



OSL2 High-Intensity Fiber Light Source

User Guide



















Table of Contents

Chapter 1	Warning Symbol Definitions	1
Chapter 2	Safety.....	2
	2.1. Precautions.....	2
	2.1.1. Power Sources	2
	2.1.2. Operation.....	2
	2.1.3. Cleaning.....	2
Chapter 3	Getting Started	3
	3.1. Unpacking the OSL2.....	3
	3.2. Setup Overview	3
	3.2.1. Electrical Power Supply	3
	3.2.2. Fiber Bundle and Light Output Port	3
Chapter 4	Physical Description	4
	4.1. Front Panel Light Source Descriptions	4
	4.2. Rear Panel Light Source Descriptions	4
Chapter 5	Lamp Replacement	5
	5.1. Lamp Replacement Instructions	5
Chapter 6	Specifications	6
	6.1. General Specifications	6
Chapter 7	Certifications and Compliances	8
Chapter 8	Regulatory.....	9
	8.1. Waste Treatment is Your Own Responsibility.....	9
	8.2. Ecological Background.....	9
Chapter 9	Thorlabs Worldwide Contacts.....	10

Chapter 1 Warning Symbol Definitions

Below is a list of warning symbols you may encounter in this manual or on your device.

Symbol	Description
	Direct Current
	Alternating Current
	Both Direct and Alternating Current
	Earth Ground Terminal
	Protective Conductor Terminal
	Frame or Chassis Terminal
	Equipotentiality
	On (Supply)
	Off (Supply)
	In Position of a Bi-Stable Push Control
	Out Position of a Bi-Stable Push Control
	Caution: Risk of Electric Shock
	Caution: Hot Surface
	Caution: Risk of Danger
	Warning: Laser Radiation
	Caution: Spinning Blades May Cause Harm

Chapter 2 Safety

CAUTION	
RISK OF ELECTRIC SHOCK. DO NOT OPEN	
INPUT: 200 W, Max	
<u>Line</u>	<u>Fuse, 5 x 20 mm</u>
100 – 120 VAC, 50/60 Hz	3 A Quick Acting
200 – 240 VAC, 50/60 Hz	3 A Quick Acting

Caution

You are cautioned that any change or modifications not expressly approved in this manual could void your authority to operate this equipment.

2.1. Precautions

2.1.1. Power Sources

- Before operating the product, check that the operating voltage is identical to your local power supply. See specific descriptions for operating voltages.
- To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- AC power cord must be replaced with IEC compatible cord.

2.1.2. Operation

Before connecting to fiber optic components, be sure that all power connections are secure.

2.1.3. Cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine.

Chapter 3 Getting Started

3.1. Unpacking the OSL2

Check that you received all items mentioned on the packing list below.

OSL2 Packing List	
Item	Quantity
OSL2 Light Source	1
OSL2FB Fiber Bundle	1
Fiber Bundle Adapter	1 (Ships Installed in the OSL2 Output Port)
User Guide	1
Location-Specific Power Cord	1

3.2. Setup Overview

3.2.1. Electrical Power Supply

1. Turn off the power to the OSL2 before making any connections.
2. Do not connect the AC power cord to the local power supply until the connections are completed to the OSL2.
3. Be sure to make the connections firmly.
4. Be sure that the OSL2 operating voltage matches the "local" power supply.

3.2.2. Fiber Bundle and Light Output Port

The included OSL2FB fiber bundle can be connected to the OSL2 light source for easy control and placement of the illumination. Additionally, the fiber bundle adapter can be removed from the output port of the OSL2. Unscrew the fiber bundle adapter to expose the internal SM1 (1.035"-40) threads. This threaded output port can be used for a variety of free space applications. See Section 4.1 for details on the location of the output port and operating controls of the OSL2.

Chapter 4 Physical Description

4.1. Front Panel Light Source Descriptions

The following components are numbered to correspond with Figure 1, below.

1. Variable Intensity Controller (0 to 100%)
2. On/Off rocker Switch
3. Light Output Port
4. LED Indicator (Indicates lamp temperature status). The LED will be green when the lamp temperature is normal. If the lamp overheats it will turn to red and power to the lamp will be shut. Once the lamp has cooled down, the LED will return to green and the lamp will resume normal operation.

