



PSY240E

# LED Light Strip and Extension

## Installation Manual



Original Instructions



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# Table of Contents

<b>Chapter 1</b>	<b>Safety .....</b>	<b>1</b>
	<b>1.1. General Warnings and Cautions .....</b>	<b>1</b>
<b>Chapter 2</b>	<b>Installation.....</b>	<b>2</b>
	<b>2.1. Environmental Conditions .....</b>	<b>2</b>
	<b>2.2. Parts List.....</b>	<b>2</b>
	2.2.1. Required Parts:.....	3
	2.2.2. LED Light Strip Attachment.....	6
<b>Chapter 3</b>	<b>Specifications.....</b>	<b>9</b>
<b>Chapter 4</b>	<b>Regulatory.....</b>	<b>10</b>
	<b>4.1. Declarations of Compliance.....</b>	<b>10</b>
	4.1.1. For Customers in Europe.....	10
	4.1.2. For Customers In The USA.....	10
<b>Chapter 5</b>	<b>Thorlabs Worldwide Contacts.....</b>	<b>11</b>

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## Chapter 1 Safety

For the continuing safety of the operators of this equipment, and the protection of the equipment itself, the operator should take note of the Warnings, Cautions and Notes throughout this handbook and, where visible, on the product itself.

**Warning: Risk of Electrical Shock**

Given when there is a risk of electrical shock.

**Warning**

Given when there is a risk of injury to the user.

**Warning: Risk of Finger Trap**

Given when there is a risk of trapping fingers between parts.

**Caution**

Given when there is a possibility of damage to the product.

**Note**

Clarification of an instruction or additional information.

### 1.1. General Warnings and Cautions

**Warning: Risk of Electric Shock**

The LED strip and extension cable must be installed only by suitably trained and qualified personnel who understand the hazards associated with using high voltages and the steps necessary to minimize the risk of electrical shock.

**Warning:**

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. In particular, excessive moisture may impair operation.

The equipment is for indoor use only. The equipment is not designed for use in an explosive atmosphere.

Where a Warning symbol appears on the product (e.g. finger trap warning), users must consult this manual to ascertain the nature of the potential hazard and the means of avoiding them.

## Chapter 2 Installation

### 2.1. Environmental Conditions


**Warning**

Operation outside the following environmental limits may adversely affect operator safety.




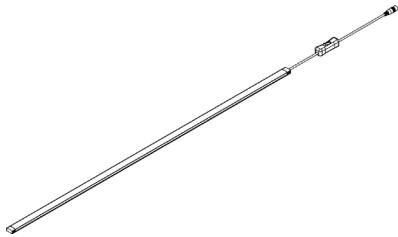
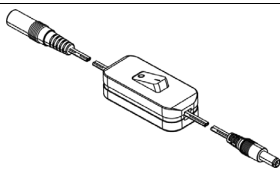
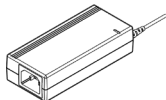
Location	Indoor use only
Maximum altitude	2000 m
Temperature range	15°C to 40°C
Maximum Humidity	Less than 80% RH (non-condensing) at 31°C
Line Voltage Fluctuations	Less than $\pm 10\%$ of the line voltage

To ensure reliable operation the unit should not be exposed to corrosive agents or excessive moisture, heat or dust.

If the unit has been stored at a low temperature or in an environment of high humidity, it must be allowed to reach ambient conditions before being powered up.

The unit is not designed to be used in explosive environments.

