Diode laser stack in housing:
qcw, passively cooled with tap water, high power
JOLD-x-QA-8A

Design 04022100824

Features

– High optical output power up to 2400 W qcw
– Wavelengths: 808 and 940 nm
– Small and robust design, light weight (< 60 g)
– Sealed housing
– Cooling with tap water

Applications

– Pumping of solid-state lasers
– Material processing

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Specifications (start of life)	JOLD-x-QA-8A Design 04022100824				
Operation Mode	qcw				
Maximum Pulse Length/Duty Cycle	0.2 ms/1 %	0.2 ms/10 %	1.5 ms/1 %	3.0 ms/4 %	
Maximum Pulse Power	2400	1200	2400	2000	W
Center Wavelength at 25 °C	808	808	940	940	nm
Center Wavelength Variation at 25 °C	3	3	3	3	nm
Typical Spectral Bandwidth (FWHM)	3	3	5	5	nm
Maximum Spectral Bandwidth (FWHM)	6	6	7	7	nm
Typical Operation Current	285	165	300	260	A
Maximum Operation Current	300	180	315	275	A
Typical Threshold Current	23	23	16	16	A
Maximum Threshold Current	25	25	18	18	A
Typical Slope	9.2	8.5	8.5	8.2	W/A
Minimum Slope	8.6	7.6	8	7.7	W/A
Typical Operating Voltage	15.8	14.4	14.9	14.7	V
Maximum Operating Voltage	16.8	15.4	15.9	15.7	V
Typical Fast Axis Divergence 95 %	66	66	47	47	°
Typical Slow Axis Divergence 95 %	10.0	8.5	10.0	8.5	°
Spot Size (at exit window)	15 mm x 10 mm				
Anode, Cathode Connectors	Via two M3 x 8 screws (ISO 4762)				
Weight	55				g
Operation Conditions	Non-condensing atmosphere; no cleanroom needed				
Expected Lifetime	> 1 GShot				
Cooling					
Flow Rate	0.8 l/min ± 20 %				
Water Temperature	15 ... 25 °C				
Maximum Inlet Pressure	400 kPa				
Maximum Pressure Drop	100 kPa				
Water Connection	Via o-ring gaskets 6 mm x 1 mm, EPDM, 70 shore				
Water Quality	Industrial grade, anti-freeze possible, particle filter < 100 µm (not included)				
Cooling System	Do not use any material that in combination with copper would form galvanic elements (e.g. aluminum, zinc, brass)				

See general user information!

Options on request: variation number of bars, fast axis collimation
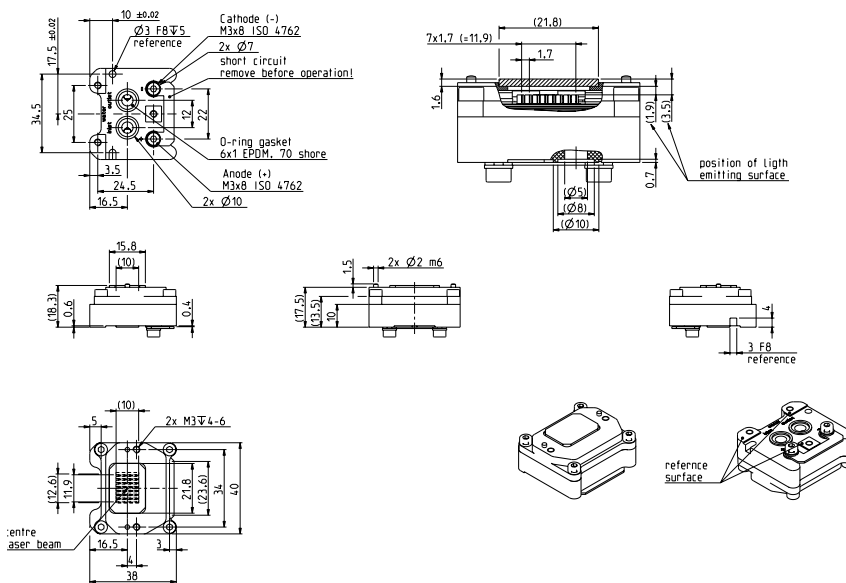
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EP 1977486 B1
CN 101361239 B
JP 4993317 B2
US 7801190 B2

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