



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 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

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JOLD-400-CAXF-6P2

Specifications (start of life)

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Operation Mode	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)				
Cooling					
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)				

See general user information!

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

