Vertical diode laser stacks:
cw, actively cooled, with collimation, 9xx nm, high power
JOLD-x-CAFN-xA

Designs
210480426 (4 submounts)
210480626 (6 submounts)
210480826 (8 submounts)
210481026 (10 submounts)
210481226 (12 submounts)

Features
– High optical output power up to 110 W cw per bar after collimation
– Wavelengths: 938 and 976 nm
– High efficiency, low divergences
– Lifetime > 10,000 h, high reliability

Applications
– Pumping of solid-state lasers and fiber lasers
– Material processing
– Medical applications (e.g. hair removal)
Vertikal diode laser stacks | cw, actively cooled, with collimation, 9xx nm, high power  
**JOLD-x-CAFN-xA**

### Specifications (start of life)

**Operation Mode**

<table>
<thead>
<tr>
<th>Design</th>
<th>Number of Submounts</th>
<th>Maximum Optical Output Power (W)</th>
<th>Maximum Operation Current (A)</th>
<th>Typical Threshold Current (A)</th>
<th>Typical Slope (W/A)</th>
<th>Minimum Slope (°)</th>
<th>Maximum Operating Voltage (V)</th>
<th>Fast Axis Divergence (°)</th>
</tr>
</thead>
<tbody>
<tr>
<td>210480426 (4 submounts)</td>
<td>4</td>
<td>360</td>
<td>105</td>
<td>15</td>
<td>4.0</td>
<td>7</td>
<td>8</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>210480626 (6 submounts)</td>
<td>6</td>
<td>540</td>
<td>115</td>
<td>15</td>
<td>5.4</td>
<td>7</td>
<td>12</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>210480826 (8 submounts)</td>
<td>8</td>
<td>720</td>
<td>135</td>
<td>15</td>
<td>7.2</td>
<td>9</td>
<td>20</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>210481026 (10 submounts)</td>
<td>10</td>
<td>900</td>
<td>155</td>
<td>15</td>
<td>9.0</td>
<td>10</td>
<td>24</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>210481226 (12 submounts)</td>
<td>12</td>
<td>1080</td>
<td>175</td>
<td>15</td>
<td>10.8</td>
<td>12</td>
<td>36</td>
<td>&lt;0.5</td>
</tr>
</tbody>
</table>

**Center Wavelength at 25 °C (nm):**

- 938 / 976

**Center Wavelength Variation at 25 °C (nm):**

- 5

**Typical Spectral Bandwidth (FWHM) (nm):**

- 3

**Maximum Spectral Bandwidth (FWHM) (nm):**

- 6

**Typical Slow Axis Divergence FWHM (°):**

- 6

**Typical Slow Axis Divergence 86 % (°):**

- 7

**Typical Slow Axis Divergence 95 % (°):**

- 8

**Maximum Inlet Pressure (kPa):**

- <200 kPa

**Water Temperature (°C):**

- 15 ... 35 °C

**Pressure Drop (kPa):**

- <200 kPa

**Water Quality:**

- Deionized 2 ... 6 μS/cm, mixed bed ion exchanger, particle filter <25 μm (not included)

**Operation Conditions**

- Cleanroom class ISO 5, non-condensing atmosphere

**Expected Lifetime**

- >10,000 h (constant current)

**Cooling**

<table>
<thead>
<tr>
<th>Number of Submounts</th>
<th>Flow Rate (l/min)</th>
<th>Flow Rate Tolerance</th>
<th>Water Temperature</th>
<th>Maximum Inlet Pressure (kPa)</th>
<th>Water Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>1.7</td>
<td>±10 %</td>
<td>15 ... 35 °C</td>
<td>400 kPa</td>
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</tr>
<tr>
<td>6</td>
<td>2.3</td>
<td>3.6</td>
<td>4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3.0</td>
<td>4.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>4.3</td>
<td></td>
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</tbody>
</table>

**Options on request:** 915 nm; for additional designs or specifications please visit our website: [www.jenoptik.com](http://www.jenoptik.com)

See general user information!