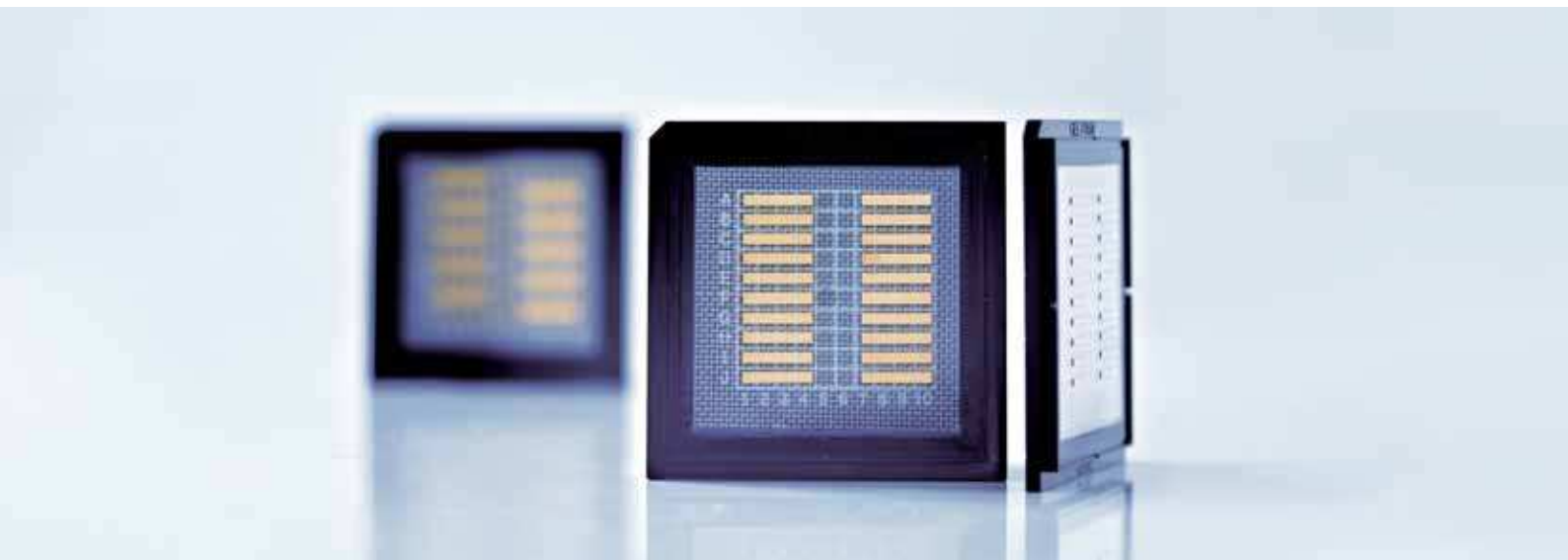




High Power Diode Laser Bars

940 nm, 300 W qcw



JDL-BAB-75-62-940-TE-300-1.5

Features:

- High laser power
- High efficiency
- Long lifetime, high reliability
- Excellent beam characteristics

Applications:

- Pumping of solid-state lasers and fiber lasers
- Industrial, scientific and medical systems
- Applications in the printing industry
- Defense and security

High Power Diode Laser Bars

940 nm, 300 W qcw

Specifications

Product

JDL-BAB-75-62-940-TE-300-1.5

	Symbol	Min	Nom	Max	Unit
Operation*					
Wavelength	λ	935	938	941	nm
Optical Output Power	P_{opt}		300		W
Operation Mode			pulsed		
Power Modulation			100		%
Current Modulation			100		%
Geometrical					
Number of Emitters			62		
Emitter Width	W	90	100	110	μm
Emitter Pitch	P		150		μm
Filling Factor	F		75		%
Bar Width	B	9600	9800	10000	μm
Cavity Length	L	1480	1500	1520	μm
Thickness	D	115	120	125	μm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	θ_{\perp}		27	30	°
Fast Axis Divergence**	θ_{\perp}		47	51	°
Slow Axis Divergence at 300 W (FWHM)	θ_{\parallel}		5	7	°
Slow Axis Divergence at 300 W**	θ_{\parallel}		7	9	°
Pulse Wavelength	λ	935	938	941	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		3	4	nm
Slope Efficiency***	η	1.0	1.05		W/A
Threshold Current	I_{th}		17	21	A
Operating Current	I_{op}		303	321	A
Operating Voltage	V_{op}		1.6	1.9	V
Series Resistance	R_s		1.5	3	m Ω
Degree of TE Polarization	α	98			%
EO Conversion Efficiency***	η_{tot}		60		%

* Mounted on a heat sink with $R_{th} = 0.7 \text{ K/W}$, coolant temperature 25 °C, operating at nominal power, 1 ms pulse length and 4 % duty cycle

** Full width at 95 % power content

*** Item may change upon notice and acceptance by JENOPTIK Diode Lab GmbH, due to future improvements of technology or processing

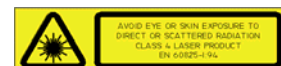
Note:

Nominal data represents typical values.

Safety Advises:

Laser bars are the active components in high-power diode lasers in accordance to IEC standard class 4 laser products.

As delivered, laser bars cannot emit any laser beam. The laser beam can only be released if the bars are connected to a source of electrical energy. In this case, IEC-Standard 60825-1 describes the safety regulations to be taken to avoid personal injury.



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