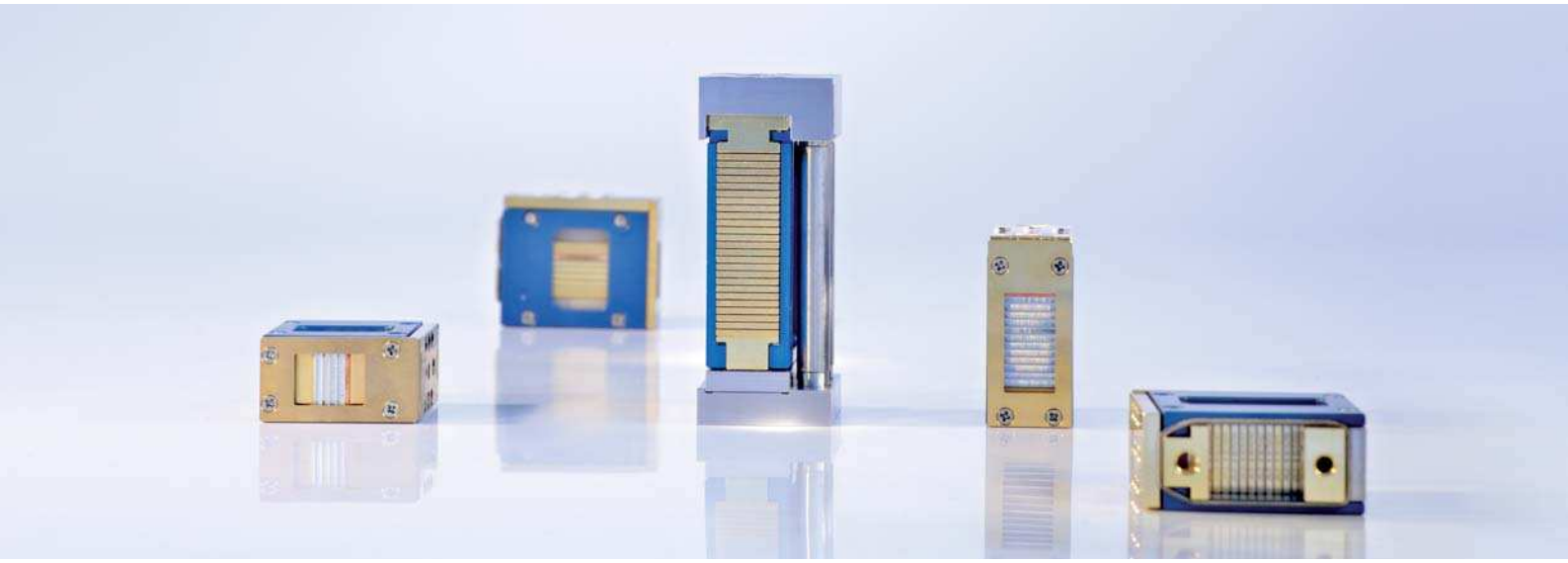
JENOPTIK

Vertical Diode Laser Stacks

cw, actively cooled, with collimation, 9xx nm



JOLD-x-CAFN-xA

Design 2104xxx26

210480326 (3 submounts)
210480426 (4 submounts)
210480526 (5 submounts)
210480626 (6 submounts)
210480826 (8 submounts)
210481026 (10 submounts)
210481226 (12 submounts)
210430626 (25 submounts)

Features:

- High optical output power up to 54 W cw per bar after collimation
- High efficiency, low divergences
- Lifetime > 10,000 h, high reliability

Applications:

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

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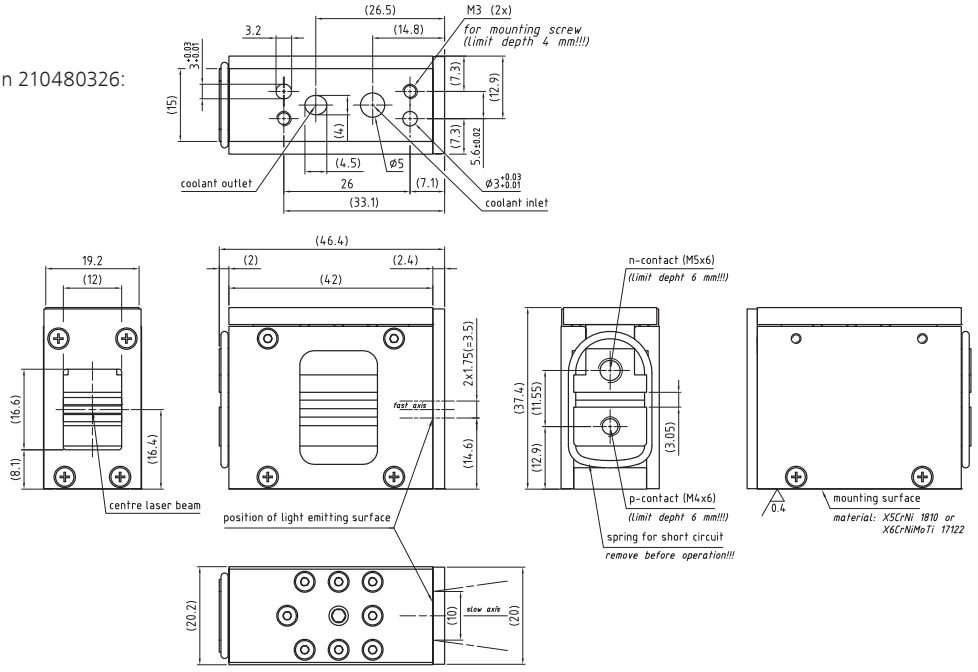
Specifications (Start of Life)

Product	JOLD-x-CAFN-xA, Designs 210480326 (3 submounts), 210480426 (4 submounts), 210480526 (5 submounts), 210480626 (6 submounts), 210480826 (8 submounts), 210481026 (10 submounts), 210481226 (12 submounts), 210430626 (25 submounts)																
Operation Mode	cw, power modulation only between threshold and maximum current																
Maximum Optical Output Power	162	216	270	324	432	540	648	1350	135	180	225	270	360	450	540	1125	W
Number of Submounts	3	4	5	6	8	10	12	25	3	4	5	6	8	10	12	25	
Power per Submount after Collimation	54	54	54	54	54	54	54	54	45	45	45	45	45	45	45	45	W
Center Wavelength at 25 °C	938								976								nm
Center Wavelength Variation at 25 °C	5	5	5	5	5	5	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	3	3	3	3	3	3	nm
Maximum Spectral Bandwidth (FWHM)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	nm
Typical Operation Current	67	67	67	67	67	67	67	67	56	56	56	56	56	56	56	56	A
Maximum Operation Current	75	75	75	75	75	75	75	75	60	60	60	60	60	60	60	60	A
Typical Threshold Current	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	10	A
Maximum Threshold Current	14	14	14	14	14	14	14	14	12	12	12	12	12	12	12	12	A
Typical Slope	3.0	4.0	5.0	5.9	7.9	9.9	11.8	24.6	3.0	4.0	4.9	5.9	7.9	9.8	11.8	24.5	W/A
Minimum Slope	2.5	3.4	4.2	5.1	6.8	8.5	10.2	21.4	2.7	3.6	4.5	5.4	7.2	9.0	10.8	22.5	W/A
Maximum Operating Voltage	6	8	10	12	15	19	23	47	6	8	9	11	15	18	22	45	V
Fast Axis Divergence (Full Power)	< 0.5								< 0.5								°
Typical Slow Axis Divergence FWHM	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	°
Typical Slow Axis Divergence 86 %	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	°
Typical Slow Axis Divergence 95 %	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	°
Operation Conditions	Cleanroom class 100, non-condensing atmosphere																
Expected Lifetime	> 10,000 h (constant current)																
Cooling:																	
Number of Submounts	3		4		5		6		8		10		12		25		
Flow Rate	1.3		1.7		2.0		2.3		3.0		3.6		4.3		8.3		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 Safety and General User Information!																

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

Design 210480326:



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