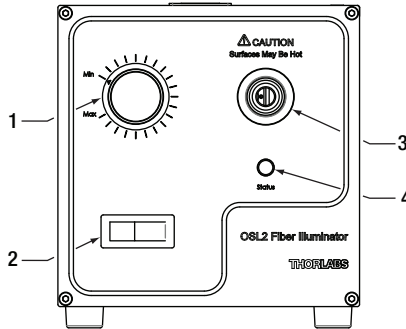


Figure 1 Front Panel Diagram

4.2. Rear Panel Light Source Descriptions

1. IEC Inlet with Line Filtering (Power Cable Input)
2. Operating Voltage Label

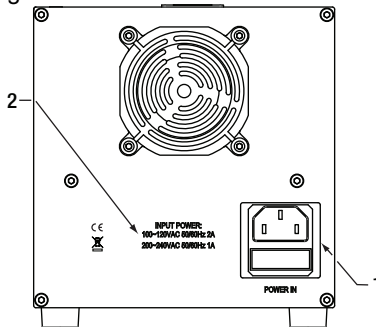


Figure 2 Rear Panel Diagram

Chapter 5 Lamp Replacement

5.1. Lamp Replacement Instructions

1. To replace the lamp, shut off the power and remove the power cord from the AC outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
2. Allow sufficient time for the unit to cool. **Caution:** Lamp and surfaces may be extremely hot after operation.
3. Pull the paddle latch handle to open the bulb cover.
4. Remove the bulb socket and carefully pull the bulb out from the bulb bracket.
5. Insert the replacement bulb into the bracket, pressing firmly to ensure it is safely seated.
6. Connect the socket with the bulb and close the cover. It will automatically latch closed.



Figure 3 Lamp Access Door



CAUTION



Should any solid object or liquid fall into the assembly while the bulb cover is open, have it inspected by qualified personnel before operation.

Chapter 6 Specifications

6.1. General Specifications

OSL2 Specifications	
Controller Specifications	
Power at Fiber Tip	1.4 W at Maximum Bulb Intensity
Color Temperature	3200 K at Maximum Bulb Intensity
Operating Wavelength Range	400 – 1600 nm (Typical)
Color Rendering Index	90%
Intensity Adjustment Range	0 to 100%
Time to Full Brightness	4 s Typical, 7 s Maximum
Output Power Stability	±0.5% over 8 Hours
Lamp Lifetime	1,000 Hours to 50% Brightness
Included Lamp	OSL2B (150W, 3200 K, EKE/10H)
Other Compatible Lamp Types	OSL2B2 (150 W, 3400 K, EJV) OSL2BIR (150 W 3200 K, Enhanced IR, EKE/AL) OSL1B (150 W, 3250 K, EKE)
Input Voltage	100 – 120 VAC; 50/60 Hz 200 – 240 VAC; 50/60 Hz
Fuse Type	3 A, 250 V, 5 x 20 mm
Power Consumption	200 W at Maximum Bulb Intensity
Operating Temperature ^a	-20 to 40°C (-4 to 104°F)
Humidity Range	0 to 80%, Non-Condensing
Weight	2.9 lbs (1.3 kg)
Fiber Bundle Specs	
Length ^b	91 cm (36")
Numerical Aperture (NA)	0.57
Effective Core Diameter	Ø6.4 mm (Ø0.25")
Operating Wavelength Range ^c	390 – 1750 nm
Attenuation	<0.6 dB/m at 940 nm
Number of Fibers	6718 (Calculated)
Fiber Core Diameter ^d	50 µm
Fiber Cladding Diameter ^d	52.5 µm
Bundle Minimum Bend Radius	100 mm
Operating Temperature ^a	0 to 180 °C (32 to 356 °F)

- The combined operating temperature range of the light source and fiber bundle is 0 to 40 °C.
- Longer length fiber bundles are available as a custom order. Contact Techsupport@thorlabs.com to order.
- Defined by the wavelength range in which the transmission of the fiber is higher than 10%.
- Dimensions of the individual fibers within the bundle.

