Overview:

The LRS-1064 Series of Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring anywhere up to 200 W of 1064 nm laser light with the highest level of long-term output power stability and long operating lifetime at a highly competitive cost.

These lasers are commonly used for various scientific applications such as measurement, communications research, spectral analysis, and a broad spectrum of other applications. The driver is available as a complete FDA-compliant system or as an O.E.M. component with significantly reduced dimensions.

Available with both analog and TTL modulation as well as a wide array of output power and stability levels, Laserglow products are currently being used by some of the World's top universities and other prominent research facilities.

Key Features:

- Air cooled below 50W, closed-loop water cooling 50 W and above
- Lightweight, compact design
- Efficient DPSS technology runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- >10,000 hours continuous maintenance-free operating life
- TTL and Analog modulation (input via BNC connector) lab-spec models only
- Adjustable output power (via lockable dial) lab-spec models only
- LED display showing LD current, laser cavity temperature lab-spec models only
- FDA CDRH Compliant Class IIIb / Class IV enclosure
- 48-hour replacement coverage available for an additional fee on specific models

Package Includes:

- Laser Head
- Driver/Power Supply
- Power Cable
- BNC Connector (LabSpec models only)
- Keys, Safety Interlock
- Hard-shell Carrying Case
- Water chiller included on models above 50 W
Specifications:
This spec sheet has been generated specifically for part number RA6-B, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to RA6-B have been highlighted below in **red + bold**.

<table>
<thead>
<tr>
<th>Specification</th>
<th>M</th>
<th>SS</th>
<th>H</th>
<th>N</th>
<th>W</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Form Factor</td>
<td>M</td>
<td>SS</td>
<td>H</td>
<td>N</td>
<td>W</td>
<td>B</td>
</tr>
<tr>
<td>Output Power (mW)</td>
<td>&gt;100, &gt;300, &gt;500, &gt;1000</td>
<td>&gt;100, &gt;300, &gt;500, &gt;1000</td>
<td>&gt;2000</td>
<td>&gt;4000, &gt;5000</td>
<td>&gt;10000, &gt;15000, &gt;20000</td>
<td>100,000, 200,000, &gt;50000</td>
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<tr>
<td>Output Power Stability (%RMS/4h)</td>
<td>&lt;1, &lt;3, &lt;5</td>
<td>&lt;1, &lt;3, &lt;5</td>
<td>&lt;1, &lt;3, &lt;5</td>
<td>&lt;1, &lt;3, &lt;5</td>
<td>&lt;1, &lt;3, &lt;5</td>
<td>&lt;3, &lt;5</td>
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<tr>
<td>FDA Safety Class</td>
<td>IIIb, IV</td>
<td>IIIb, IV</td>
<td>IV</td>
<td>IV</td>
<td>IV</td>
<td>IV</td>
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<tr>
<td>Central Wavelength (nm)</td>
<td>1063.2</td>
<td>1064</td>
<td>1063.2</td>
<td>1063.2</td>
<td>1063.2</td>
<td>1063.2</td>
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<tr>
<td>Wavelength Tolerance (+/- nm)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Divergence (mrad, full angle)</td>
<td>&lt;1.5</td>
<td>&lt;1.8</td>
<td>&lt;2</td>
<td>&lt;1.5</td>
<td>&lt;2</td>
<td>&lt;3.5</td>
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<tr>
<td>Beam Dimensions (mm, 1/e²)</td>
<td>1.5</td>
<td>1.2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>6, 9</td>
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<tr>
<td>Transverse Mode</td>
<td>TEM00</td>
<td>TEM00</td>
<td>Near TEM00</td>
<td>Near TEM00</td>
<td>Near TEM00</td>
<td>Multimode</td>
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<tr>
<td>Longitudinal Modes</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
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<tr>
<td>Warm-up Time (minutes)</td>
<td>10</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
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<tr>
<td>M²</td>
<td>&lt;1.5</td>
<td>&lt;1.5</td>
<td>&lt;2</td>
<td>&lt;3</td>
<td>&lt;2, &lt;3</td>
<td></td>
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<tr>
<td>Polarization Ratio</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td></td>
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<tr>
<td>Beam Pointing Stability (mrad)</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
<td>&lt;0.05</td>
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<td>IP rating</td>
<td>67</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Lateral Shock Tolerance (G's/6ms)</td>
<td>7</td>
<td></td>
<td></td>
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<tr>
<td>Vertical Shock Tolerance (G's/6ms)</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Operating Temperature Range (°C)</td>
<td>10 to 35</td>
<td>1 to 60</td>
<td>10 to 35</td>
<td>10 to 35</td>
<td>10 to 35</td>
<td>15 to 35</td>
</tr>
<tr>
<td>Storage Temperature Range (°C)</td>
<td>-10 to</td>
<td>-10 to</td>
<td>-10 to</td>
<td>-10 to</td>
<td>-10 to</td>
<td>-10 to</td>
</tr>
<tr>
<td>Max. Analog Modulation Freq. (Hz)</td>
<td>30000</td>
<td>30000</td>
<td>30000</td>
<td>30000</td>
<td>30000</td>
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<tr>
<td>Max. TTL Modulation Freq. (Hz)</td>
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<td>30000</td>
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<tr>
<td>Modulation Input Signal</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
<td>0-5 VDC</td>
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<tr>
<td>Total Power Consumption (W)</td>
<td>22, 30, 35</td>
<td>40</td>
<td>70</td>
<td></td>
<td>153</td>
<td></td>
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<tr>
<td>Max. Power Input Duty Cycle</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Cooling Method</td>
<td>TEC</td>
<td>TEC</td>
<td>TEC/Forced Air</td>
<td>TEC/Forced Air</td>
<td>TEC/Forced Air</td>
<td>Water (Closed Loop)</td>
</tr>
</tbody>
</table>

**CW:** All specifications are based on performance at full output power and after the specified warmup period. Output characteristics may change if the laser is run at a different power level.

