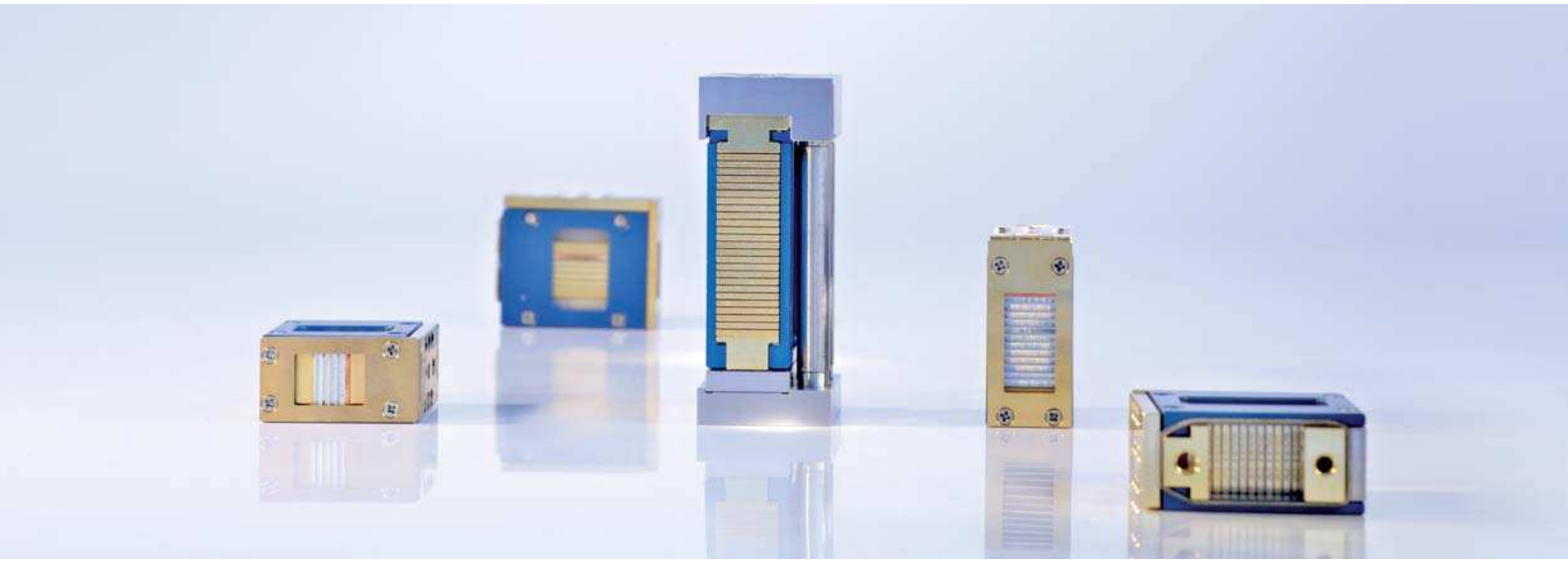
JENOPTIK

Vertical Diode Laser Stacks

cw, actively cooled, 9xx nm



JOLD-x-CANN-xA

Design 2104xxx24

210480324 (3 submounts)
210480424 (4 submounts)
210480524 (5 submounts)
210480624 (6 submounts)
210480824 (8 submounts)
210481024 (10 submounts)
210481224 (12 submounts)
210430624 (25 submounts)

Features:

- High optical output power up to 60 W cw per bar
- 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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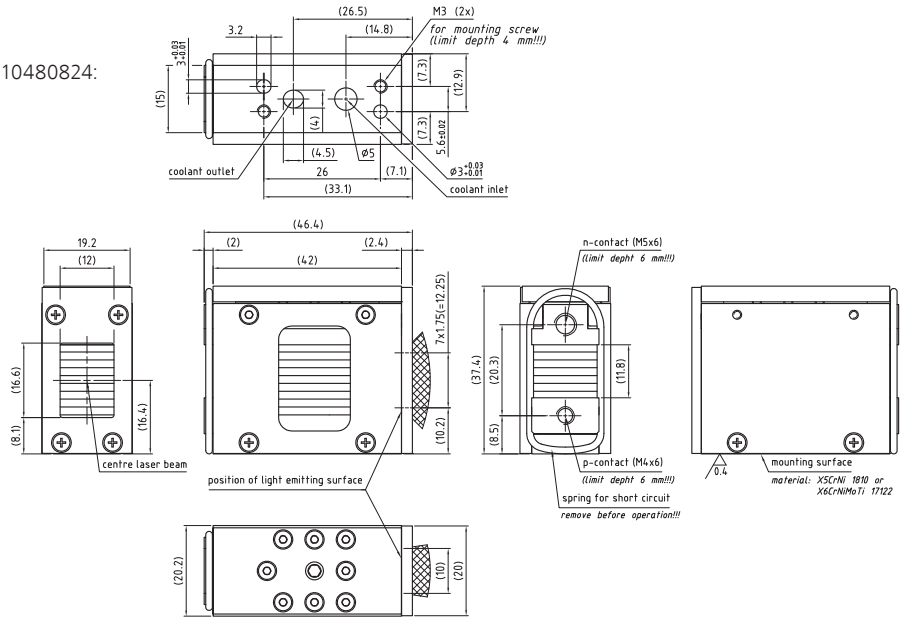
Specifications (Start of Life)

Product	JOLD-x-CANN-xA, Designs 210480324 (3 submounts), 210480424 (4 submounts), 210480524 (5 submounts), 210480624 (6 submounts), 210480824 (8 submounts), 210481024 (10 submounts), 210481224 (12 submounts), 210430624 (25 submounts)																
Operation Mode	cw, power modulation only between threshold and maximum current																
Maximum Optical Output Power	180	240	300	360	480	600	720	1500	150	200	250	300	400	500	600	1250	W
Number of Submounts	3	4	5	6	8	10	12	25	3	4	5	6	8	10	12	25	
Power per Submount	60	60	60	60	60	60	60	60	50	50	50	50	50	50	50	50	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	3.3	4.4	5.5	6.6	8.8	11.0	13.1	27.3	3.3	4.4	5.5	6.6	8.7	10.9	13.1	27.2	W/A
Minimum Slope	2.8	3.8	4.7	5.7	7.6	9.5	11.4	23.8	3.0	4.0	5.0	6.0	8.0	10.0	12.0	25.0	W/A
Maximum Operating Voltage	6	8	10	12	15	19	23	47	6	8	9	11	15	18	22	45	V
Typical Fast Axis Divergence FWHM	27	27	27	27	27	27	27	27	34	34	34	34	34	34	34	34	°
Typical Fast Axis Divergence 86 %	34	34	34	34	34	34	34	34	47	47	47	47	47	47	47	47	°
Typical Fast Axis Divergence 95 %	46	46	46	46	46	46	46	46	64	64	64	64	64	64	64	64	°
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 210480824:



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