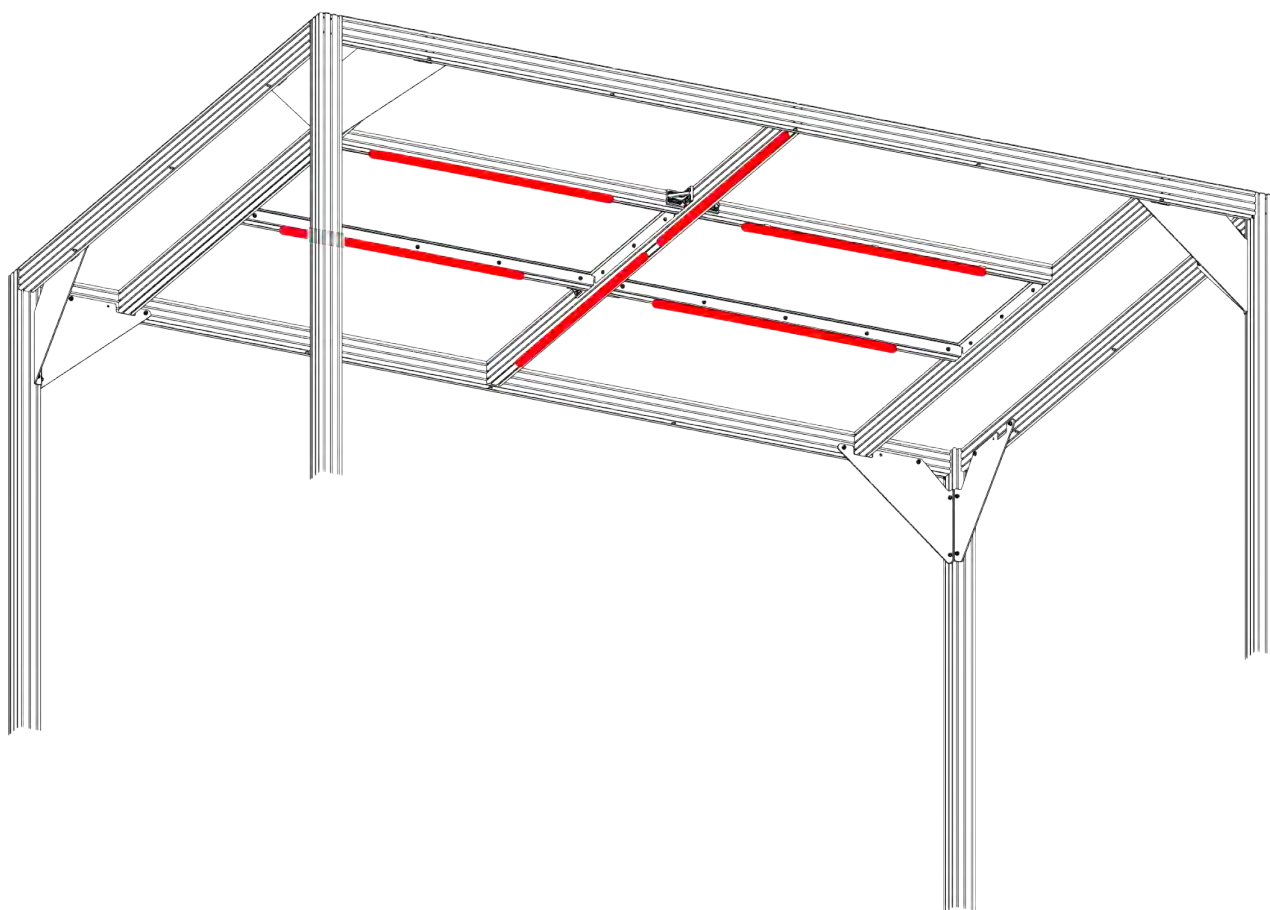
### 2.2. Parts List

Code	Description	Qty	Image
BA	XE25T1/M Drop-in Nut	3	
BB	M6 x 1.0 Button Screw, 6mm Long	3	
BC	LED mounting clip	3	
BD	LED light strip	1	
BF	LED switch extension	1	
BG	12V Power Supply	1	

