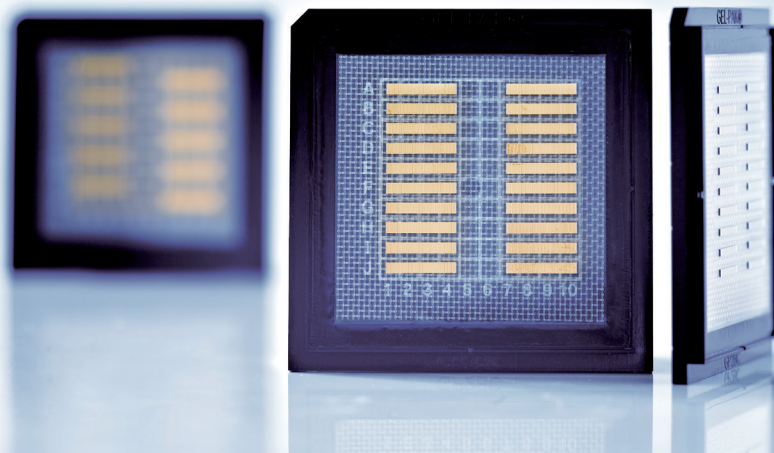




High Power Diode Laser Bars

760 nm, 40 W cw



JDL-BAB-30-19-760-TE-40-1.5

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

760 nm, 40 W cw

Specifications

Product		JDL-BAB-30-19-760-TE-40-1.5			
	Symbol	Min	Nom	Max	Unit
Operation*					
Wavelength (cw)	λ	757	760	763	nm
Optical Output Power	P_{opt}		40		W
Operation Mode			cw, switched		
Power Modulation			100		%
Current 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	1480	1500	1520	μm
Thickness	D	115	120	125	μm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	θ_{\perp}		36	39	$^{\circ}$
Fast Axis Divergence**	θ_{\perp}		65	68	$^{\circ}$
Slow Axis Divergence at 40 W (FWHM)	θ_{\parallel}		6	8	$^{\circ}$
Slow Axis Divergence at 40 W**	θ_{\parallel}		7	9	$^{\circ}$
Pulse Wavelength	λ	755	758	761	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		2	3	nm
Slope Efficiency***	η	1.20	1.25		W/A
Threshold Current	I_{th}		12	14	A
Operating Current	I_{op}		44	45	A
Operating Voltage	V_{op}		1.75	2.0	V
Series Resistance	R_s		2	3	m Ω
Degree of TE Polarization	α	98			%
EO Conversion Efficiency***	η_{tot}	50	55		%

* Mounted on a heat sink with $R_{th} = 0.50 \text{ K/W}$, coolant temperature $25 \text{ }^{\circ}\text{C}$, operating at nominal power

** Full width at 95 % power content

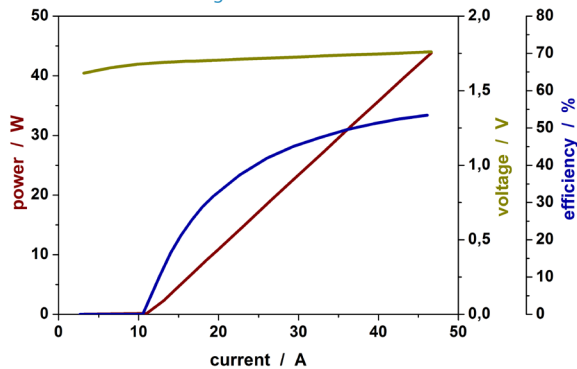
*** Item may change upon notice and acceptance by JENOPTIK Diode Lab GmbH, due to future improvements of technology or processing

Note: Nominal data represents typical values.

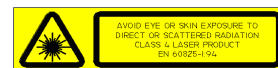
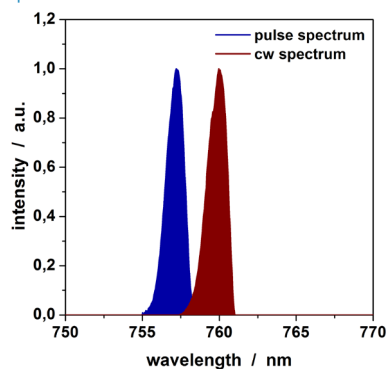
Safety Advices: Laser bars are the active components in high-power diode lasers in accordance to IEC standard class 4 laser products.

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.

Power - Current - Voltage - Characteristics*



Spectral Characteristic*



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