

JENOPTIK

## High-power single emitter diode lasers: 200 $\mu\text{m}$ , 808 nm, 10 W cw JDL-BAE-200-808-TM-10-4.0

### 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
- Printing industry
- Defense and security
- Recommended fields of application: medicine

# High-power single emitter diode lasers | 200 $\mu\text{m}$ , 808 nm, 10 W cw

## JDL-BAE-200-808-TM-10-4.0

### Specifications

JDL-BAE-200-808-TM-10-4.0

Operation*	Symbol	Min	Nom	Max	Unit
Wavelength (cw)	$\lambda$	805	808	811	nm
Optical Output Power	$P_{opt}$		10		W
Operation Mode			cw, switched		
Power Modulation			100		%
<b>Geometrical</b>					
Number of Emitters			1		
Emitter Width	W	190	200	210	$\mu\text{m}$
Width	B	580	600	620	$\mu\text{m}$
Cavity Length	L	3980	4000	4020	$\mu\text{m}$
Thickness	D	115	120	125	$\mu\text{m}$
<b>Electro Optical Data*</b>					
Fast Axis Divergence (FWHM)	$\theta_{\perp}$		27	30	$^{\circ}$
Fast Axis Divergence**	$\theta_{\perp}$		46	50	$^{\circ}$
Slow Axis Divergence at 10 W (FWHM)	$\theta_{\parallel}$		8	11	$^{\circ}$
Slow Axis Divergence at 10 W**	$\theta_{\parallel}$		9	12	$^{\circ}$
Pulse Wavelength	$\lambda$	799	802	805	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		2	3	nm
Slope Efficiency***	$\eta$	1.0	1.1		W/A
Threshold Current	$I_{th}$		1.60	1.80	A
Operating Current	$I_{op}$		11	12	A
Operating Voltage	$V_{op}$		1.7	1.8	V
Series Resistance	$R_s$		17	23	$\text{m}\Omega$
Degree of TM Polarization	$\alpha$	97			%
EO Conversion Efficiency***	$\eta_{tot}$	50	54		%

\* Mounted on a heat sink with  $R_{th} = 2.1 \text{ K/W}$ , 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:

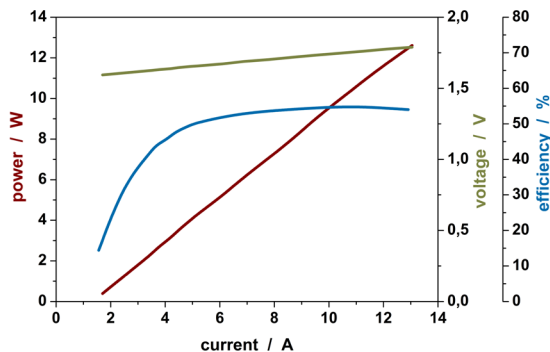
Nominal data represents typical values.

Safety Advice:

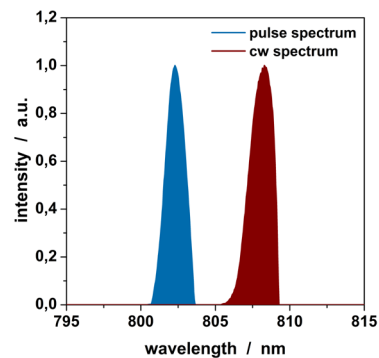
Single emitter diode lasers are the active components in high-power diode lasers in accordance to IEC standard class 4 laser products.

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 Characteristics\*



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