

JOLD-210-CAXF-6A

# Fiber-coupled diode laser stacks: cw, actively cooled with deionized water

Design 211616226

#### Features

- High optical output power of 210 W cw
- Wavelengths: 807, 915, 938 and 976 nm
- Fiber core diameter: 600 μm (NA 0.22)
- Integrated pilot laser and power monitor
- Lifetime > 10,000 h, high reliability

## **Applications**

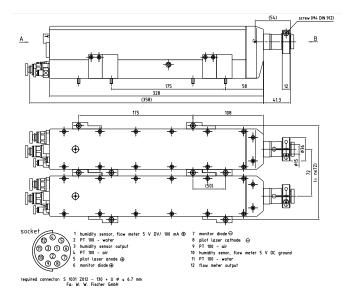
- Pumping of solid-state lasers and fiber lasers
- Material processing

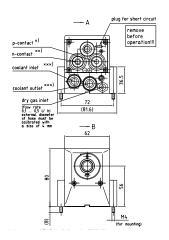
# Fiber-coupled diode laser stacks | cw, actively cooled with deionized water JOLD-210-CAXF-6A

| Specifications (start of life)          | JOLD-210-CAXF-6A Design 211616226   |     |     |     |     |
|---|---|-----|-----|-----|-----|
| Operation Mode                          | cw, power modulation only between threshold and maximum current   |     |     |     |     |
| Maximum Optical Output Power            | 210   | 210 | 210 | 210 | W   |
| Center Wavelength at 25 °C              | 807   | 915 | 938 | 976 | nm  |
| Center Wavelength Variation at 25 °C    | 3   | 5   | 5   | 3   | nm  |
| Typical Spectral Bandwidth (FWHM)       | 4   | 4   | 4   | 4   | nm  |
| Maximum Spectral Bandwidth (FWHM)       | 5   | 5   | 5   | 5   | nm  |
| Typical Operation Current               | 59  | 60  | 60  | 64  | A   |
| Maximum Operation Current               | 65  | 66  | 66  | 70  | A   |
| Typical Threshold Current               | 10  | 6   | 6   | 6   | A   |
| Maximum Threshold Current               | 13  | 9   | 9   | 9   | A   |
| Typical Slope                           | 4.3   | 3.9 | 3.9 | 3.7 | W/A |
| Minimum Slope                           | 3.8   | 3.5 | 3.5 | 3.2 | W/A |
| Maximum Operating Voltage               | 13  | 13  | 13  | 13  |     |
| Fiber Core Diameter, Numerical Aperture | 600 μm, NA 0.22   |     |     |     |     |
| Fiber Connection                        | High-power plug with 15 mm ferrule diameter   |     |     |     |     |
| Power Monitor                           | Infineon, SFH 229   |     |     |     |     |
| Pilot Laser                             | 0.5 3 mW, 650 nm $\pm$ 15 nm, 3 5 V, 40 $\pm$ 15 mA, power not adjustable (only for teaching and targeting purposes before laser operation) |     |     |     |     |
| Anode, Cathode Connectors               | Plug KST6AR-N/10 (Part No.15.0001-22), Socket KBT6AR-N/10-S (Part No. 15.0017-21);<br>Ref.: www.multi-contact-usa.com                       |     |     |     |     |
| Humidity Reduction                      | Purge gas, water vapor outlet closed with membrane  |     |     |     |     |
| Purge Gas                               | Synthetic air, purity > 99.9997 %, flow rate 0.1 0.5 l/h (10 20 mbar pressure), Ref.: www.airliquide.com                                    |     |     |     |     |
| Purge Gas Connector                     | Ø 4 mm push-in fitting  |     |     |     |     |
| Expected Lifetime                       | > 10,000 h (constant current)   |     |     |     |     |
| Cooling                                 |   |     |     |     |     |
| Flow Rate                               | 2.3 l/min ± 0.2 l/min   |     |     |     |     |
| Water Temperature                       | 15 35 ℃   |     |     |     |     |
| Water Pressure                          | 400 kPa maximum inlet and outlet pressure, 150 250 kPa pressure drop  |     |     |     |     |
| Water Connectors                        | Ø 8 mm push-in fittings   |     |     |     |     |
| Water Quality                           | Deionized 2 6 $\mu$ S/cm, mixed bed ion exchanger, particle filter < 25 $\mu$ m (not included)  |     |     |     |     |

### See general user information!

Options on request: Including dry cartridge instead of water vapour outlet





- x) required connector: KST6AR-N/ 10: Order No. 15.0001-22 (Fa: MULTI-CONTACT) required connector: KBT6AR-N/ 10-S; Order No. 15.0017-21 (Fa: MULTI-CONTACT)
- external diameter of waterhose must be calibrated with a size of 8 mm ambient temperature < 40 °C