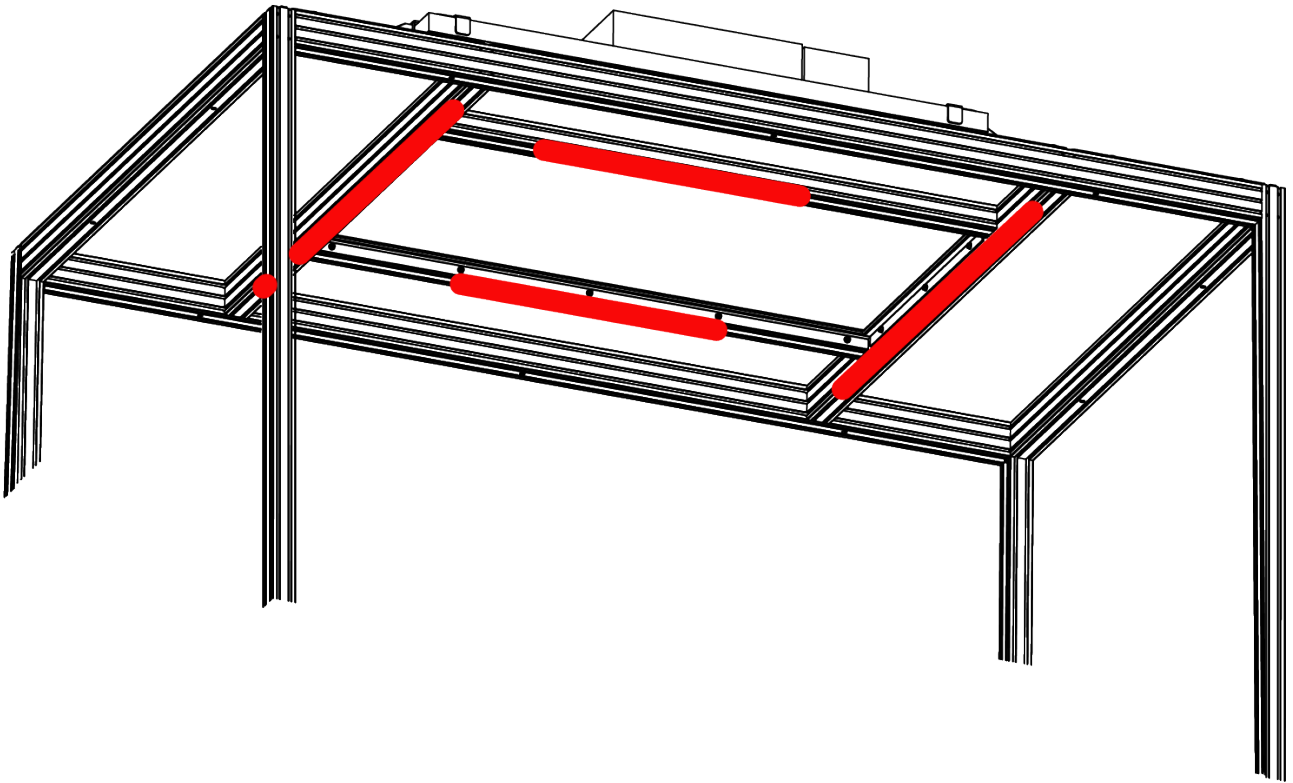
**2.2.1. Required Parts:**

Code	Description	Qty
BA	XE25T1/M Drop-in Nut	6
BB	M6 x 1.0 Button Screw, 6mm Long	6
BC	LED mounting clip	6
BD	LED light strip	2
BF	LED switch extension	1
BG	12V Power Supply	1
T	XE25S2 Slot Cover Profile	4
<b>Tools Required</b>		
AJ	4mm T-handle hex driver	

The LED light strips have been provided for additional internal lighting of the Laminar Flow Enclosure. The T-slots of the construction rails allow flexibility in the placement of the LED light strip. Some recommended placement options for the light strip are shown below.



