JENOPTIK

MORE LIGHT

JDL-BAE-17-090-1060-TE-10-4.0

High-power single emitter diode lasers 90 µm, 1060 nm, 10 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
- Recommended fields of application: medicine

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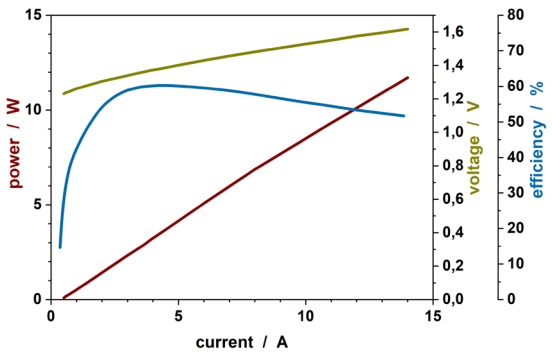
Specifications	JDL-BAE-17-090-1060-TE-10-4.0				
Operation*	**Symbol**	**Min**	**Nom**	**Max**	**Unit**
Wavelength (cw)	λ	1057	**1060**	1063	nm
Optical Output Power	P_{opt}		**10**		W
Operation Mode			**cw, switched**		
Power Modulation			**100**		%
Geometrical					
Number of Emitters			**1**		
Emitter Width	W	80	**90**	100	µm
Emitter Pitch	P		**-**		µm
Filling Factor	F		**-**		%
Width	B		**600**		µm
Cavity Length	L	3980	**4000**	4020	µm
Thickness	D	115	**120**	125	µm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	$\theta_{\perp}$		**27**	30	°
Fast Axis Divergence**	$\theta_{\perp}$		**55**	58	°
Slow Axis Divergence at 10 W (FWHM)	$\theta_{\parallel}$		**6**	8	°
Slow Axis Divergence at 10 W**	$\theta_{\parallel}$		**10**	12	°
Pulse Wavelength	λ	1049	**1052**	1055	nm
Spectral Bandwidth (FWHM)	Δλ		**5**	6	nm
Slope Efficiency***	η	0.80	**0.86**		W/A
Threshold Current	I_{th}		**0.4**	0.5	A
Operating Current	I_{op}		**12**	13	A
Operating Voltage	V_{op}		**1.50**	1.55	V
Series Resistance	R_s		**25**	30	mΩ
Degree of TE Polarization	α	97			%
EO Conversion Efficiency***	η_{tot}	50	**54**		%

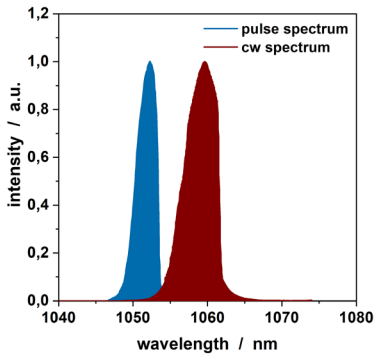
* Mounted on a heat sink with Rth=2.1 K/W, coolant temperature 25°C, operating at nominal power
** Full width at 95 % power content
*** Item may change upon notice and acceptance by Jenoptik, due to future improvements of technology or processing

Note: Nominal data represents typical values.
Safety Advice: 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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