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
### Specifications

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Min</th>
<th>Nom</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \lambda )</td>
<td>803</td>
<td>806</td>
<td>809</td>
<td>nm</td>
</tr>
<tr>
<td>( P_{\text{opt}} )</td>
<td>60</td>
<td>60</td>
<td></td>
<td>W</td>
</tr>
<tr>
<td>Operation Mode</td>
<td>cw, switched</td>
<td></td>
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</tr>
<tr>
<td>Power Modulation</td>
<td>100</td>
<td>100</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Number of Emitters</td>
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<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emitter Width</td>
<td>95</td>
<td>100</td>
<td>105</td>
<td>( \mu ) m</td>
</tr>
<tr>
<td>Emitter Pitch</td>
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<td>200</td>
<td></td>
<td>( \mu ) m</td>
</tr>
<tr>
<td>Filling Factor</td>
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<td>%</td>
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<tr>
<td>Bar Width</td>
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<td>9600</td>
<td>10000</td>
<td>( \mu ) m</td>
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<tr>
<td>Cavity Length</td>
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<td>1500</td>
<td>1520</td>
<td>( \mu ) m</td>
</tr>
<tr>
<td>Thickness</td>
<td>115</td>
<td>120</td>
<td>125</td>
<td>( \mu ) m</td>
</tr>
</tbody>
</table>

### Electro Optical Data*

- Fast Axis Divergence (FWHM) \( \theta_{\text{LA}} \): 36°, 39°
- Fast Axis Divergence**: \( \theta_{\text{LA}} \): 65°, 68°
- Slow Axis Divergence at 60 W (FWHM): \( \theta_{\text{LA}} \): 6°, 8°
- Slow Axis Divergence at 60 W**: \( \theta_{\text{LA}} \): 6°, 8°
- Pulse Wavelength \( \lambda \): 798 nm, 801 nm, 804 nm
- Spectral Bandwidth (FWHM) \( \Delta \lambda \): 2 nm, 3 nm
- Slope Efficiency*** \( \eta \): 1.1%, 1.2 W/A
- Threshold Current \( I_{\text{th}} \): 15 A, 19 A
- Operating Current \( I_{\text{op}} \): 65 A, 69 A
- Operating Voltage \( V_{\text{op}} \): 1.8 V, 2.0 V
- Series Resistance \( R_{\text{s}} \): 2 \( \Omega \), 4 \( \Omega \)
- Degree of TE Polarization \( \alpha \): 98%, 98%
- EO Conversion Efficiency*** \( \eta_{\text{EO}} \): 52%, 56%

* Mounted on a heat sink with \( R_{\text{th}} = 0.5 \) 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

### Notes:
- Nominal data represents typical values.
- 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*

![Power - Current - Voltage - Characteristics](image)

### Spectral Characteristics*

![Spectral Characteristics](image)