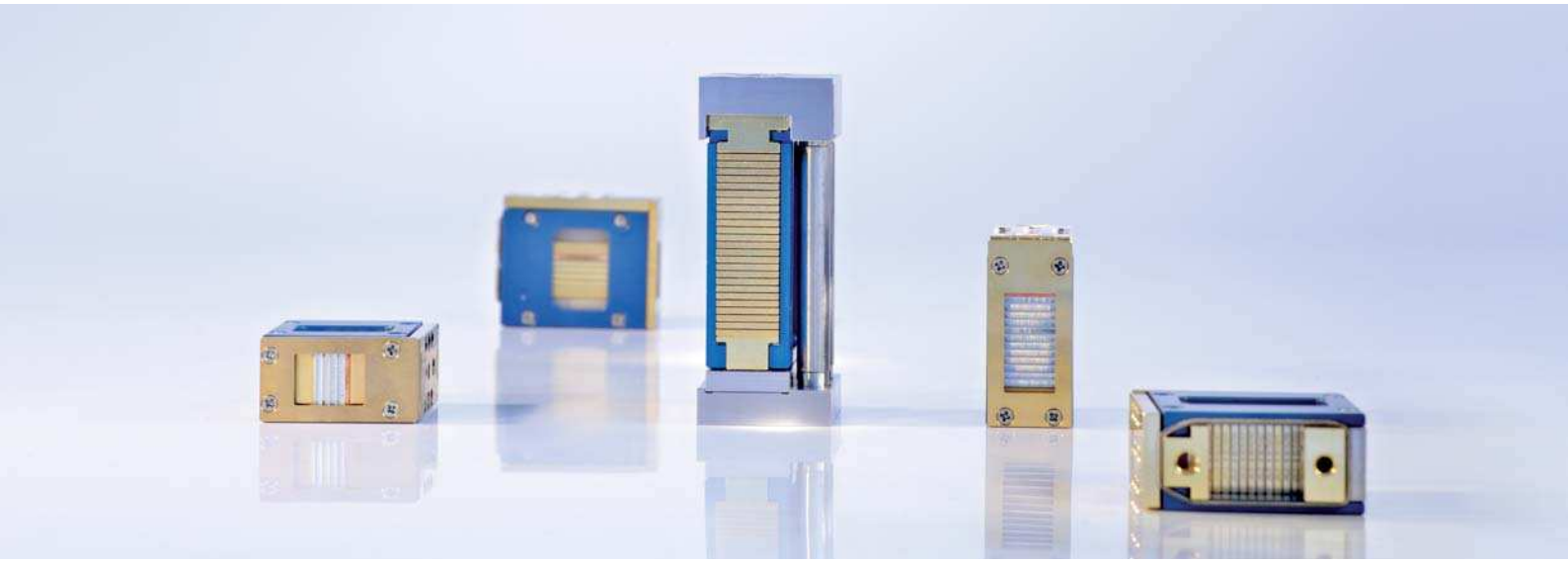
JENOPTIK

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 110 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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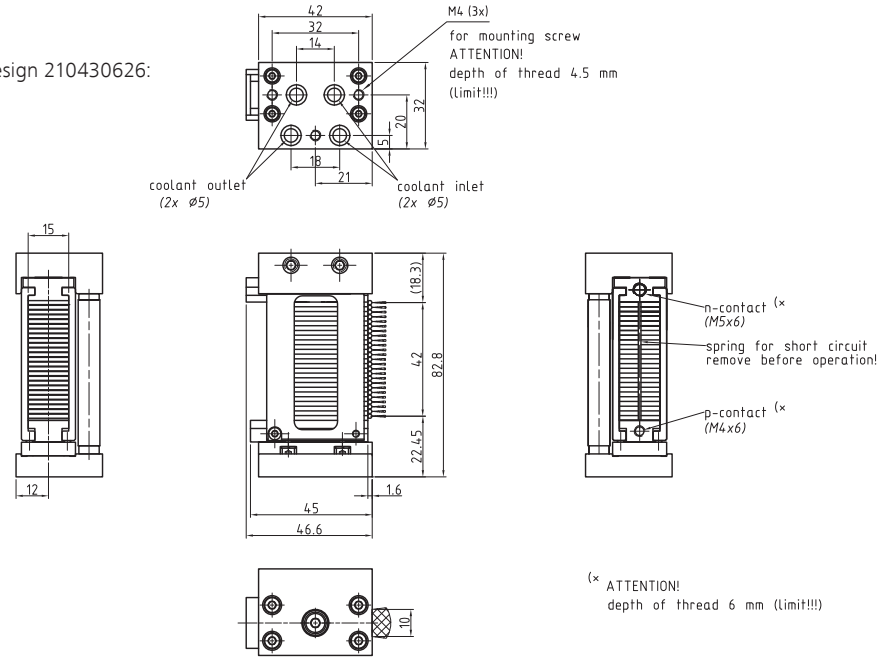
Specifications (Start of Life)

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								cw only								
Maximum Optical Output Power	270	360	450	540	720	900	1080	2250	330	440	550	660	880	1100	1320	2750	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	90	90	90	90	90	90	90	90	110	110	110	110	110	110	110	110	W
Center Wavelength at 25 °C	938 / 976								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)	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	nm
Typical Operation Current	105	105	105	105	105	105	105	105	125	125	125	125	125	125	125	125	A
Maximum Operation Current	115	115	115	115	115	115	115	115	135	135	135	135	135	135	135	135	A
Typical Threshold Current	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	A
Maximum Threshold Current	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	A
Typical Slope	3.0	4.0	5.0	6.0	8.0	10.0	12.0	25.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	25.0	W/A
Minimum Slope	2.7	3.6	4.5	5.4	7.2	9.0	10.8	22.5	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	16	20	24	49	6	8	10	12	16	20	24	49	V
Fast Axis Divergence (Full Power)	< 0.5								< 0.5								°
Typical Slow Axis Divergence FWHM	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	°
Typical Slow Axis Divergence 86 %	6	6	6	6	6	6	6	6	8	8	8	8	8	8	8	8	°
Typical Slow Axis Divergence 95 %	7	7	7	7	7	7	7	7	9	9	9	9	9	9	9	9	°
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 210430626:



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