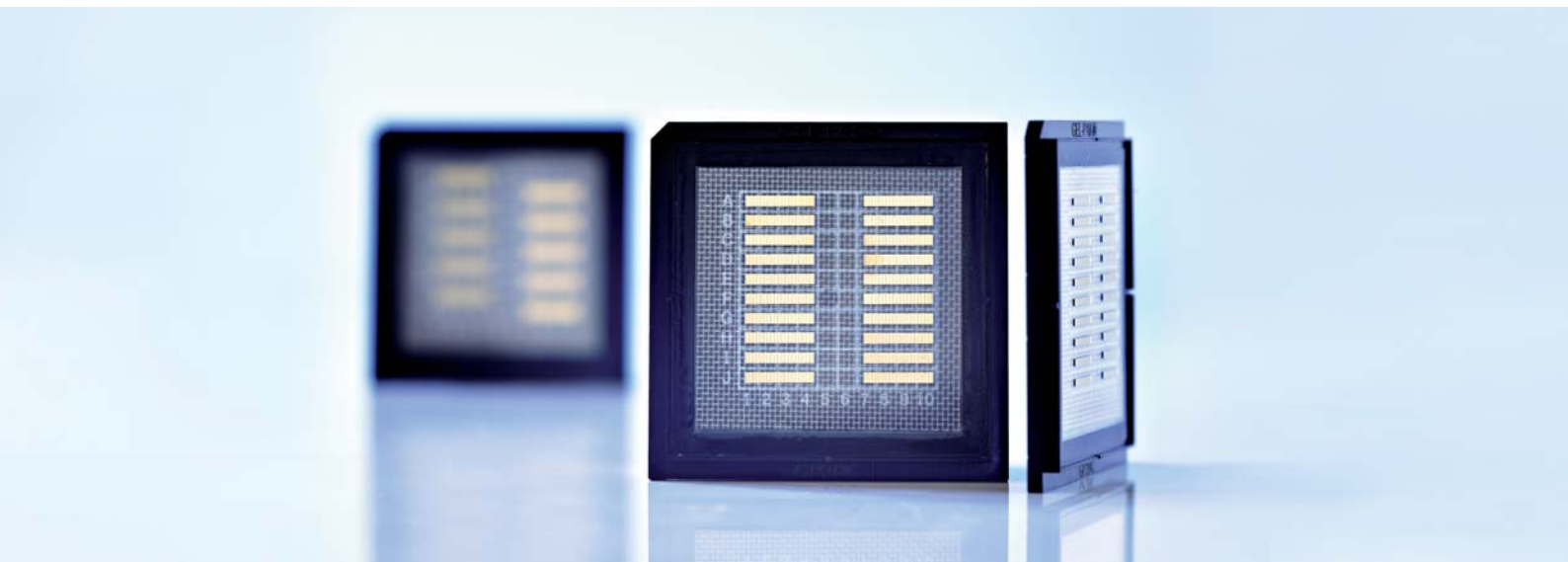




High Power Diode Laser Bars

880 nm, 100 W cw



JDL-BAB-50-47-880-TE-100-2.0

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
- Applications in the printing industry
- Defense and security

High Power Diode Laser Bars

880 nm, 100 W cw

Specifications

| Product | JDL-BAB-50-47-880-TE-100-2.0 | | | | |
|--------------------------------------|------------------------------|------|---------------------|-------|---------------|
| | Symbol | Min | Nom | Max | Unit |
| Operation* | | | | | |
| Wavelength (cw) | λ | | 885 | | nm |
| Optical Output Power | P_{opt} | | 100 | | W |
| Operation Mode | | | cw, switched | | |
| Power Modulation | | | 100 | | % |
| Geometrical | | | | | |
| Number of Emitters | | | 47 | | |
| Emitter Width | W | 95 | 100 | 105 | μm |
| Emitter Pitch | P | | 200 | | μm |
| Filling Factor | F | | 50 | | % |
| 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) | $\theta_{ }$ | | 28 | | ° |
| Fast Axis Divergence** | $\theta_{ }$ | | 47 | | ° |
| Slow Axis Divergence at 100 W (FWHM) | θ_{\perp} | | 5 | | ° |
| Slow Axis Divergence at 100 W** | θ_{\perp} | | 7 | | ° |
| Pulse Wavelength | λ | | 876 | | nm |
| Spectral Bandwidth (FWHM) | $\Delta\lambda$ | | 3 | | nm |
| Slope Efficiency*** | η | | 1.2 | | W/A |
| Threshold Current | I_{th} | | 19 | | A |
| Operating Current | I_{op} | | 102 | | A |
| Operating Voltage | V_{op} | | 1.7 | | V |
| Series Resistance | R_s | | 2 | | m Ω |
| Degree of TE Polarization | α | 98 | | | % |
| EO Conversion Efficiency*** | η_{tot} | | 60 | | % |

* Mounted on a heat sink with $R_{th} = 0.5 \text{ K/W}$, 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: 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.



JENOPTIK | Lasers & Material Processing

JENOPTIK Diode Lab GmbH

Max-Planck-Strasse 2 | 12489 Berlin | Germany

Sales contact: JENOPTIK Laserdiode GmbH

Phone: +49 3641 65-4300 | Fax: -4392 | E-mail: jold@jenoptik.com | www.diodelab.com

