



MORE LIGHT

Next generation diode laser

275 W for hard pulse & cw conditions with passive cooling

Features

- High optical output power up to 275 W
- Hard pulse & cw mode
- Passively cooled
- Wavelength: 9xx nm

Applications

- Laser material processing
- Direct diode laser applications
- Print applications
- Pumping of solid-state and fiber lasers
- Healthcare & life science (laser-based treatments)

Next generation of diode laser

275 W high-power diode laser for hard pulse and cw conditions sets new standards for applications in laser material processing and the Healthcare & Life Science industry.

Thanks to Jenoptik's patented mounting and connection technology, the new passively cooled diode laser is able to achieve extremely high performance in hard pulse and cw applications. The laser source is available in wavelengths of 9xx nanometers.

For the production of our high-power diode laser, we exclusively use the efficient and high-performance semiconductor materials that we produce ourselves. This guarantees top performance in hard pulse applications as well as the utmost quality and reliability. Manufacturers of laser systems benefit from lower costs and more high-power applications.

Benefits



Higher power with a lower cost per watt: Fewer diode lasers are required for the same level of performance. This reduces the costs for your system and, consequently, for your applications.



Simple adaptation to existing systems (CS package): Existing laser systems can be adapted with little efforts.



Less complexity with a smaller package: Using fewer diode lasers decreases the complexity and size of your laser system.



Easy power scaling: The increased performance of the laser source allows the power of the laser system to be increased at little expense.



Features



Significant increase in performance compared to other diode lasers available on the market.



Continuous cw operation at 275 W.



Extremely reliable, even in hard pulse conditions.



Passive cooling despite its high power and small dimensions.

Open heat sink diode laser | cw, passively cooled JOLD-275-CPNN-1L

Operating Conditions

JOLD-275-CPNN-1L

Ambient Conditions	Cleanroom class ISO 5 or better non-condensing atmosphere	
Operating Mode	cw & modulation 0-I _{max}	
Optics	without optics, FA collimation possible (with lens max. height 1,8mm) Collimation/version for larger lenses on request	
Baseplate Temperature	25	°C

Specification (Preliminary)

	Min	Typ	Max	Comment	
Optical Output Power			275		W
Optical Output Power after Collimation			250		
Drive Current for Rated Power		320	350		A
Threshold Current		30	50		A
Forward Voltage at Typical drive Current		1,5	1,75		V
Fast Axis Divergence 95%		47	51		deg
Slow Axis Divergence 95%		7	10		deg
Slope Efficiency	0,9	1			W/A
Power Conversion Efficiency	55	60			%
Polarization Extinction Ratio TE/TM	90	95			%
Center Wavelength at 25°C	973	978	983	Example, wavelength range 930 nm ... 1064 nm possible	nm
Spectral Bandwidth (FWHM)		3	5		nm
Smile		<1	1,5		µm

Absolute Maximum Ratings

Storage Temperature	-25		75		°C
Laser Bar Forward Current			355	Limited to rated current plus 5A	A
Laser Bar Reverse Voltage			0		V

Options on request.



