

MORE LIGHT

JDL-BAB-75-62-808-TE-300-1.5

## High-power diode laser bars: 808 nm, 300 W qcw

### 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
- Printing industry
- Defense and security

# High-power diode laser bars | 808 nm, 300 W qcw JDL-BAB-75-62-808-TE-300-1.5

## Specifications

## JDL-BAB-75-62-808-TE-300-1.5

Operation*	Symbol	Min	Nom	Max	Unit
Wavelength (qcw)	$\lambda$	805	808	811	nm
Optical Output Power	$P_{opt}$		300		W
Operation Mode			pulsed		
Power Modulation			100		%
<b>Geometrical</b>					
Number of Emitters			62		
Emitter Width	W	90	100	110	$\mu\text{m}$
Emitter Pitch	P		150		$\mu\text{m}$
Filling Factor	F		75		%
Bar Width	B	9600	9800	10000	$\mu\text{m}$
Cavity Length	L	1480	1500	1520	$\mu\text{m}$
Thickness	D	115	120	125	$\mu\text{m}$
<b>Electro Optical Data*</b>					
Fast Axis Divergence (FWHM)	$\theta_{\perp}$		36	39	$^{\circ}$
Fast Axis Divergence**	$\theta_{\perp}$		65	68	$^{\circ}$
Slow Axis Divergence at 300 W (FWHM)	$\theta_{\parallel}$		8	9	$^{\circ}$
Slow Axis Divergence at 300 W**	$\theta_{\parallel}$		10	11	$^{\circ}$
Pulse Wavelength	$\lambda$	805	808	811	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		3	5	nm
Slope Efficiency***	$\eta$	1.20	1.30		W/A
Threshold Current	$I_{th}$		22	25	A
Operating Current	$I_{op}$		253	275	A
Operating Voltage	$V_{op}$		2.1	2.2	V
Series Resistance	$R_s$		3		m $\Omega$
Degree of TE Polarization	$\alpha$	98			%
EO Conversion Efficiency***	$\eta_{tot}$		56		%

\* Mounted on a heat sink with  $R_{th}=0.7$  K/W, coolant temperature 25°C, operating at nominal power, 200  $\mu\text{sec}$  pulse length and 4% duty cycle, measured with photodiode

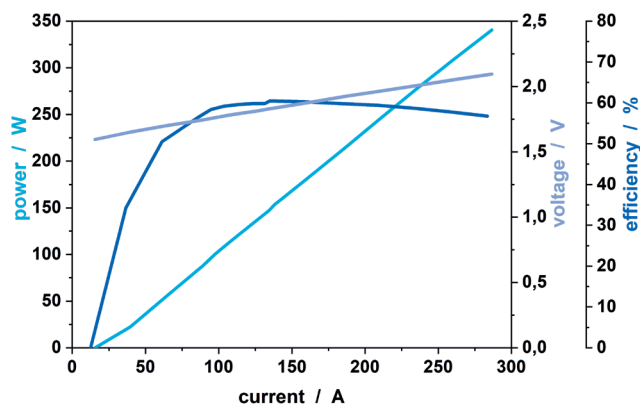
\*\* Full width at 95 % power content

\*\*\* Item may change upon notice and acceptance by Jenoptik, due to future improvements of technology or processing

Note: Nominal data represents typical values.

Safety Advice: 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 Characteristics\*

