



## High Power Single Emitter Diode Lasers

200  $\mu\text{m}$ , 808 nm, 8 W



### JDL-BAE-200-808-TM-8-4.0

#### 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 Single Emitter Diode Lasers

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## Specifications

Product **JDL-BAE-200-808-TM-8-4.0**

	Symbol	Min	Nom	Max	Unit
<b>Operation*</b>					
Wavelength (cw)	$\lambda$	805	<b>808</b>	811	nm
Optical Output Power	$P_{\text{opt}}$		<b>8</b>		W
Operation Mode			<b>cw, switched</b>		
Power Modulation			<b>100</b>		%
<b>Geometrical</b>					
Number of Emitters			<b>1</b>		
Emitter Width	W	190	<b>200</b>	210	$\mu\text{m}$
Emitter Pitch	P		-		$\mu\text{m}$
Filling Factor	F		-		%
Width	B	580	<b>600</b>	620	$\mu\text{m}$
Cavity Length	L	3980	<b>4000</b>	4020	$\mu\text{m}$
Thickness	D	115	<b>120</b>	125	$\mu\text{m}$
<b>Electro Optical Data*</b>					
Fast Axis Divergence (FWHM)	$\theta_{\parallel}$		<b>27</b>	30	$^{\circ}$
Fast Axis Divergence**	$\theta_{\parallel}$		<b>46</b>	50	$^{\circ}$
Slow Axis Divergence at 8 W (FWHM)	$\theta_{\perp}$		<b>7</b>	9	$^{\circ}$
Slow Axis Divergence at 8 W**	$\theta_{\perp}$		<b>8</b>	10	$^{\circ}$
Pulse Wavelength	$\lambda$	800	<b>803</b>	806	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		<b>2</b>	3	nm
Slope Efficiency***	$\eta$	1.0	<b>1.1</b>		W/A
Threshold Current	$I_{\text{th}}$		<b>1.2</b>	1.5	A
Operating Current	$I_{\text{op}}$		<b>8.5</b>	9.5	A
Operating Voltage	$V_{\text{op}}$		<b>1.8</b>	2.0	V
Series Resistance	$R_s$		<b>18</b>	28	$\text{m}\Omega$
Degree of TM Polarization	$\alpha$	98			%
EO Conversion Efficiency***	$\eta_{\text{tot}}$	51	<b>55</b>		%

\* Mounted on a heat sink with  $R_{\text{th}} = 2.1 \text{ K/W}$ , coolant temperature  $25 \text{ }^{\circ}\text{C}$ , operating at nominal power

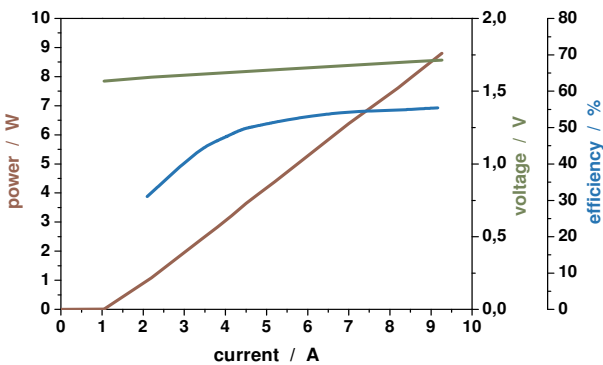
\*\* Full width at 95 % power content

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

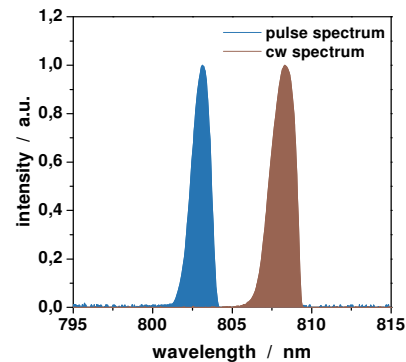
Note: Nominal data represents typical values.

Safety Advises: Single emitter diode lasers are the active components in high-power diode lasers in accordance to IEC standard class 4 laser products. As delivered, single emitter diode lasers cannot emit any laser beam. The laser beam can only be released if the single emitter diode lasers 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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