**Figure 1 Recommended Lighting Placement Options - LFE1220W**



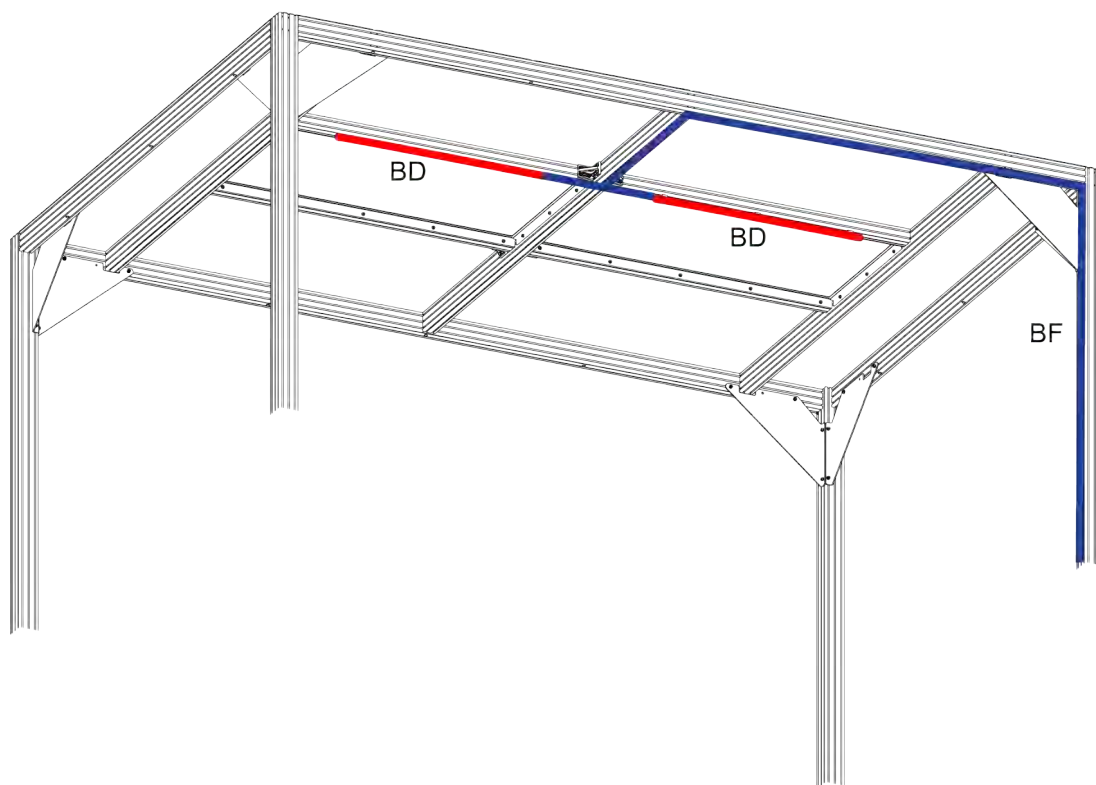
**Figure 2 Recommended Lighting Placement Options – LFE1220**

The cable routing will be determined by the chosen light position.

The connection order is as follows:

Light strips (BD) – switch extension (BF) – 12V power supply (BG).

