

## LRD-0635 Collimated Diode Laser System

**Laserglow Part Number: D633005FX**



### Similar Products:

For information about the other lasers in this product family visit:

<http://www.laserglow.com/D63>

### Ordering:

Order Online Now or Request Quote:

<http://www.laserglow.com/D633005FX>

### Series Specifications:

Nominal Wavelength	635 nm
Output Type	CW
Laser Source Type	Diode

### Overview:

The LRD-0635 Series of Collimated Diode (Semiconductor) Lasers are ideal for applications requiring a wavelength of 635 nm and a wide range of output power levels from 5 mW to 5 W 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 various scientific applications involving biological research, as well as PIV, spectral analysis, laser display (entertainment) 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.

### Key Features:

- Air cooled – no need for water cooling or external chiller
- Lightweight, compact design
- Efficient Diode Laser 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

## Specifications:

This spec sheet has been generated specifically for part number D633005FX, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to D633005FX have been highlighted below in **red + bold**.

Laser Form Factor	<b>R</b>	X	V	W
Output Power (mW)	<5, >100, >200, <b>&gt;300</b> , >500	>1000	>3000	>5000, >6000
Output Power Stability (%RMS/4h)	<1, <3, <b>&lt;5</b> , <10	<1, <3, <5, <10	<1, <3, <5, <10	<1, <3, <5, <10
FDA Safety Class	IIIa, <b>IIIb</b> , IV	IV	IV	IV
Central Wavelength (nm)	<b>635</b>			635
Wavelength Tolerance (+/- nm)	<b>5</b>			5
Divergence (mrad, full angle)	<b>&lt;2.5</b>	<4.5x3	<5	<5
Beam Diameter (mm, 1/e <sup>2</sup> )	5x8	6x5	5x6	7x7
Transverse Mode	<b>Multi</b>			Multi
Longitudinal Modes	<b>Multiple</b>	Multiple	Multiple	Multiple
Warm-up Time (minutes)	<b>10</b>			5
Spectral Linewidth (nm)	<b>&lt;0.8</b>			<0.8
M <sup>2</sup>			<20	
Polarization Ratio	<b>&gt;50</b>			
Beam Pointing Stability (mrad)	<b>&lt;0.05</b>			<0.05
Operating Temperature Range (°C)	<b>10 to 35</b>			10 to 35
Storage Temperature Range (°C)	<b>-10 to 50</b>	-10 to 50	-10 to 50	-10 to 50
Max. Analog Modulation Freq. (Hz)	<b>30000</b>	30000	30000	30000
Max. TTL Modulation Freq. (Hz)	10000, <b>30000</b>	10000, 30000	10000, 30000	10000, 30000
Modulation Input Signal	<b>0-5 VDC</b>	0-5 VDC	0-5 VDC	0-5 VDC
Total Power Consumption (W)	15, 16, <b>18</b>	21		120
Max. Power Input Duty Cycle	<b>100%</b>	100%	100%	100%
Cooling Method	<b>TEC</b>	TEC/Forced Air	TEC/Forced Air	TEC/Forced Air
Standard Warranty (months)	<b>12</b>	12	12	12
MTTF (operational hours)	<b>10000</b>	10000	10000	10000

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:

This spec sheet has been generated specifically for part number D633005FX, per your request, and data for the entire series is also displayed for your reference. The specs which are specific to D633005FX have been highlighted below in **red + bold**.


Laser Form Factor	<b>R</b>	X	V	W
Weight of Laser Head (kg)	<b>0.6</b>	1.6	2.6	6.1
Beam Height from Base Plate (mm)	<b>24.8</b>	45	68.2	93.5
Laser Head Dimensions (mm)	<b>140.7 (l) x 73 (w) x 46.2 (h)</b>	180 (l) x 86 (w) x 65 (h)	235 (l) x 99 (w) x 94 (h)	346 (l) x 140 (w) x 125 (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.

