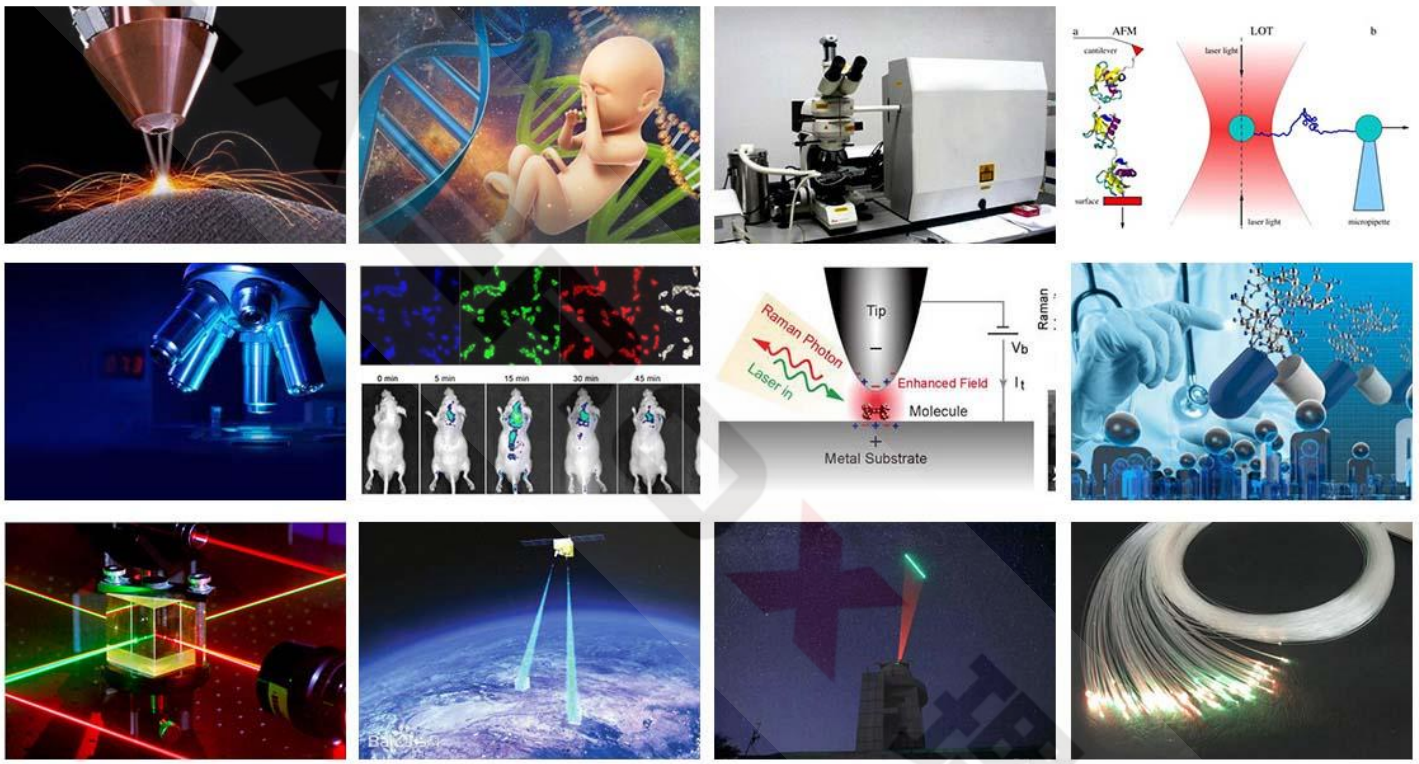
高稳定可见光激光器系列 Stabilized Visible Laser Systems

635nm Stabilized Red Diode Laser System

Applications:

Science Research	Photoelectronic Industry	Physics
Chemistry	Materials Science	Biology and Life Science
Medicine and Pharmacy	Agriculture and Forestry	National Defence Industry