**Q-Switched:** Specifications are based on the laser pulsing at the specified design frequency. Output characteristics may change if the laser is run at a different frequency.
## Specifications Page 2:

<table>
<thead>
<tr>
<th>Laser Form Factor</th>
<th>M</th>
<th>SS</th>
<th>H</th>
<th>N</th>
<th>W</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Warranty (months)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
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<tr>
<td>MTTF (operational hours)</td>
<td>10000</td>
<td>10000</td>
<td>10000</td>
<td>10000</td>
<td>10000</td>
<td>10000</td>
</tr>
<tr>
<td>Weight of Product or Laser Head (kg)</td>
<td>0.6</td>
<td>0.9</td>
<td>2.6</td>
<td>6.1</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Beam Height from Base Plate (mm)</td>
<td>24.8</td>
<td>19</td>
<td>29</td>
<td>68.2</td>
<td>93.5</td>
<td>65</td>
</tr>
<tr>
<td>Dimensions of Product or Laser Head (mm)</td>
<td>140.8 (l) x 73 (w) x 46.2 (h)</td>
<td>100 (l) x 50 (w) x 38 (h)</td>
<td>155 (l) x 77 (w) x 60 (h)</td>
<td>240 (l) x 99 (w) x 94 (h)</td>
<td>346 (l) x 140 (w) x 125 (h)</td>
<td>426 (l) x 150 (w) x 130 (h)</td>
</tr>
</tbody>
</table>

**CW:** All specifications are based on performance at full output power and after the specified warmup period. Output characteristics may change if the laser is run at a different power level.

**Q-Switched:** Specifications are based on the laser pulsing at the specified design frequency. Output characteristics may change if the laser is run at a different frequency.
Power Supply Options:
These lasers are available with several different power supply options. The model that you have selected is highlighted below, and any other options are shown for easy reference.

<table>
<thead>
<tr>
<th></th>
<th>Power Supply Type</th>
<th>FM</th>
<th>FH</th>
<th>FN</th>
<th>FW</th>
<th>FB</th>
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<tbody>
<tr>
<td>Input Power</td>
<td>85v to 264v</td>
<td>85v to 264v</td>
<td>85v to 264v</td>
<td>85v to 264v</td>
<td>85v to 264v</td>
<td></td>
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<tr>
<td>Power Supply</td>
<td>1.5</td>
<td>2.6</td>
<td>2.6</td>
<td>5.2</td>
<td>18.5</td>
<td></td>
</tr>
<tr>
<td>Weight (kg)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>154 (l) x 155 (w) x 95 (h)</td>
<td>268 (l) x 145 (w) x 106 (h)</td>
<td>268 (l) x 145 (w) x 106 (h)</td>
<td>307 (l) x 168 (w) x 123 (h)</td>
<td>340 (l) x 463 (w) x 221 (h)</td>
<td></td>
</tr>
</tbody>
</table>

*Power supply may not be exactly as shown, see dimensional drawings on next 2 pages.
*Dimensions for fiber-integrated (I_) include laser head packaged inside.

Regulatory Classification:
The model you have selected (RA6-B) requires the following safety label(s):
Accessories:
The most popular accessories for model RA6-B are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Full Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACFMIRHXA</td>
<td>FC/PC Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens</td>
<td><a href="http://www.laserglow.com/ACF">www.laserglow.com/ACF</a></td>
</tr>
<tr>
<td>ACSMIRHXA</td>
<td>SMA-905 Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens</td>
<td><a href="http://www.laserglow.com/ACS">www.laserglow.com/ACS</a></td>
</tr>
<tr>
<td>AFF2002XX</td>
<td>Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length</td>
<td><a href="http://www.laserglow.com/AFF">www.laserglow.com/AFF</a></td>
</tr>
<tr>
<td>AFS2002XX</td>
<td>Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length</td>
<td><a href="http://www.laserglow.com/AFS">www.laserglow.com/AFS</a></td>
</tr>
<tr>
<td>TBK</td>
<td>Complete optics kits with breadboard mounting hardware. External modulators, variable attenuators, free-space fiber launch systems</td>
<td><a href="http://www.laserglow.com/TBK">www.laserglow.com/TBK</a></td>
</tr>
</tbody>
</table>

FOR MORE INFORMATION PLEASE CONTACT:
LASERGLOW TECHNOLOGIES
99 Ingram Dr. Unit B, North York, ON, Canada M6M2L7
Tel. (416) 729-7976 Fax (480) 247-4864
sales@laserglow.com [www.laserglow.com](http://www.laserglow.com)

E&OE: Data included in this sheet may be subject to change without notice.
Please confirm critical specifications with our staff prior to ordering.