

## Laserglow Product Datasheet

### LLS-1053 Low-Noise DPSS Laser System



#### Series Specifications:

Nominal Wavelength	1053 nm
Output Type	CW
Laser Source Type	DPSS

#### Overview:

The LLS-1053 Series of Low-Noise Diode-Pumped Solid-State (DPSS) Lasers are ideal for applications requiring less than 1% noise and output power levels from 50 mW to 1000 mW. These 1053 nm lasers maintain a high level of long-term output power stability and long operating lifetime at an aggressively competitive cost.

These lasers are commonly used for various scientific purposes such as biological experiments, communications research, 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.

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

#### Key Features:

- 1% optical noise (20 Hz-20 MHz)
- 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
- 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
- Keys, Safety Interlock
- Hard-shell Carrying Case

## Specifications:

This spec sheet has been generated specifically for part number LA5-H, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to LA5-H have been highlighted below in **red + bold**.


Output Power (mW)	>50, >100, >300, >500	<b>&gt;1000</b>
Output Power Stability (%RMS/4h)	<3, <5	<b>&lt;3, &lt;5</b>
Central Wavelength (nm)	1053.3	<b>1053.3</b>
Wavelength Tolerance (+/- nm)	1	<b>1</b>
Divergence (mrad, full angle)	<1.5	<b>&lt;2</b>
Beam Dimensions (mm, 1/e <sup>2</sup> )	1.5	<b>3</b>
Warm-up Time (minutes)	10	<b>10</b>
Optical Noise Amplitude (%RMS @ 20 Hz - 20 MHz)	<1	<b>&lt;1</b>
M <sup>2</sup>	<1.5	<b>&lt;2</b>
Polarization Ratio	>100	<b>&gt;100</b>
Beam Pointing Stability (mrad)	<0.05	<b>&lt;0.05</b>
Operating Temperature Range (°C)	10 to 35	<b>10 to 35</b>
Total Power Consumption (W)	22, 30, 35	
Max. Power Input Duty Cycle	100%	<b>100%</b>
Standard Warranty (months)	12	<b>12</b>
MTTF (operational hours)	10000	<b>10000</b>
Weight of Product or Laser Head (kg)	0.6	<b>0.9</b>
Beam Height from Base Plate (mm)	24.8	<b>29</b>
Dimensions of Product or Laser Head (mm)	140.8 (l) x 73 (w) x 46.2 (h)	<b>155 (l) x 77 (w) x 60 (h)</b>

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.

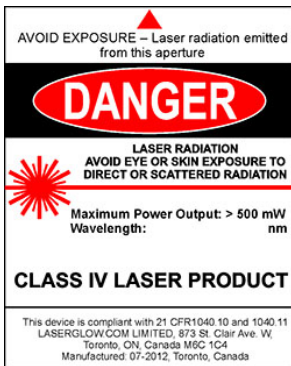
<div>FDA-Compliant Standard</div> <div></div>	Power Supply Type:	<b>SM</b>	<b>SH</b>
	Input Power	85v to 264v	<b>85v to 264v</b>
	Power Supply Weight (kg)	1.2	<b>2.3</b>
	Dimensions (mm)	133 (l) x 130 (w) x 65 (h)	<b>238 (l) x 146 (w) x 102 (h)</b>

\*Power supply may not be exactly as shown, see dimensional drawings on next 2 pages.

