

JENOPTIK

Vertical diode laser stacks: qcw, passively cooled | with(out) collimation JOLD-x-Q-3A | JOLD-x-QF-3A

Design 220430324 | 220430326

Features

- High optical output power up to 300 W qcw per bar without collimation and 270 W qcw per bar after collimation
- Wavelengths: 808 and 940 nm
- High efficiency, low divergences
- Lifetime up to > 1 GShot, high reliability

Applications

- Pumping of solid-state lasers
- Illumination
- Medical applications

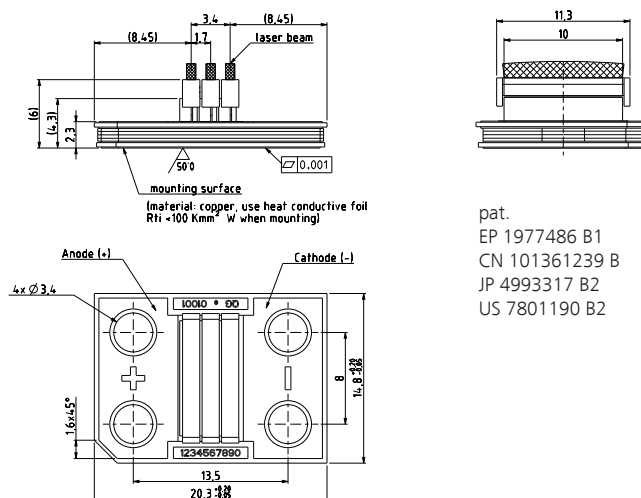
Vertical diode laser stacks | qcw, passively cooled | with(out) collimation

JOLD-x-Q-3A | JOLD-x-QF-3A

Specifications (Start of life)	JOLD-x-Q-3A Design 220430324				JOLD-x-QF-3A Design 220430326				
Operation Mode	qcw				qcw				
Maximum Pulse Length	≤ 0.2	≤ 0.2	≤ 1.5	≤ 3.0	≤ 0.2	≤ 0.2	≤ 1.5	≤ 3.0	ms
Maximum Duty Cycle	≤ 1	≤ 10	≤ 1	≤ 4	≤ 1	≤ 10	≤ 1	≤ 4	%
Maximum Pulse Power	900	450	900	750					W
Maximum Optical Power after Collimation					810	405	810	675	W
Number of Submounts	3	3	3	3	3	3	3	3	
Pulse Power per Submount	300	150	300	250	270	135	270	225	W
Center Wavelength at 25 °C	808	808	940	940	808	808	940	940	nm
Center Wavelength Variation at 25 °C	3	3	3	3	3	3	3	3	nm
Typical Spectral Bandwidth (FWHM)	3	3	5	5	3	3	5	5	nm
Maximum Spectral Bandwidth (FWHM)	6	6	7	7	6	6	7	7	nm
Typical Operation Current	285	165	300	260	285	165	300	260	A
Maximum Operation Current	300	180	315	275	300	180	315	275	A
Typical Threshold Current	23	23	16	16	23	23	16	16	A
Maximum Threshold Current	25	25	18	18	25	25	18	18	A
Typical Slope	3.5	3.2	3.2	3.1	3.1	2.9	2.9	2.8	W/A
Minimum Slope	3.2	2.8	3.0	2.8	2.9	2.5	2.7	2.6	W/A
Typical Operating Voltage	5.9	5.4	5.6	5.5	5.9	5.4	5.6	5.5	V
Maximum Operating Voltage	6.9	6.4	6.6	6.5	6.9	6.6	6.6	6.5	V
Fast Axis Divergence (Full Power)					< 0.5	< 0.5	< 0.5	< 0.5	°
Typical Fast Axis Divergence 95 %	66	66	47	47					°
Typical Slow Axis Divergence 95 %	10.0	8.5	10.0	8.5	8.5	8.5	10.0	8.5	°
Typical Polarization	90, TE	90, TE	90, TE	90, TE	90, TE	90, TE	90, TE	90, TE	%
Emitting Window	3.4 x 10	3.4 x 10	3.4 x 10	3.4 x 10	4.3 x 10	4.3 x 10	4.3 x 10	4.3 x 10	mm ²
Stack Pitch	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	mm
Anode, Cathode Connectors	Via two M3 screws each (base isolated)								
Weight	5								g
Operation Conditions	Cleanroom class ISO 5, non-condensing atmosphere								
Expected Lifetime	> 1 GShot								
Cooling									
Mounting	On cooled surface (water cooled plate or TEC)								
Note	Do not mount via any paste-like media!								
Operation Temperature	15 ... 30 °C								
Storage Temperature	- 20 ... + 50 °C, non-condensing								

See Safety and General User Manual Information!

Options on request: variation of number of bars



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EP 1977486 B1
CN 101361239 B
JP 4993317 B2
US 7801190 B2

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