

MORE LIGHT

JOLD-x-CAFN-xA

Vertical diode laser stacks: cw, actively cooled, with collimation, 9xx nm, high power

Designs

- 210480426 (4 submounts)
- 210480626 (6 submounts)
- 210480826 (8 submounts)
- 210481026 (10 submounts)
- 210481226 (12 submounts)

Features

- High optical output power up to 110 W cw per bar after collimation
- Wavelengths: 938 and 976 nm
- 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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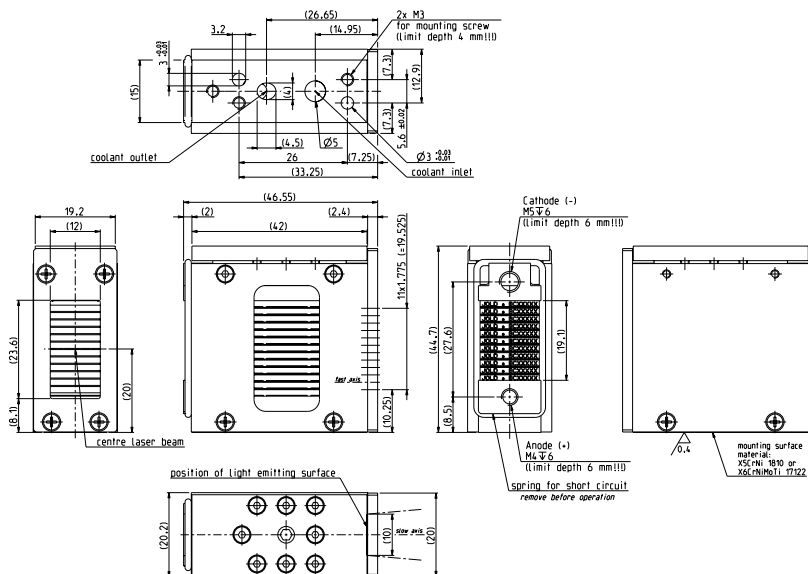
JOLD-x-CAFN-xA Designs 210480426 (4 submounts), 210480626 (6 submounts), 210480826 (8 submounts), 210481026 (10 submounts), 210481226 (12 submounts)

Specifications (start of life)

| Operation Mode | cw, power modulation only between threshold and maximum current | | | | | cw only | | | | | |
|--------------------------------------|--|-----|-----|------|------|-----------|-----|-----|------|------|-------|
| Maximum Optical Output Power | 360 | 540 | 720 | 900 | 1080 | 440 | 660 | 880 | 1100 | 1320 | W |
| Number of Submounts | 4 | 6 | 8 | 10 | 12 | 4 | 6 | 8 | 10 | 12 | |
| Power per Submount after Collimation | 90 | 90 | 90 | 90 | 90 | 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 | nm |
| Typical Spectral Bandwidth (FWHM) | 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 | nm |
| Typical Operation Current | 105 | 105 | 105 | 105 | 105 | 125 | 125 | 125 | 125 | 125 | A |
| Maximum Operation Current | 115 | 115 | 115 | 115 | 115 | 135 | 135 | 135 | 135 | 135 | A |
| Typical Threshold Current | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | A |
| Maximum Threshold Current | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | A |
| Typical Slope | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | W/A |
| Minimum Slope | 3.6 | 5.4 | 7.2 | 9.0 | 10.8 | 3.6 | 5.4 | 7.2 | 9.0 | 10.8 | W/A |
| Maximum Operating Voltage | 8 | 12 | 16 | 20 | 24 | 8 | 12 | 16 | 20 | 24 | V |
| Fast Axis Divergence (Full Power) | < 0.5 | | | | | < 0.5 | | | | | ° |
| Typical Slow Axis Divergence FWHM | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | ° |
| Typical Slow Axis Divergence 86 % | 6 | 6 | 6 | 6 | 6 | 8 | 8 | 8 | 8 | 8 | ° |
| Typical Slow Axis Divergence 95 % | 7 | 7 | 7 | 7 | 7 | 9 | 9 | 9 | 9 | 9 | ° |
| Operation Conditions | Cleanroom class ISO 5, non-condensing atmosphere | | | | | | | | | | |
| Expected Lifetime | > 10,000 h (constant current) | | | | | | | | | | |
| Cooling | | | | | | | | | | | |
| Number of Submounts | 4 | | 6 | | 8 | | 10 | | 12 | | |
| Flow Rate | 1.7 | | 2.3 | | 3.0 | | 3.6 | | 4.3 | | 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 general user information!

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



Design 210481226