



## Fiber-Coupled Diode Laser Stacks

cw, actively cooled with deionized water



JOLD-400-CAXF-6P2

Design 211620126

### Features:

- High optical output power of 400 W cw
- Fiber core diameter: 600  $\mu\text{m}$  (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

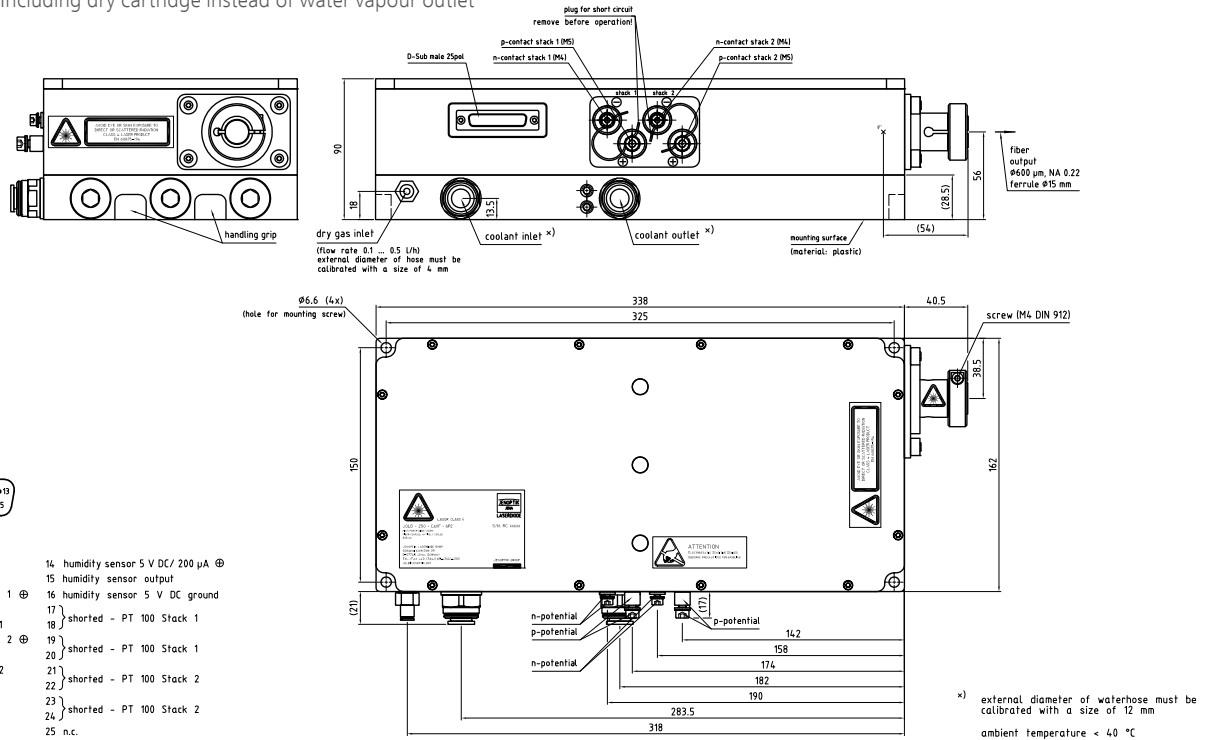
# Fiber-Coupled Diode Laser Stacks

## cw, actively cooled with deionized water

### Specifications (Start of Life)

|   |   |           |           |           |     |
|---|---|-----------|-----------|-----------|-----|
| <b>Product</b>                          | JOLD-400-CAXF-6P2, Design 211620126   |           |           |           |     |
| <b>Operation Mode</b>                   | cw, power modulation only between threshold and maximum current   |           |           |           |     |
| Maximum Optical Output Power            | 400   | 400       | 400       | 400       | 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)       | 5   | 6         | 6         | 6         | nm  |
| Maximum Spectral Bandwidth (FWHM)       | 6   | 7         | 7         | 7         | nm  |
| Typical Operation Current               | 60  | 60        | 60        | 60        | A   |
| Maximum Operation Current               | 70  | 70        | 70        | 70        | A   |
| Typical Threshold Current               | 10  | 6         | 6         | 6         | A   |
| Maximum Threshold Current               | 13  | 9         | 9         | 9         | A   |
| Typical Slope                           | 8.0   | 7.5       | 7.5       | 7.5       | W/A |
| Minimum Slope                           | 6.6   | 6.2       | 6.2       | 6.2       | W/A |
| Maximum Operating Voltage               | 26 (2x13)   | 26 (2x13) | 26 (2x13) | 26 (2x13) | V   |
| Fiber Core Diameter, Numerical Aperture | 600 µm, NA 0.22   |           |           |           |     |
| Fiber Connector                         | High-power plug with 15 mm ferrule diameter   |           |           |           |     |
| Power Monitor                           | Infineon, SFH 229   |           |           |           |     |
| Pilot Laser                             | 0.5 ... 3 mW, 650 nm ± 15 nm, 3 ... 5 V, 40 ± 15 mA, power not adjustable (only for teaching and targeting purposes before laser operation) |           |           |           |     |
| Anode, Cathode Connectors               | 2x M5, 2x M4 (e.g. socket cap screws ISO 4762); see manual  |           |           |           |     |
| 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)   |           |           |           |     |
| <b>Cooling:</b>                         |   |           |           |           |     |
| Flow Rate                               | 4.6 l/min ± 0.4 l/min   |           |           |           |     |
| Water Temperature                       | 15 ... 35 °C  |           |           |           |     |
| Water Pressure                          | 400 kPa maximum inlet and outlet pressure, 150 ... 250 kPa pressure drop  |           |           |           |     |
| Water Connectors                        | Ø 12 mm push-in fittings  |           |           |           |     |
| Water Quality                           | Deionized 2 ... 6 µS/cm, mixed bed ion exchanger, particle filter < 25 µm (not included)  |           |           |           |     |
| <b>See General User Information!</b>    |   |           |           |           |     |

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



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