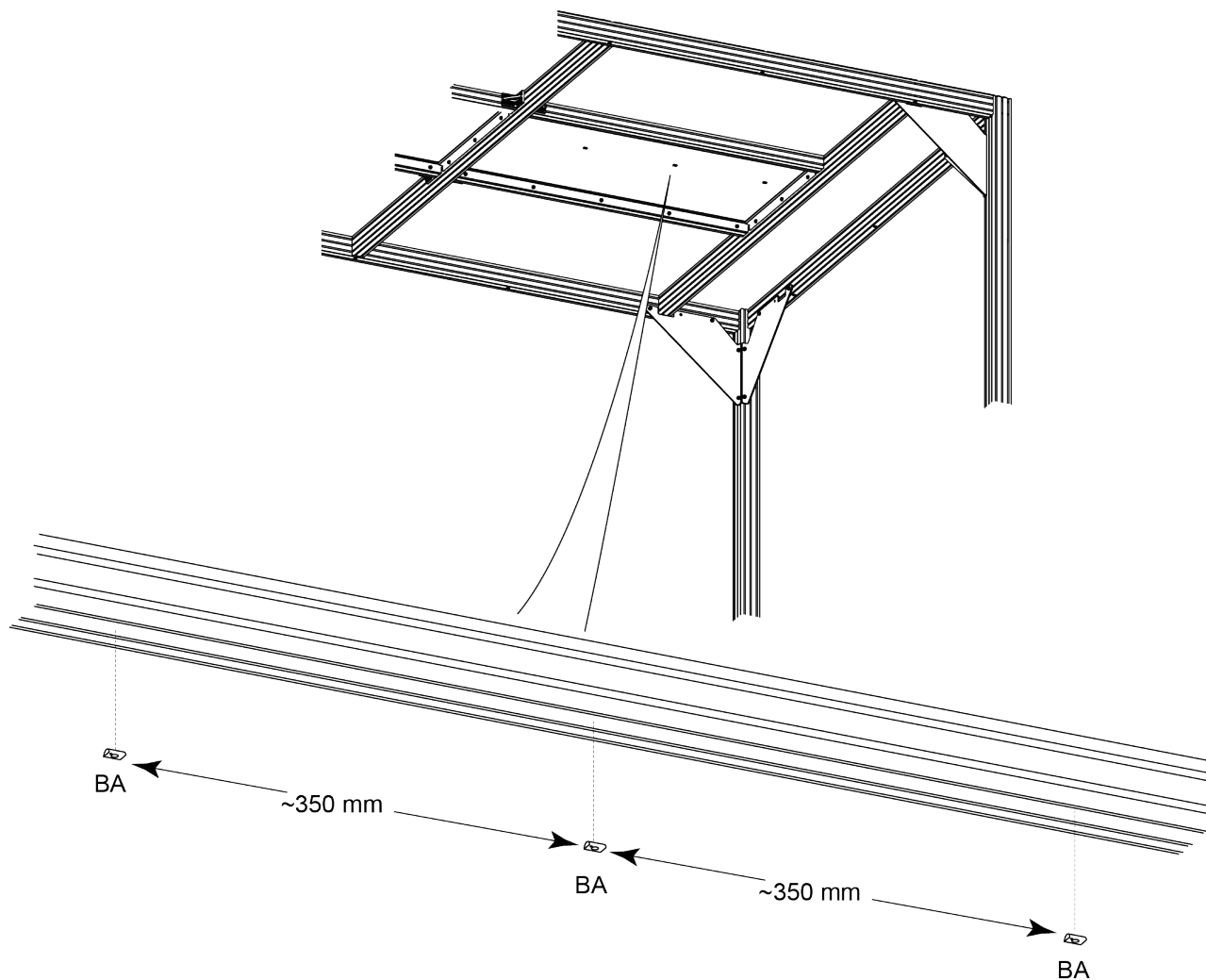
An example of the light strip position, and corresponding routing of cable is shown below.