	Power Supply Type:	<b>FR</b>	<b>FM</b>	<b>FW</b>
FDA-Compliant LabSpec 	Input Power	<b>85v to 264v</b>	85v to 264v	85v to 264v
	Power Supply Weight (kg)	<b>1.5</b>	1.5	5.2
	Dimensions (mm)	<b>154 (l) x 155 (w) x 95 (h)</b>	154 (l) x 155 (w) x 95 (h)	307 (l) x 168 (w) x 123 (h)

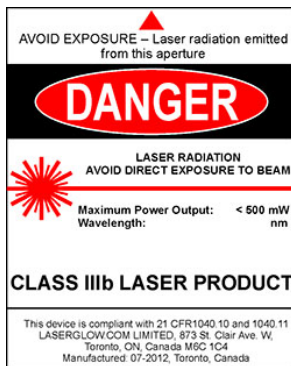
	Power Supply Type:	<b>SR</b>	<b>SM</b>	<b>SW</b>
FDA-Compliant Standard 	Input Power	85v to 264v	85v to 264v	85v to 264v
	Power Supply Weight (kg)	1.2	1.2	5.1
	Dimensions (mm)	133 (l) x 130 (w) x 65 (h)	133 (l) x 130 (w) x 65 (h)	307 (l) x 168 (w) x 123 (h)

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

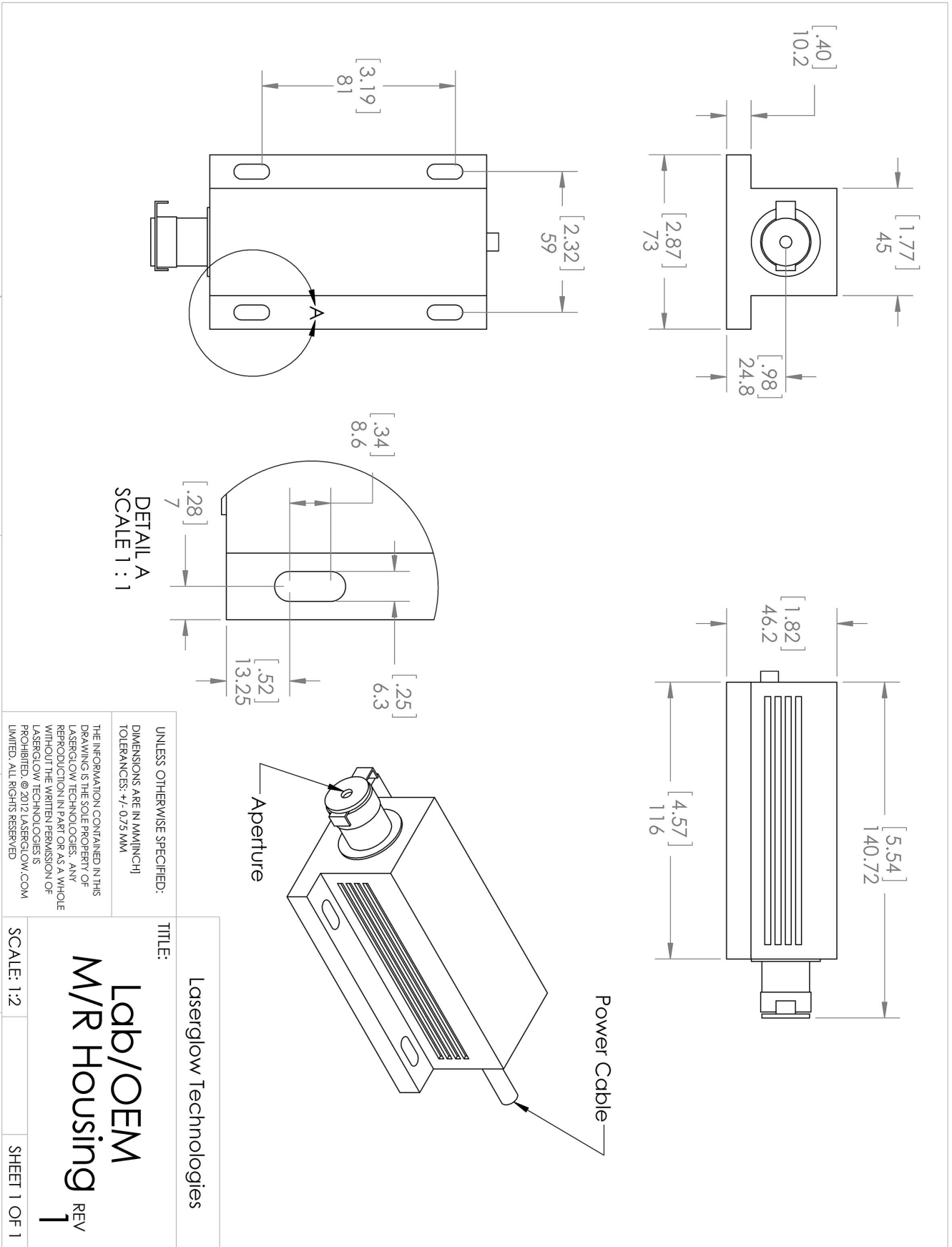
\*Dimensions for fiber-integrated (l\_) include laser head packaged inside.

