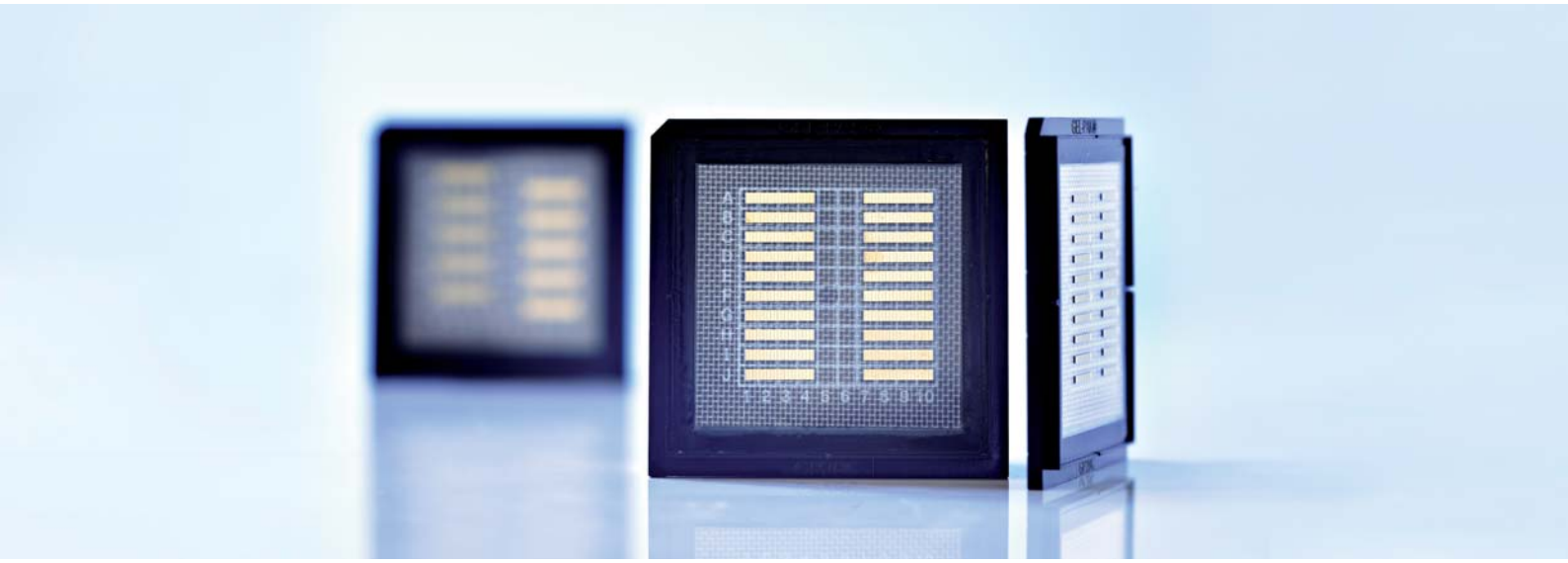
JENOPTIK

High Power Diode Laser Bars

940 nm, 80 W cw



JDL-BAB-30-19-940-TE-80-2.0

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

www.diodelab.com

High Power Diode Laser Bars

940 nm, 80 W cw

Specifications

Product	JDL-BAB-30-19-940-TE-80-2.0				
	Symbol	Min	**Nom**	Max	Unit
Operation*					
Wavelength (cw)	λ	935	**938**	941	nm
Optical Output Power	P_{opt}		**80**		W
Operation Mode			**cw, switched**		
Power Modulation			**100**		%
Geometrical					
Number of Emitters			**19**		
Emitter Width	W	145	**150**	155	µm
Emitter Pitch	P		**500**		µm
Filling Factor	F		**30**		%
Bar Width	B	9600	**9800**	10000	µm
Cavity Length	L	1980	**2000**	2020	µm
Thickness	D	115	**120**	125	µm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	$\theta_{\parallel}$		**27**	30	°
Fast Axis Divergence**	$\theta_{\parallel}$		**47**	51	°
Slow Axis Divergence at 80 W (FWHM)	$\theta_{\perp}$		**5**	7	°
Slow Axis Divergence at 80 W**	$\theta_{\perp}$		**7**	9	°
Pulse Wavelength	λ	927	**930**	933	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		**3**	4	nm
Slope Efficiency***	η	1.0	**1.1**		W/A
Threshold Current	I_{th}		**9**	11	A
Operating Current	I_{op}		**82**	91	A
Operating Voltage	V_{op}		**1.7**	1.9	V
Series Resistance	R_s		**2**	4	mΩ
Degree of TE Polarization	α	98			%
EO Conversion Efficiency***	η_{tot}	56	**61**		%

* Mounted on a heat sink with Rth = 0.7 K/W, coolant temperature 25 °C, operating at nominal power
** 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 Advices: 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.

Specifications may change in compliance with our quality management system.

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