**Figure 3 Cable Routing Example**

**2.2.2. LED Light Strip Attachment**

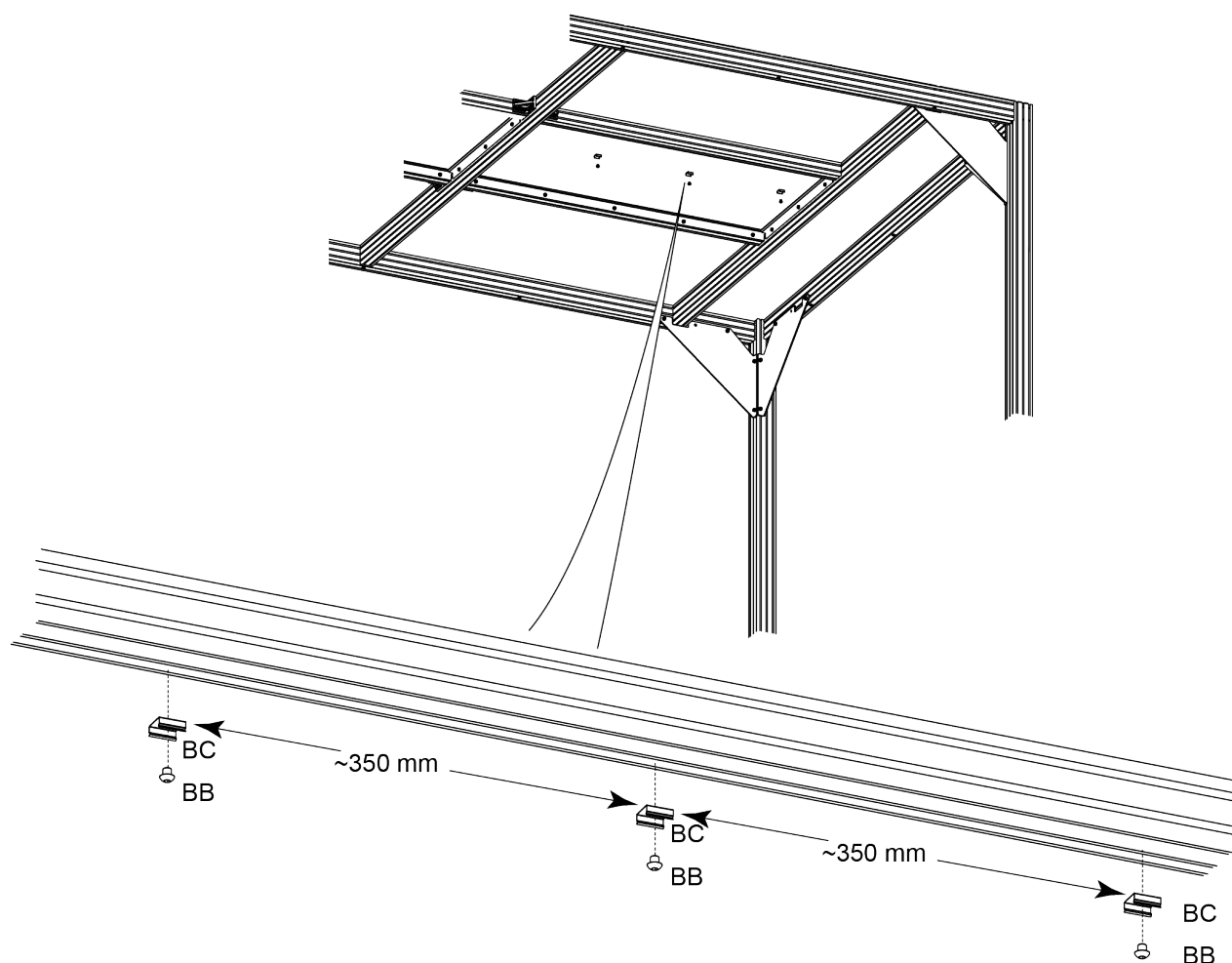
1. Insert qty 3 XE25T1/M Drop-in Nuts (BA) in the slot that corresponds to your chosen position: The nuts should be spaced approx. 350 mm [13.8"] apart.