## Regulatory Classification:

The model you have selected (D633005FX) requires the following safety label(s):



**Dimensional Drawing - Laser Form Factor: R:**



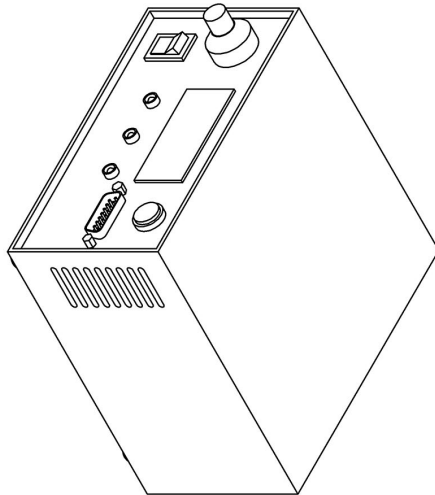
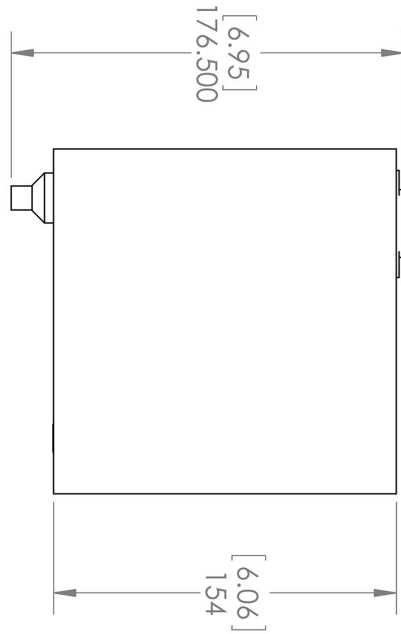
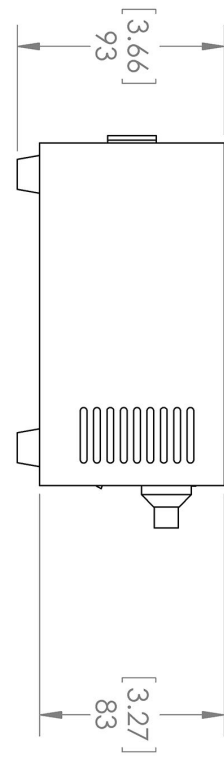
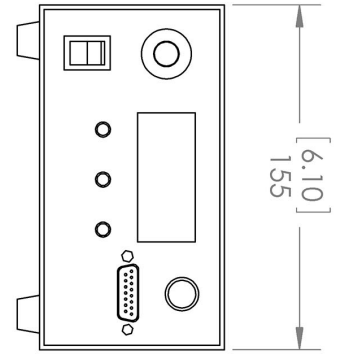
DETAIL A  
SCALE 1 : 1

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN MILLIMETER  
TOLERANCES: +/- 0.075 MM

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TITLE:		Laserglow Technologies	
SCALE: 1:2		SHEET 1 OF 1	
M/R Housing		REV 1	
Lab/OEM			

**Dimensional Drawing - Power Supply Form Factor: FR:**



UNLESS OTHERWISE SPECIFIED:  
 DIMENSIONS ARE IN MM(INCH)  
 TOLERANCES: +/- 0.75 MM

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TITLE:  
 Laserglow Technologies

**Power Supply**  
**FM/FR**  
 REV  
**1**

SCALE: 1:3 SHEET 1 OF 1

## Accessories:

The most popular accessories for model D633005FX are shown below. For additional details regarding these or other accessories please see our website or contact us directly.

Part Number	Description	
 AFF2002XX	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	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>	
 AGF6605XX	LSG-660-NF-5 Fit-Over Safety Goggles 660nm Output: OD 5+ at 600-694 nm CE Certified Full Details: <a href="http://www.laserglow.com/AGF">www.laserglow.com/AGF</a>	
 ACFVISHXA	ACFVISHXA FC/PC Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 nm) (installed and aligned) 11mm diameter input lens Full Details: <a href="http://www.laserglow.com/ACF">www.laserglow.com/ACF</a>	
 ACSVISHXA	ACSVISHXA SMA-905 Fiber Coupler/Collimator for visible spectrum wavelengths (400 to 700 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

## 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.