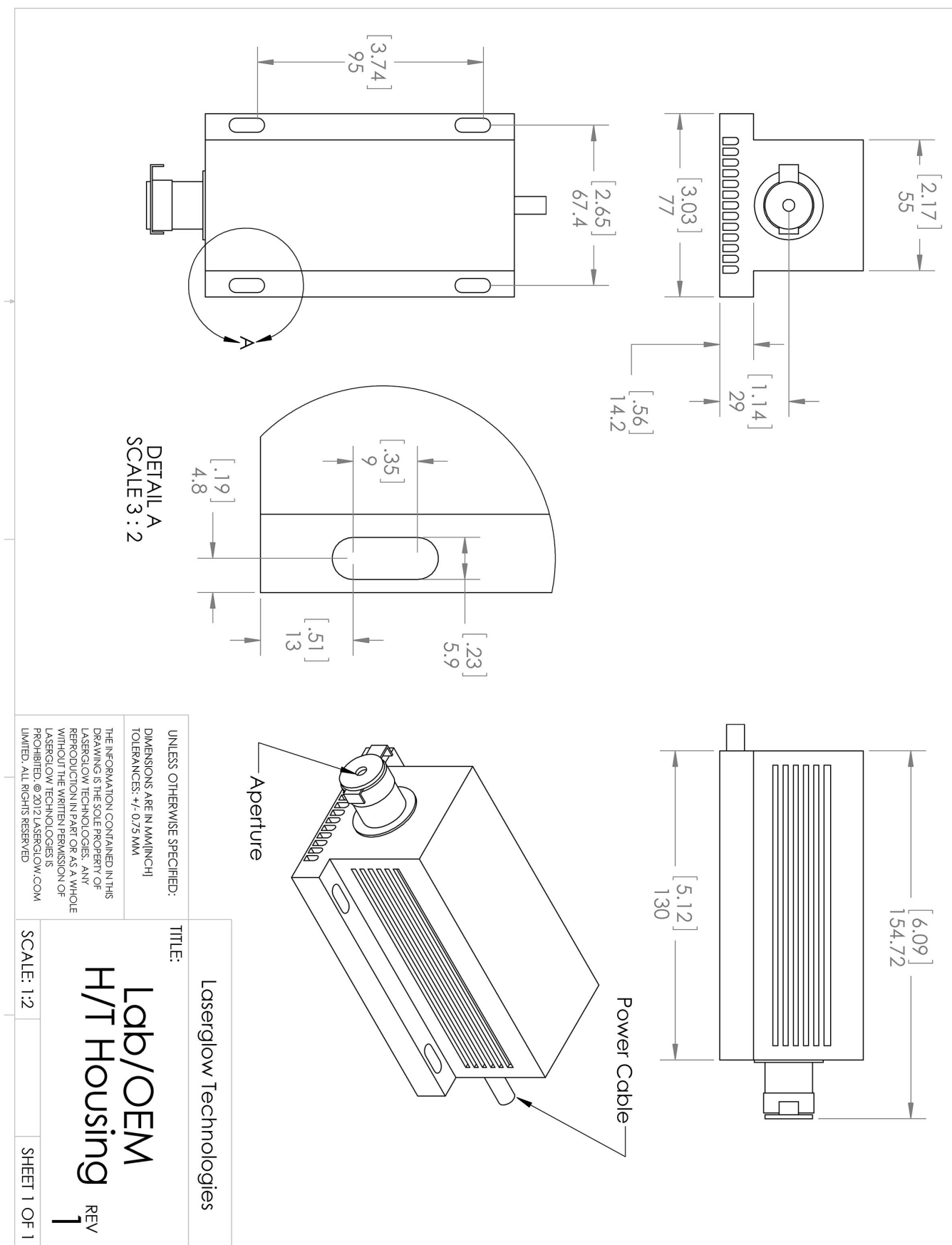
\*Dimensions for fiber-integrated (I\_) include laser head packaged inside.

