



JENOPTIK

## Fiber-coupled diode lasers: cw, passively cooled with integrated TEC JOLD-75-CPXF-2P iTEC

Design 215529224

### Features

- High optical output power of 75 W cw
- Wavelengths: 808, 880, 915, 938 and 976 nm
- Fiber core diameter: 400  $\mu\text{m}$  (NA 0.22)
- Integrated pilot laser and power monitor
- Long lifetime > 20,000 h, high reliability

### Applications

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

# Fiber-coupled diode lasers | cw, passively cooled with integrated TEC

## JOLD-75-CPXF-2P iTEC

### Specifications (start of life)

### JOLD-75-CPXF-2P iTEC Design 215529224

Operation Mode	cw, power modulation only between threshold and maximum current					
Maximum Optical Output Power	75	75	75	75	75	W
Center Wavelength at 25 °C	808 *	880 *	915 *	938 *	976 *	nm
Center Wavelength Variation at 25 °C	3	3	5	5	3	nm
Typical Spectral Bandwidth (FWHM)	5	5	5	5	5	nm
Maximum Spectral Bandwidth (FWHM)	6	6	6	6	6	nm
Typical Operation Current	59	60	60	60	64	A
Maximum Operation Current	65	66	66	66	70	A
Typical Threshold Current	10	9	6	6	6	A
Maximum Threshold Current	13	12	9	9	9	A
Typical Slope	1.55	1.45	1.4	1.4	1.3	W/A
Minimum Slope	1.35	1.3	1.25	1.25	1.15	W/A
Maximum Operating Voltage	4.5	4.5	4.5	4.5	4.5	V
Fiber Core Diameter, Numerical Aperture	400 µm, NA 0.22					
Fiber Connector	HP-SMA 905, both ends free standing					
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	M5, M4 (e.g. socket cap screws ISO 4762)					
Signal Connector	D-Sub, male, 25 pin					
Operation Conditions	Non-condensing atmosphere					
Expected Lifetime	> 20,000 h (constant current), partly under qualification					
<b>Cooling</b>						
Mounting	Via thermally conductive foil (thickness 25 ... 100 µm) on cooled surface					
Note	<b>Do not mount via any paste-like media!</b>					
Diode Laser Operating Temperature	15 ... 30 °C, measured with internal temperature sensor					
Integrated Temperature Sensors	PT 100 and PT 1000, separately for each diode laser					
Temperature Sensor TEC	PT 100 (1 for all TECs at common hot side)					
Max. Hot Side Temperature	50 °C					
Maximum Cooling Power	2 TECs x 173 W => 346 W					
Maximum TEC Voltage, Current	24.6 V, 11.3 A (per TEC)					
* Adjustment Range of Wavelength	± 2 nm ... ± 3 nm, diode laser wavelengths separately adjustable by TECs					

### See general user information!

Options on request: for additional designs or specifications please visit our website: [www.jenoptik.com](http://www.jenoptik.com)

