



JENOPTIK

Fiber-coupled diode lasers: qcw, passively cooled with integrated TEC JOLD-70-QPXF-1L

Design 215415124

Features

- High optical output power 70 W qcw
- Wavelengths: 808 and 938 nm
- Fiber core diameter: 600 μm (NA 0.22)
- Integrated 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 | qcw, passively cooled with integrated TEC

JOLD-70-QPXF-1L

Specifications (start of life)

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Operation Mode	qcw		
Maximum Pulse Length/Duty Cycle	≤ 0.3 ms/≤ 20 %		
Maximum Optical Output Power	70	70	W
Center Wavelength at 25 °C	808	938	nm
Center Wavelength Variation at 25 °C	5	5	nm
Typical Spectral Bandwidth (FWHM)	3	3	nm
Maximum Spectral Bandwidth (FWHM)	5	5	nm
Typical Operation Current	105	120	A
Maximum Operation Current	120	130	A
Typical Threshold Current	18	20	A
Maximum Threshold Current	20	25	A
Typical Slope	0.8	0.7	W/A
Minimum Slope	0.7	0.65	W/A
Maximum Operating Voltage	2.2	2.2	V
Fiber Core Diameter, Numerical Aperture	600 μm, NA 0.22 free standing fiber inside F-SMA 905 towards the module		
Fiber Connector	F-SMA 905		
Power Monitor	Infineon, SFH 229		
Anode, Cathode Connectors	M5 (e.g. socket cap screw ISO 4762), M4 (threaded bolt and hex nut ISO 4032)		
Operation Conditions	Non-condensing atmosphere		
Expected Lifetime	> 1 GShot		
Cooling			
Mounting	Via thermally conductive foil (thickness 25 ... 100 μm) on cooled surface		
Note	Do not mount via any paste-like media!		
Diode Laser Operating Temperature	15 ... 30 °C, measured with internal temperature sensor		
Temperature Sensor	PT 100 and PT 1000		
Integrated TECs	Connected in series, cold side at max. 30 °C		
Maximum Cooling Power	2 TECs x 173 W => 346 W		
Maximum TEC Voltage, Current	2 x 24.6 V => 49.2 V, 11.3 A		
	Manufactured under license of FhG-ILT Aachen (Germany).		

See general user information!

Options on request: For additional designs or specifications please visit our website: www.jenoptik.com

