**Series Specifications:**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Wavelength</td>
<td>532 nm</td>
</tr>
<tr>
<td>Output Type</td>
<td>CW</td>
</tr>
<tr>
<td>Laser Source Type</td>
<td>DPSS</td>
</tr>
</tbody>
</table>

**Overview:**

The LRS-0532 Series of Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring 20 W of 532 nm laser light with a high level of long-term output power stability and long operating lifetime at an aggressively competitive cost.

These lasers are commonly used for fluorescence excitation, PIV, Raman Spectroscopy, laser display 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 TTL and Analog modulation, and in 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 - no need for water cooling or external chiller
- 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*
- Specially-tuned for clean modulation responses from 1-100 Hz (on selected models)
- 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
### Specifications:

This spec sheet has been generated specifically for part number R53-SS, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to R53-SS have been highlighted below in **red + bold**.

<table>
<thead>
<tr>
<th>Laser Form Factor</th>
<th>M</th>
<th>SS</th>
<th>C</th>
<th>O</th>
<th>F</th>
<th>N</th>
<th>W</th>
<th>WA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power (mW)</td>
<td>&lt;5, &gt;10, &gt;30, &gt;50, &gt;100, &gt;200, &gt;300</td>
<td>&gt;10, &gt;50, &gt;100, &gt;200, &gt;300</td>
<td>&gt;500, &gt;1000, &gt;1500</td>
<td>&gt;2000, &gt;2500</td>
<td>&gt;3000, &gt;4000, &gt;5000</td>
<td>&gt;3000, &gt;4000, &gt;5000</td>
<td>&gt;8000, &gt;10000, &gt;12000, &gt;15000, &gt;18000, &gt;20000</td>
<td>&gt;10000</td>
</tr>
</tbody>
</table>

Output Power Stability (%RMS/4h)  
- M: <1, <3, <5, <10  
- SS: <1, <3  
- C: <3  
- O: <1, <2, <3  
- F: <1, <2, <3, <5  
- N: <1, <2, <3, <5  
- W: <1, <3, <5  

FDA Safety Class  
- M: IIIa, IIIb  
- SS: IIIb  
- C: IIIb  
- O: IV  
- F: IV  
- N: IV  
- W: IV  

Central Wavelength (nm)  
- M: 531.65  
- SS: 531.65  
- C: 531.65  
- O: 531.65  
- F: 531.65  
- N: 531.65  
- W: 531.65  

Wavelength Tolerance (+/- nm)  
- M: 1  
- SS: 1  
- C: 1  
- O: 1  
- F: 1  
- N: 1  
- W: 1  

Divergence (mrad, full angle)  
- M: <1.5  
- SS: <1.5  
- C: <1.5  
- O: <1.2  
- F: <1.2  
- N: <1.5  
- W: <2  

Beam Dimensions (mm, 1/e²)  
- M: 1.2, 2  
- SS: 0.8  
- C: 2  
- O: 2  
- F: 2  
- N: 1.5, 3  
- W: 1.5  

Transverse Mode  
- M: TEM00  
- SS: TEM00  
- C: TEM00  
- O: Near TEM00  
- F: Near TEM00  
- N: TEM00  
- W: Near TEM00  

Longitudinal Modes  
- M: Multiple  
- SS: Multiple  
- C: Multiple  
- O: Multiple  
- F: Multiple  
- N: Multiple  
- W: Multiple  

Warm-up Time (minutes)  
- M: 10  
- SS: 5  
- C: 10  
- O: 10  
- F: 10  
- N: 10  
- W: 10  

Spectral Linewidth (nm)  
- M: <0.2  
- SS: <0.2  
- C: <0.2  
- O: <0.2  
- F: <0.2  
- N: <0.2  
- W: <0.2  

M²  
- M: <1.2  
- SS: <1.2  
- C: <1.2  
- O: <1.2  
- F: <1.2  
- N: <1.3, <2, <5  
- W: <1.3  

Polarization Ratio  
- M: >100  
- SS: >100  
- C: >100  
- O: >100  
- F: >100  
- N: >100  
- W: >100  

Beam Pointing Stability (mrad)  
- M: <0.05  
- SS: <0.05  
- C: <0.05  
- O: <0.05  
- F: <0.05  
- N: <0.05  
- W: <0.05  

