# Arktis Laser Product Datasheet

## LWS-0532 Water-Cooled Q-Switched DPSS Laser System




### Series Specifications:

| | |
|---|---|
| Nominal Wavelength | 532 nm |
| Output Type | Q-Switched |
| Laser Source Type | DPSS |

### Overview:

The LWS-0532 Series of Diode-Pumped Solid-State (DPSS) Q-Switched Lasers are ideal for applications requiring the highest available output in 532 nm. At 10 W to 45 W average output power, this series maintains a high level of long-term output power stability and a 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 including materials processing in the production of PV Solar Cells. The driver is available as a complete FDA-compliant system or as an O.E.M. component with significantly reduced dimensions.

Laserglow products are currently being used by some of the World's top universities and other prominent research facilities.

**Key Features:**

- Closed Loop Water Cooling - no need for external plumbing connection
- Compact design
- Pulse energy and frequency are user-adjustable
- Efficient DPSS technology runs on standard AC power (85 - 264 V, 47 - 63 Hz)
- >10,000 hours continuous maintenance-free operating life
- FDA CDRH Compliant Class 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

## Specifications:

This spec sheet has been generated specifically for part number W53-B, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to W53-B have been highlighted below in **red + bold**.

| | |
|---|---|
| Output Power (W) | **10**, **20**, **30**, **40**, **50**, **75**, **100** |
| Single Pulse Energy (µJ) | **1000**, **2000**, **3000**, **4000**, **5000**, **7500**, **10000** |
| Optimal Pulse Frequency (Hz) | **10000**, **15000** |
| Output Power Stability (%RMS/4h) | **<1**, **<3**, **<5** |
| Central Wavelength (nm) | **531.65** |
| Wavelength Tolerance (+/- nm) | **1** |
| Divergence (mrad, full angle) | **<3.5** |
| Beam Dimensions (mm, $1/e^2$) | **7**, **12**, **15** |
| Warm-up Time (minutes) | **10** |
| Avg. Pulse Duration (ns) | **100** |
| Beam Pointing Stability (mrad) | **<0.05** |
| Operating Temperature Range (°C) | **15 to 35** |
| Max. TTL Modulation Freq. (Hz) | **100,000** |
| Modulation Input Signal | **0-5 VDC** |
| Max. Power Input Duty Cycle | **100%** |
| Standard Warranty (months) | **12** |
| MTTF (operational hours) | **10000** |
| Weight of Product or Laser Head (kg) | **15** |
| Beam Height from Base Plate (mm) | **65** |
| Dimensions of Product or Laser Head (mm) | **426 (l) x 150 (w) x 130 (h)** |

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.

| | | |
|---|---|---|
| FDA-Compliant LabSpec  | Power Supply Type: | **FB** |
| | Input Power | **85v to 264v** |
| | Power Supply Weight (kg) | **18.5** |
| | Dimensions (mm) | **340 (l) x 463 (w) x 221 (h)** |

*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 (W53-B) requires the following safety label(s):



## Accessories:

The most popular accessories for model W53-B are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

| Part Number | Description | |
|---|---|---|
|  AGF5327XX | LSG-532-NF-7 Fit-Over Safety Goggles 532nm<br>Output: OD 7+ at 190-532 nm<br>CE Certified<br>Full Details: www.arktislaser.com/AGF | |

## FOR MORE INFORMATION PLEASE CONTACT:

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Please confirm critical specifications with our staff prior to ordering.