Features:

- Stabilized Spectrum Technology
- Patented Sealed Optical Cavity
- CDRH Compliant
- Excellent Beam Quality
- PID Temperature Control Built-in for Excellent Performance
- Precision Current Source
- Low Noise Technology
- Clean-up filter optional
- Easy operation & Free maintenance
- High Reliability and High Power Stability
- Free Space Output or Fiber Coupled Output is optional
- High Polarization Ratio is Optional

★ External Analog Modulation and Digital Modulation

★ APC Function is Optional

Free Space Output and Fiber Coupled Output Versions

All of the LA-LS have free space output and fiber coupled output versions. There are single mode fiber and multi-mode fiber for your choice.The fibers for the laser are available at various core diameter from 3um to 800um.

External Analog Modulation Versions

The LA-LS Series can perform analog modulation of up to 10KHz,50KHz,100KHz,500KHz and 20 MHz. To modulate the LA-LS Series diode laser modules from below-threshold (at 0 V) to full power (at +3V) requires an external 3 VDC analog input. The modulation sources must be provided by the user.

External Digital Modulation Versions

The LA-LS Series can perform digital modulation (via TTL) of up to 50KHz,100KHz,20MHz and 200 MHz. To modulate the LA-LS Series from below-threshold to full power requires a user-supplied external 0-5 V TTL modulation signal (5V yields full power).

High precision Power Controller

LAERO's LA-LS-PS Series power supply and controller are recommended for use with LA-LS series laser.The power controller is available to provide DC power and support CDRH safety requirements. This is a key device that will make the LE-LS laser modules CDRH compliant. It provides an interlock input, CDRH ON/OFF key switch, delayed start-up, local control,remote control and external modulation. Warranty is not applicable when a custom power supply is used to drive the module.

Specifications:

635nm Free Space Output

635nm Stabilized Red Diode Laser System

Model	LA-LS-635-XY (X is output power,Y is special parameter)
Center Wavelength	635nm±5nm
Output Power	1mW-8000mW(Optional)
Power Adjustable Range	0%~100%
Transverse Mode(Spacial Mode)	TEM00 or TEMmn (Optional)
Operation Mode	CW (Analog or TTL Modulation Version is Optional)
Spectral Line Width	2~5nm(Typ.); 6~9nm(Max.) (Narrow Linewidth and Single Frequency Type,please refer to LE-LS-UNL Series Laser System);
Beam Diameter	~2mm(Typ.); ~ 3mm(Max.)
Beam Shape	Ellipse(2:1)（Standard）or Round (Optional)
Customized Beam Diameter	10um~70mm (Depend on the Lens Module)
Beam Divergence,Full Angle(mrad)	<1mrad(Typ.)
Pointing Stability@25℃	<0.05mrad
Polarization Extinction Ratio	≥60:1（Type P60）≥100:1(Type P100); (≥200:1, ≥500:1,≥1000:1,>1500:1 is Optional)
Polarization Orientation	Vertical or Horizontal ±2° (Optional)
Stabilized Spectrum Technology	Optional
Cooling Technology	TEC with FANS or TEC without FANS(Optional)
Temperature Control	PID Temperature Control Built-in for Excellent Performance
APC Function	Optional
Output Power Stability(RMS,Over 8hours)	≤2% @25℃(Standard); ≤1% (APC Optional)
External Digital Modulation(TTL)	0~50KHz(Standard);0~100KHz(HM01)，0~10MHz(HM10),0~20MHz(HM20) (Up to 200MHz High Modulation Type is Optional)
External Analog Modulation	Optional
Fall Time	<50ns,<1us, <22us, <50us(Optional)
Accessories	Base Plate & Vertical Positioners &Optical Components for Laser (Optional)
Warm up time	≤5minutes
Expected Operating Lifetime	>12000hours
Input Voltage (Power Controller)	90-250VAC,50/60Hz
Storage Temperature	10℃~ 60℃
Operation Temperature	10℃~ 40℃
Laser Head Dimensions	100(L)*35(W)*35(H)；140(L)*40(W)*40(H)(Depend on the output power of the laser)