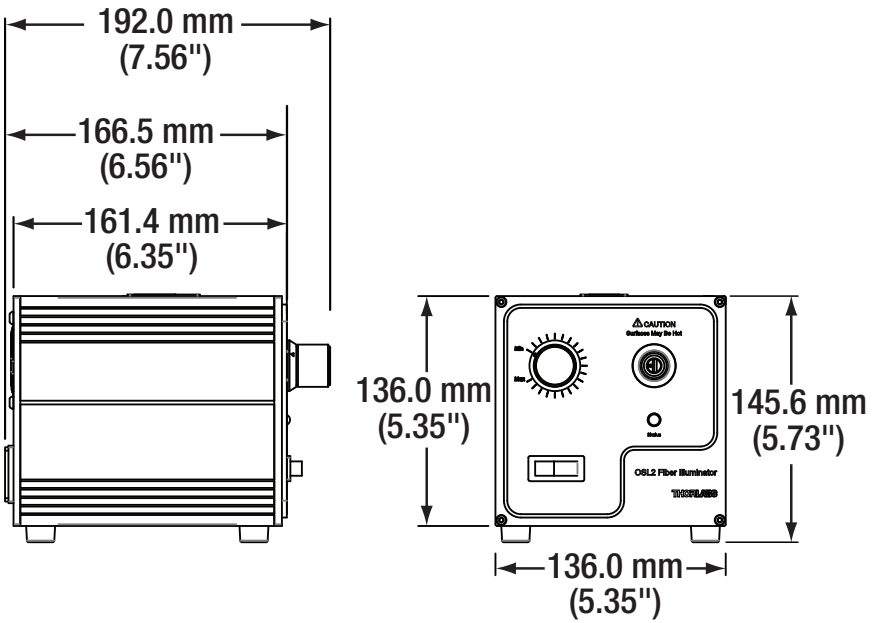


Figure 4 Dimensional Drawing

Chapter 7 Certifications and Compliances



Declaration of Conformity

We: Thorlabs Optical Electronic Technology(Shanghai) Co., Ltd
of: Room A101, No.100, Lane 2891, South Qilianshan Rd, Shanghai

In accordance with the following directive(s):

2014/35/EU	Low Voltage Directive (LVD)
2014/30/EU	Electromagnetic Compatibility (EMC) Directive
2011/65/EU	RoHS 2 Directive
2009/125/EC	Ecodesign Directive

hereby declare that:

Model: **OSL2**
Equipment: **High Intensity Fiber Light Source**

Is in conformity with the applicable requirements of the following documents:

EN 61010-1:2010
EN 61326-1:2013
EN 62471:2008 (Exempt Group)

and which, issued under the sole responsibility of Thorlabs, is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8th June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment, for the reason stated below:

does not contain substances in excess of the maximum concentration values tolerated by weight in homogenous materials as listed in Annex II of the Directive.

I hereby declare that the equipment named has been designed to comply with the relevant section of the above referenced specifications, and complies with all applicable Essential Requirements of the Directives.

Signed:  on: 8. May 2017

Name: Shanshan Song
Position: General Manager

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Chapter 8 Regulatory

As required by the WEEE (Waste Electrical and Electronic Equipment Directive) of the European Community and the corresponding national laws, Thorlabs offers all end users in the EC the possibility to return “end of life” units without incurring disposal charges.

- This offer is valid for Thorlabs electrical and electronic equipment:
- Sold after August 13, 2005
- Marked correspondingly with the crossed out “wheelie bin” logo (see right)
- Sold to a company or institute within the EC
- Currently owned by a company or institute within the EC
- Still complete, not disassembled and not contaminated



Wheelie Bin Logo

As the WEEE directive applies to self contained operational electrical and electronic products, this end of life take back service does not refer to other Thorlabs products, such as:

- Pure OEM products, that means assemblies to be built into a unit by the user (e.g. OEM laser driver cards)
- Components
- Mechanics and optics
- Left over parts of units disassembled by the user (PCB's, housings etc.).

If you wish to return a Thorlabs unit for waste recovery, please contact Thorlabs or your nearest dealer for further information.

8.1. Waste Treatment is Your Own Responsibility

If you do not return an “end of life” unit to Thorlabs, you must hand it to a company specialized in waste recovery. Do not dispose of the unit in a litter bin or at a public waste disposal site.

8.2. Ecological Background

It is well known that WEEE pollutes the environment by releasing toxic products during decomposition. The aim of the European RoHS directive is to reduce the content of toxic substances in electronic products in the future.

The intent of the WEEE directive is to enforce the recycling of WEEE. A controlled recycling of end of life products will thereby avoid negative impacts on the environment.

Chapter 9 Thorlabs Worldwide Contacts

For technical support or sales inquiries, please visit us at www.thorlabs.com/contact for our most up-to-date contact information.



USA, Canada, and South America

Thorlabs, Inc.
sales@thorlabs.com
techsupport@thorlabs.com

Europe

Thorlabs GmbH
europe@thorlabs.com

France

Thorlabs SAS
sales.fr@thorlabs.com

Japan

Thorlabs Japan, Inc.
sales@thorlabs.jp

UK and Ireland

Thorlabs Ltd.
sales.uk@thorlabs.com
techsupport.uk@thorlabs.com

Scandinavia

Thorlabs Sweden AB
scandinavia@thorlabs.com

Brazil

Thorlabs Vendas de Fotônicos Ltda.
brasil@thorlabs.com

China

Thorlabs China
chinasales@thorlabs.com



THORLABS

www.thorlabs.com