IP rating  
- M: 67  
- SS: 7  
- C: 15  

Lateral Shock Tolerance (G's/6ms)  
- M: 7  
- SS:  
- C:  
- O:  
- F:  
- N:  
- W:  

Vertical Shock Tolerance (G's/6ms)  
- M: 15  
- SS:  
- C:  
- O:  
- F:  
- N:  
- W:  

Operating Temperature Range (°C)  
- M: 10 to 35  
- SS: 1 to 60  
- C: 10 to 35  
- O: 10 to 35  
- F: 10 to 35  
- N: 10 to 35  
- W: 10 to 35  

Storage Temperature Range (°C)  
- M: -10 to 35  
- SS: -10 to 50  
- C: -10 to 50  
- O: -10 to 50  
- F: -10 to 50  
- N: -10 to 50  
- W: -10 to 50  

Max. Analog Modulation Freq. (Hz)  
- M: 150, 30000  
- SS: 30000  
- C: 30000  
- O: 30000  
- F: 30000  
- N: 30000  
- W: 30000  

Max. TTL Modulation Freq. (Hz)  
- M: 150, 10000, 30000  
- SS: 30000  
- C: 30000  
- O: 30000  
- F: 30000  
- N: 30000  
- W: 30000  

Modulation Input Signal  
- M: 0-5 VDC  
- SS: 0-5 VDC  
- C: 0-5 VDC  
- O: 0-5 VDC  
- F: 0-5 VDC  
- N: 0-5 VDC  
- W: 0-5 VDC  

Total Power Consumption (W)  
- M: 32  
- SS: 30  
- C: 70, 125  
- O: 125  
- F: 118  
- N: 228, 232, 246, 250  
- W: 232  

Max. Power Input Duty Cycle  
- M: 100%  
- SS: 100%  
- C: 100%  
- O: 100%  
- F: 100%  
- N: 100%  
- W: 100%  

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 power level.
different frequency.
<table>
<thead>
<tr>
<th>Specifications Page 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Form Factor</td>
</tr>
<tr>
<td>Cooling Method</td>
</tr>
<tr>
<td>Standard Warranty (months)</td>
</tr>
<tr>
<td>MTTF (operational hours)</td>
</tr>
<tr>
<td>Weight of Product or Laser Head (kg)</td>
</tr>
<tr>
<td>Beam Height from Base Plate (mm)</td>
</tr>
<tr>
<td>Dimensions of Product or Laser Head (mm)</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>Power Supply Type:</th>
<th>FM</th>
<th>FF</th>
<th>FN</th>
<th>FW</th>
<th>FO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FDA-Compliant LabSpec</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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>
</tr>
<tr>
<td>Power Supply Weight (kg)</td>
<td>1.5</td>
<td>2.6</td>
<td>2.6</td>
<td>5.2</td>
<td>2.6</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>268 (l) x 145 (w) x 106 (h)</td>
</tr>
<tr>
<td><strong>FDA-Compliant Standard</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td>85v to 264v</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply Weight (kg)</td>
<td></td>
<td>1.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td></td>
<td>133 (l) x 130 (w) x 65 (h)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OEM 12 Volt DC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Power</td>
<td></td>
<td>0v to 12v</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply Weight (kg)</td>
<td></td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td></td>
<td>115 (l) x 59 (w) x 34 (h)</td>
<td></td>
<td></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 (R53-SS) requires the following safety label(s):

![Safety Label](image)
Accessories:
The most popular accessories for model R53-SS 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>ACFVISHXA</td>
<td>FC/PC Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 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>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 2m length</td>
<td><a href="http://www.laserglow.com/AFS">www.laserglow.com/AFS</a></td>
</tr>
<tr>
<td>AGF5327XX</td>
<td>LSG-532-NF-7 Fit-Over Safety Goggles 532nm Output: OD 7+ at 190-532 nm CE Certified</td>
<td><a href="http://www.laserglow.com/AGF">www.laserglow.com/AGF</a></td>
</tr>
<tr>
<td>ACSVISHXA</td>
<td>SMA-905 Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 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>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>
<tr>
<td>ACALBMXXX</td>
<td>Carrying Case-102 Holds Lab/OEM M, R and S size, standard or LabSpec laser</td>
<td>Included With Laser</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

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