## Regulatory Classification:

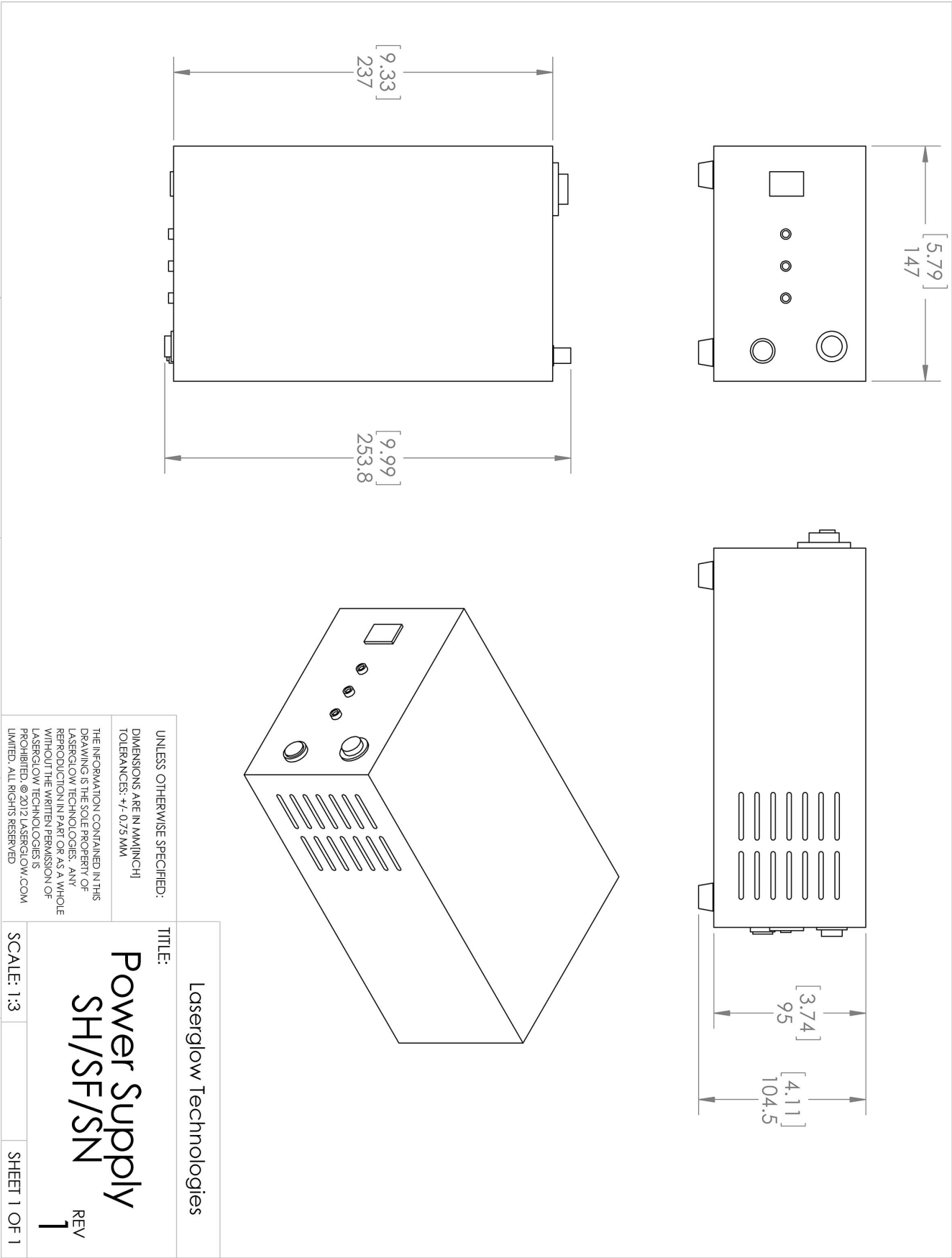
The model you have selected (LA5-H) requires the following safety label(s):



### Dimensional Drawing - Laser Form Factor: H:










Dimensional Drawing - Power Supply Form Factor: SH:



## Accessories:

The most popular accessories for model LA5-H are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
 AGFA647XX	LSG-1064-NF-7 Fit-Over Safety Goggles 1064nm Output: OD 7+ at 950-1070 nm CE Certified Full Details: <a href="http://www.laserglow.com/AGF">www.laserglow.com/AGF</a>	
 ACFMIRHXA	FC/PC Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACF">www.laserglow.com/ACF</a>	
 ACSMIRHXA	SMA-905 Fiber Coupler/Collimator for IR wavelengths (1000 to 1300 nm) (installed and aligned) 11mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACS">www.laserglow.com/ACS</a>	
 ACALBMXXX	Carrying Case-102 Holds Lab/OEM M, R and S size, standard or LabSpec laser Full Details: <a href="http://www.laserglow.com/ACA">www.laserglow.com/ACA</a>	Included With Laser
 AFF2002XX	Armored Fiber With FC/PC Connectors 200um Core Multimode 2m length Full Details: <a href="http://www.laserglow.com/AFF">www.laserglow.com/AFF</a>	
 AFS2002XX	Armored Fiber With SMA 905 Connectors 200um Core Multimode 2 m length Full Details: <a href="http://www.laserglow.com/AFS">www.laserglow.com/AFS</a>	
 TBK	Complete optics kits with breadboard mounting hardware. External modulators, variable attenuators, free-space fiber launch systems Full Details: <a href="http://www.laserglow.com/TBK">www.laserglow.com/TBK</a>	

## FOR MORE INFORMATION PLEASE CONTACT:

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