JDL-BAB-30-19-808-TE-60-2.0

High-power diode laser bars: 808 nm, 60 W cw

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

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Specifications	JDL-BAB-30-19-808-TE-60-2.0				
Operation*	Symbol	Min	Nom	Max	Unit
Wavelength (cw)	λ	803	806	809	nm
Optical Output Power	P_{opt}		60		W
Operation Mode			cw, switched		
Power 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	1980	2000	2020	µm
Thickness	D	115	120	125	µm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	$\theta_\perp$		36	39	°
Fast Axis Divergence**	$\theta_\perp$		65	68	°
Slow Axis Divergence at 60 W (FWHM)	$\theta_\parallel$		6	8	°
Slow Axis Divergence at 60 W**	$\theta_\parallel$		7	9	°
Pulse Wavelength	λ	798	801	804	nm
Spectral Bandwidth (FWHM)	Δλ		2	3	nm
Slope Efficiency***	η	1.1	1.2		W/A
Threshold Current	I_{th}		10	12	A
Operating Current	I_{op}		60	67	A
Operating Voltage	V_{op}		1.8	2.0	V
Series Resistance	R_s		2	4	mΩ
Degree of TE Polarization	α	98			%
EO Conversion Efficiency***	η_{tot}	54	59		%

* Mounted on a heat sink with Rth = 0.7 K/W, coolant temperature 25 °C, operating at nominal power
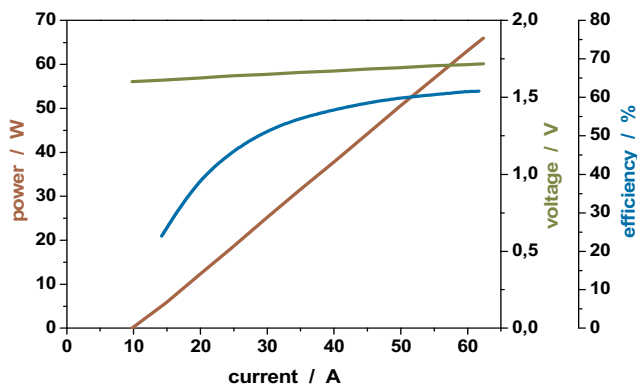** Full width at 95 % power content
*** Item may change upon notice and acceptance by Jenoptik, due to future improvements of technology or processing

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*

JENOPTIK

AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION CLASS 4 LASER PRODUCT EN 60825-1 94

ATTENTION ELECTROSTATIC SENSITIVE DEVICES OBSERVE PRECAUTION FOR HANDLING