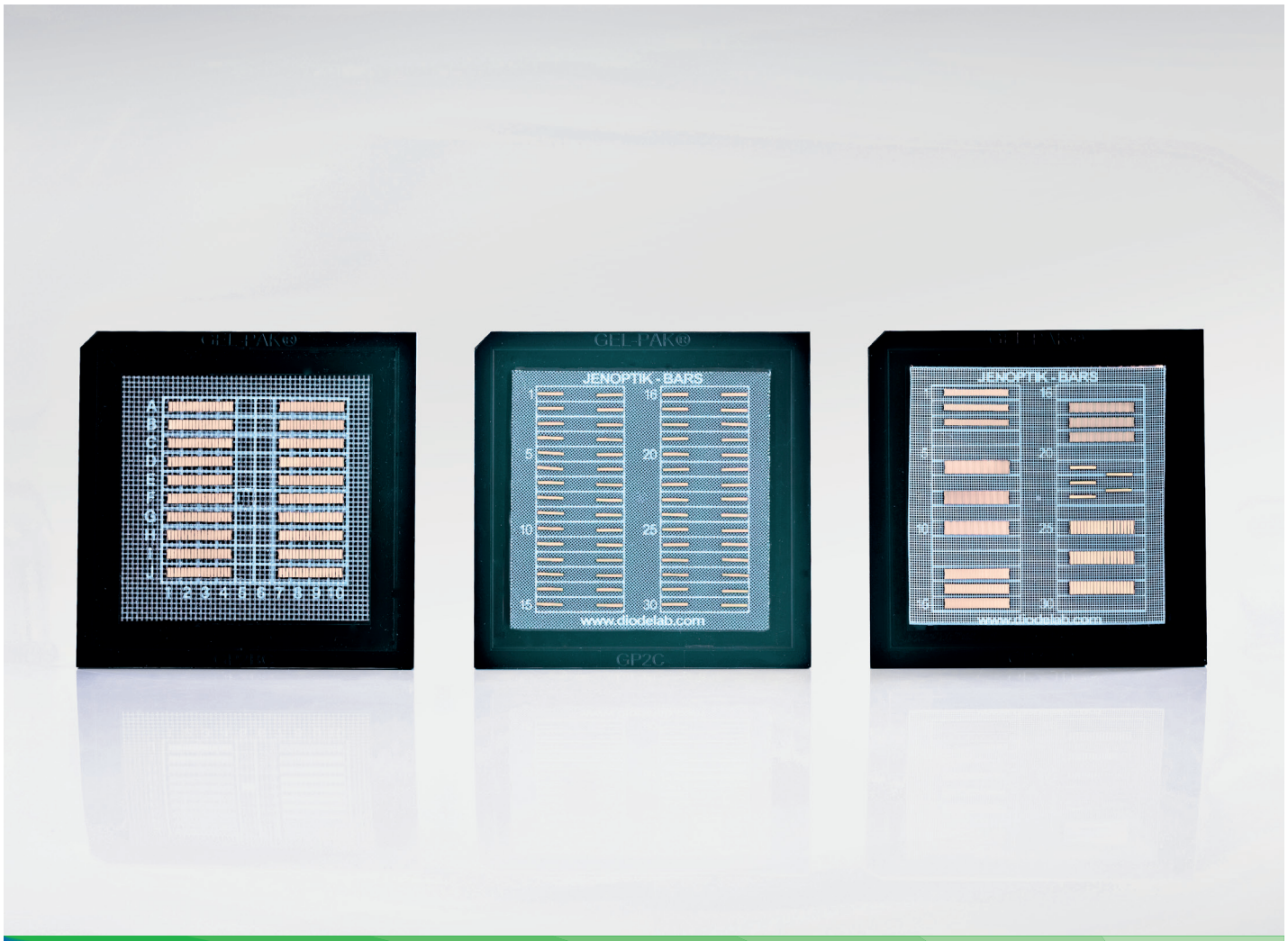

JENOPTIK

MORE LIGHT

JDL-BAB-50-23-1020-TE-120-2.0

High-power diode laser bars: 1020 nm, 120 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

High-power diode laser bars | 1020 nm, 120 W cw
JDL-BAB-50-23-1020-TE-120-20

Preliminary specifications	JDL-BAB-50-23-1020-TE-120-2.0				
Operation*	**Symbol**	**Min**	**Nom**	**Max**	**Unit**
Wavelength (cw)	λ	1017	**1020**	1023	nm
Optical Output Power	P_{opt}		**120**		W
Operation Mode			**cw, switched**		
Power Modulation			**100**		%
Geometrical					
Number of Emitters			**23**		
Emitter Width	W	195	**200**	205	µm
Emitter Pitch	P		**400**		µm
Filling Factor	F		**50**		%
Bar Width	B	9600	**9800**	10000	µm
Cavity Length	L	980	**1000**	1020	µm
Thickness	D	115	**120**	125	µm
Electro Optical Data*					
Fast Axis Divergence (FWHM)	$\theta_{\perp}$		**25**	27	°
Fast Axis Divergence**	$\theta_{\perp}$		**55**	57	°
Slow Axis Divergence at 120 W (FWHM)	$\theta_{\parallel}$		**5**	7	°
Slow Axis Divergence at 120 W**	$\theta_{\parallel}$		**7**	9	°
Pulse Wavelength	λ	1003	**1006**	1009	nm
Spectral Bandwidth (FWHM)	$\Delta\lambda$		**4**	5	nm
Slope Efficiency***	η	0.98	**1.0**		W/A
Threshold Current	I_{th}		**13**	15	A
Operating Current	I_{op}		**132**	137	A
Operating Voltage	V_{op}		**1.48**	1.49	V
Series Resistance	R_s		**1.7**	1.8	mΩ
Degree of TE Polarization	α	95			%
EO Conversion Efficiency***	η_{tot}	59	**61**		%

* Mounted on a heat sink with Rth = 0.5 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.

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