CDRH Class	Class 1~Class4(Depend on the output power of Laser)
EU Compliance	CE Mark Certified with Power Controller
ROHS Compliance	EU and China
Power Controller	Type A(Standard);Type B(Module);Type CU(Customized); Type C(Self-contained and Compact);
Warranty time	1 Year

Notice：1，Specifications guaranteed only at full power

2，Other special specifications and custom-made design are available. Please Contact us to discuss your needs.

635nm Fiber Coupled Output

635nm Stabilized Red Diode Fiber Laser System

Model	LA-LS-635-XFCY (X is output power,Y is special parameter)
Center Wavelength	635nm
Output Power@Fiber End	1mW-8000mW(Optional)
Power Adjustable Range	0%~100%
Output Power Stability(RMS,Over 8hours)	≤2% @25℃(Standard); ≤1% (APC Optional)
Operation Mode	CW (Analog or TTL Modulation Version is Optional)
Fiber Type	Multimode Fiber,Single Mode or PM Fiber (Optional)
Fiber Diameter	200um (3~10um Depend on the wavelength, 50um,105um,400um,600um Optional)
Fiber Connector	FC/PC,FC/APC or SMA905
Numerical Aperture	0.22±0.02(Mulimode Fiber); 0.11±0.01(Single Mode Fiber)
Fiber Cable Bend Radius	200mm(300mm Optional） (Optional)
Fiber Length	1.0m(Standard),Other Fiber Length is Optional
Optical Lens Module	Customized Collimating Lens Module or Focusing Lens Module (Optional)
Customized Beam Diameter After Lens Module	50um~70mm(Depend on the Lens Module)

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2，Other special specifications and custom-made design are available. Please Contact us to discuss your needs.

Optical Accessories for Laser System

★ **LA-LENS-αFC-Cβ Series** Customized Collimating LENS Module for 635nm Fiber Laser System;

The α Stands for the laser wavelength.The β stands for the collimating beam diameter；

Beam Diameter:1.5,2.5mm,5mm,10mm,22mm,40mm.55mm,70mm(Optional).

★ **LA-LENS-αFC-Fβ Series** Customized Focusing LENS Module for 635nm Fiber Laser System.

The α Standards for the laser wavelength.The β stands for the focusing beam diameter at the work distance.

Beam Diameter:10um,50um.100um,200um,400um,800um(Optional).

★ **LA-LENS-Sα-BEβ Series** Customized Laser Expander and Adapter；The α Stands for the specific laser wavelength from 200nm to 12um；The β stands for the magnification；β：1.2X,1.5X，2X，3X，4X，5X，6X，7X，8X，10X，12X，15X，20X or Adjustable from 2X to 10X.

★ **LA-MT-FLSeries** Customized LENS Mount for Fluorescence Spectrometer (LEOPTICS,LAEROX, HORIBA/JOBIN YVON, Edinburgh Instruments，Andor，Princeton Instruments,Hitachi，Simadzu，Jasco..)

★ **LA-MT-MIC** Customized Adapter and Mounts for Microscope(NIKON、OLUMPUS、LEICA、ZEISS).

★ **LA-MT-B series** Base for Laser and Optical Table.

★ **LA-MT-BEM22A** Series Kinematic Optical Mounts Assemblies for Laser Expander.

★ **LA-MT-MR30RA** Series Kinematic Optical Mirror Mounts Assemblies for Beam Routing.

★ **LA-LS-PS Series** High precision power supply and controller are recommended for use with LA-LS series laser.

NOTICE: Due to the continuous improvement of the products, the technical parameters and specifications in this catalog are modified without prior notice.Please contact our Optical Engineer for the newest catalog and quotation.

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For further information and ordering details please contact LAEROX at：

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