High-power diode laser bars:
976 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
High-power diode laser bars | 976 nm, 60 W cw  
JDL-BAB-20-19-976-TE-60-1.5

Specifications | JDL-BAB-20-19-976-TE-60-1.5
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**Operation** |  
Wavelength (cw) | λ | 973 | 976 | 979 | nm  
Optical Output Power | P | 60 | W  
Operation Mode | | | | cw, switched  
Power Modulation | | | | 100 | %
**Geometrical** |  
Number of Emitters | W | 19 |  
Emitter Width | | | | 90 | 110 | µm  
Emitter Pitch | | | | 500 | µm  
Filling Factor | F | | | 20 | %
Bar Width | B | 9600 | 9800 | 10000 | µm  
Cavity Length | L | 1480 | 1500 | 1520 | µm  
Thickness | D | 115 | 120 | 125 | µm
**Electro Optical Data** |  
Fast Axis Divergence (FWHM) | θ | 27 | 30 | °  
Fast Axis Divergence** | | | | 47 | 51 |  
Slow Axis Divergence at 60 W (FWHM) | δ | 6 | 8 | °  
Slow Axis Divergence at 60 W** | | | | 7 | 9 | °  
Pulse Wavelength | λ | 965 | 968 | 971 | nm  
Spectral Bandwidth (FWHM) | Δλ | 3 | 4 | nm  
Slope Efficiency*** | η | 0.95 | 1.05 | W/A  
Threshold Current | I | 4 | 6 | A  
Operating Current | I | 61 | 67 | A  
Operating Voltage | V | 1.7 | 1.9 | V  
Series Resistance | R | 5 | 7 | mΩ  
Degree of TE Polarization | α | 98 | %  
EO Conversion Efficiency*** | η | 55 | 60 | %

* 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**
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![Graph of power vs. current and voltage vs. efficiency](image1.png)  
![Graph of wavelength vs. intensity](image2.png)