**Figure 4 Inserting the Drop-in Nuts**

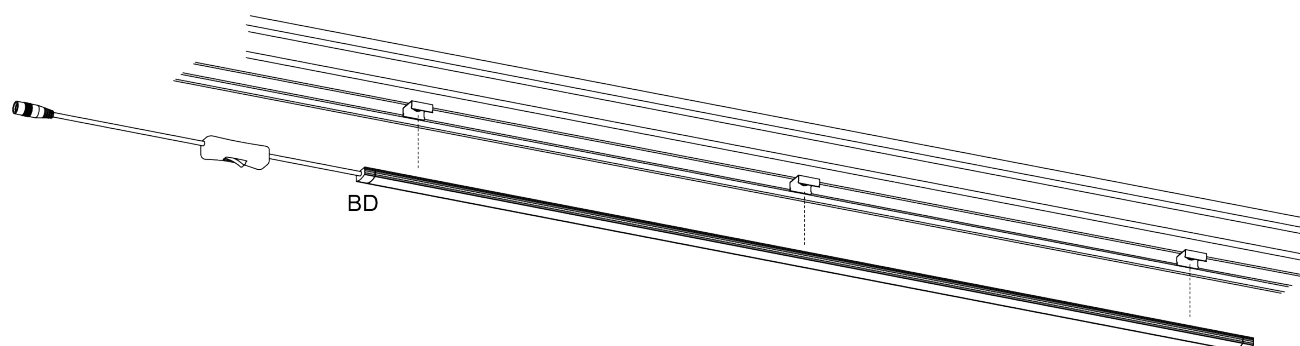


- Using qty 3 LED mounting clips (BC) and qty 3 M6x6 Button Screws (BB), secure the light clips to the XE25T1/M Drop-in Nuts inserted above. A 4mm hex driver is supplied to tighten the screws.



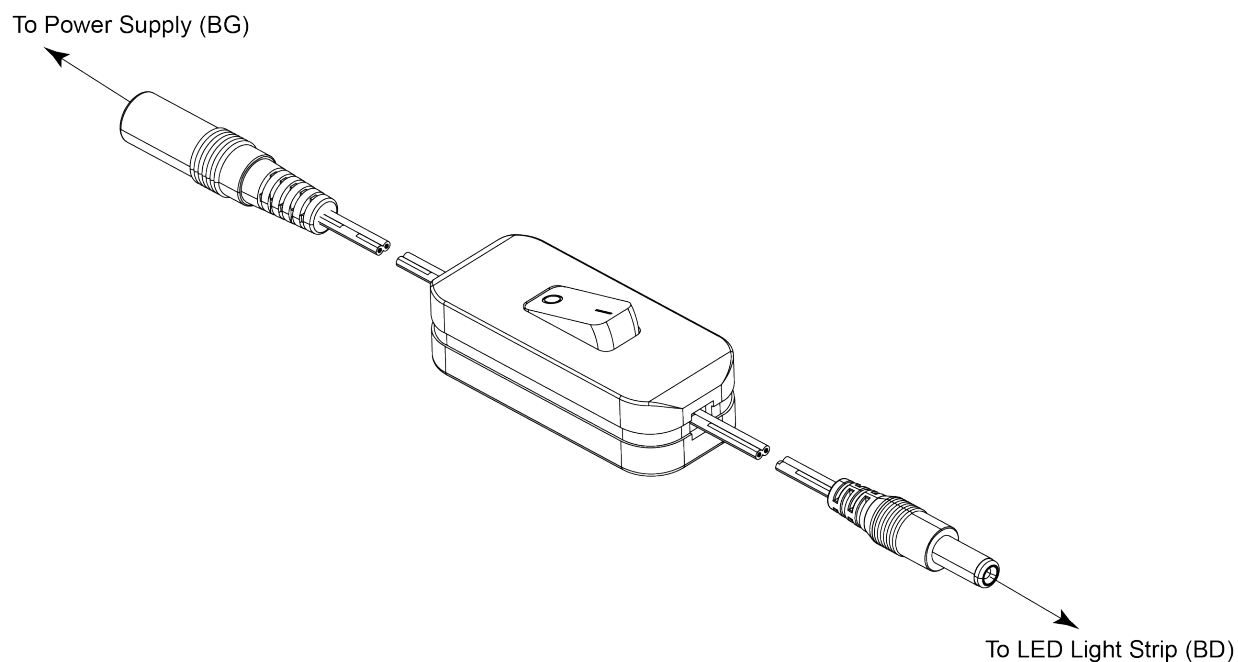
**Figure 5 Fitting the Light Clips**

- Fit the LED light strip (BD) by pressing into the 3 clips.



