

JENOPTIK

High-power single emitter diode lasers: 100 μm , 808 nm, 6 W cw JDL-BAE-100-808-TM-6-4.0

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 | 100 μm , 808 nm, 6 W cw

JDL-BAE-100-808-TM-6-4.0 | Specifications

Operation*	Symbol	Min	Nom	Max	Unit
Wavelength (cw)	λ	805	808	811	nm
Optical Output Power	P_{opt}		6		W
Operation Mode			cw, switched		
Power Modulation			100		%
Geometrical					
Number of Emitters			1		
Emitter Width	W	95	100	105	μm
Width	B	380	400	420	μm
Cavity Length	L	3980	4000	4020	μm
Thickness	D	115	120	125	μm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	θ_{\perp}		27	30	$^{\circ}$
Fast Axis Divergence**	θ_{\perp}		46	50	$^{\circ}$
Slow Axis Divergence at 6 W (FWHM)	θ_{\parallel}		6	8	$^{\circ}$
Slow Axis Divergence at 6 W**	θ_{\parallel}		8	10	$^{\circ}$
Pulse Wavelength	λ	802	805	808	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		2	3	nm
Slope Efficiency***	η	1.0	1.1		W/A
Threshold Current	I_{th}		0.8	1.0	A
Operating Current	I_{op}		6.5	7.5	A
Operating Voltage	V_{op}		1.75	1.85	V
Series Resistance	R_s		30	35	$\text{m}\Omega$
Degree of TM Polarization	α	97			%
EO Conversion Efficiency***	η_{tot}	51	55		%

* 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

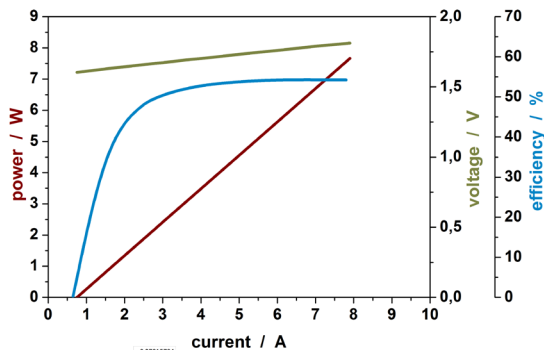
** Full width at 95 % power content

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

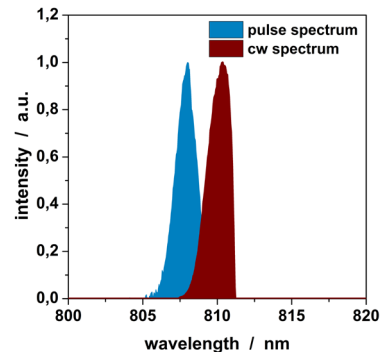
Note: Nominal data represents typical values.

Safety Advices: 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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