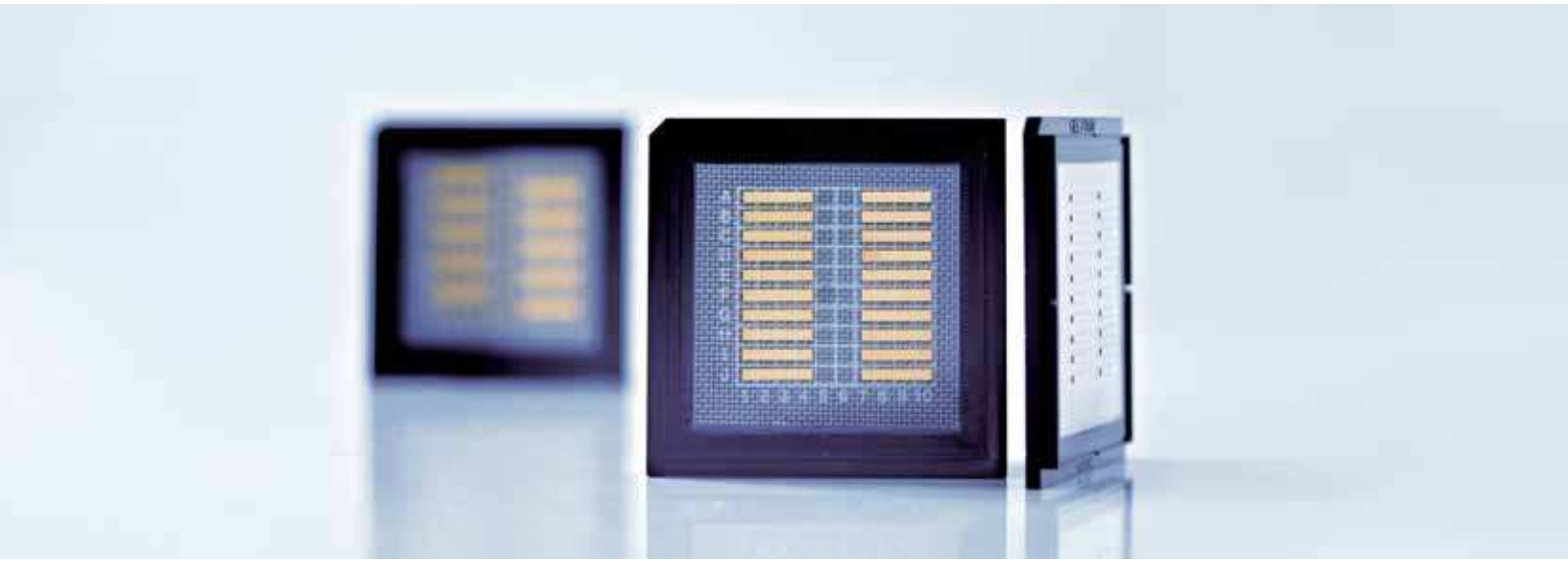
JENOPTIK

High Power Diode Laser Bars

808 nm, 40 W cw



JDL-BAB-50-47-808-TE-40-1.0

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

High Power Diode Laser Bars

808 nm, 40 W cw

Specifications

Product	JDL-BAB-50-47-808-TE-40-1.0				
	Symbol	Min	**Nom**	Max	Unit
Operation*					
Wavelength (cw)	λ	803	**806**	809	nm
Optical Output Power	P_{opt}		**40**		W
Operation Mode			**cw, switched**		
Power Modulation			**100**		%
Geometrical					
Number of Emitters			**47**		
Emitter Width	W	95	**100**	105	µm
Emitter Pitch	P		**200**		µm
Filling Factor	F		**50**		%
Bar Width	B	9600	**9800**	10000	µm
Cavity Length	L	980	**1000**	1020	µm
Thickness	D	115	**120**	125	µm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	$\theta_{\perp}$		**36**	39	°
Fast Axis Divergence**	$\theta_{\perp}$		**65**	68	°
Slow Axis Divergence at 40 W (FWHM)	$\theta_{\parallel}$		**6**	8	°
Slow Axis Divergence at 40 W**	$\theta_{\parallel}$		**7**	9	°
Pulse Wavelength	λ	799	**802**	805	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		**2**	3	nm
Slope Efficiency***	η	1.1	**1.2**		W/A
Threshold Current	I_{th}		**12**	15	A
Operating Current	I_{op}		**45**	50	A
Operating Voltage	V_{op}		**1.7**	2.0	V
Series Resistance	R_s		**3**	5	mΩ
Degree of TE Polarization	α	98			%
EO Conversion Efficiency***	η_{tot}	52	**55**		%

* Mounted on a heat sink with Rth = 0.5 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

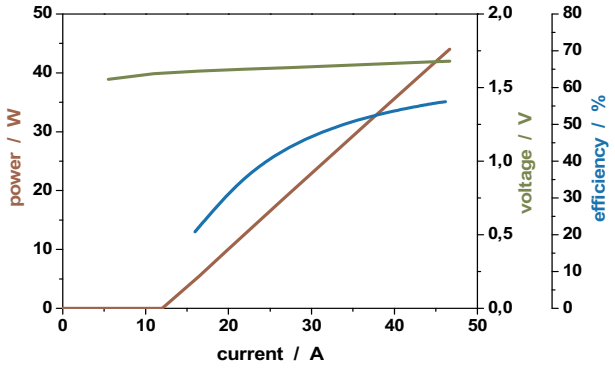
Note: Nominal data represents typical values.

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.

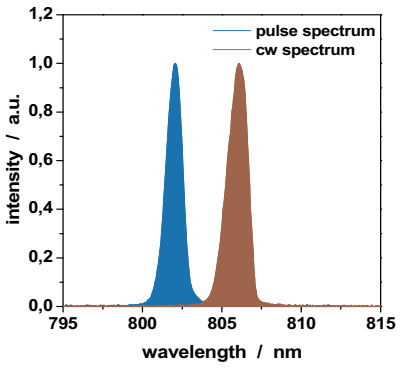
Specifications may change in compliance with our quality management system.

11/2012

Power - Current - Voltage - Characteristics*



Spectral Characteristic*



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