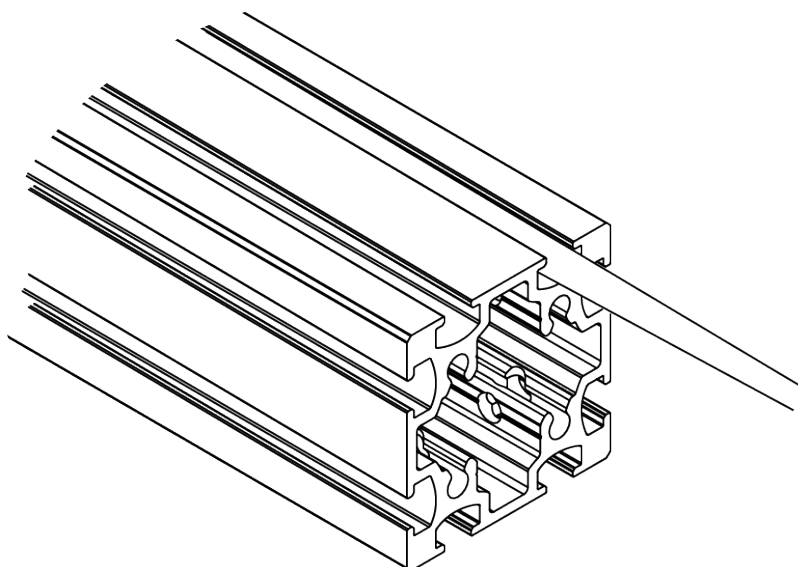
**Figure 6 Fitting the Light Strip**

4. The LED switch extension (BF) has been provided to enable the switching of the lights from a more accessible position. This connects between the LED light strip and 12V Power Supply (BG).



**Figure 7 LED Switch Extension Cable**

5. The cable can be routed inside the T-slots of the construction rail.



**Figure 8 Cable Routing Inside the T-Slots**

## Chapter 3 Specifications

General Specifications	
Brightness	1530 Lumens
Number of LEDs	51
Power	15.3 W
Voltage	12 VDC (Power Supply Included)
Dimensions (LED Light Strip Only)	850 mm x 17.4 mm x 8.2 mm (33.46" x 0.69" x 0.32")

## Chapter 4 Regulatory

### 4.1. Declarations of Compliance

#### 4.1.1. For Customers in Europe



**THORLABS**  
www.thorlabs.com

### EU Declaration of Conformity

*in accordance with EN ISO 17050-1:2010*

We: Thorlabs Ltd.  
Of: 204 Lancaster Way Business Park, Ely, CB6 3NX, UK

*in accordance with the following Directive(s):*

2014/35/EU	Low Voltage Directive (LVD)
2014/30/EU	Electromagnetic Compatibility (EMC) Directive
2011/65/EU	Restriction of Use of Certain Hazardous Substances (RoHS)

hereby declare that:  
Model: **PSY240E**

Equipment: **850 mm LED Light Strip with 4.3 m Switch Extension Cable**

*is in conformity with the applicable requirements of the following documents:*

EN 61010-1	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use.	2010
EN 61326-1	Electrical Equipment for Measurement, Control and Laboratory Use - EMC Requirements	2013

*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 sections of the above referenced specifications, and complies with all applicable Essential Requirements of the Directives.*

Signed:  On: 02 March 2021

Name: Keith Dhese  
Position: General Manager

EDC - PSY240E -2021-03-02



#### 4.1.2. For Customers In The USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the company could void the user's authority to operate the equipment.

## Chapter 5 Thorlabs Worldwide Contacts

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



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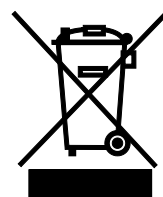
### Brazil

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Thorlabs verifies our compliance with the WEEE (Waste Electrical and Electronic Equipment) directive of the European Community and the corresponding national laws. Accordingly, all end users in the EC may return “end of life” Annex I category electrical and electronic equipment sold after August 13, 2005 to Thorlabs, without incurring disposal charges. Eligible units are marked with the crossed out “wheelie bin” logo (see right), were sold to and are currently owned by a company or institute within the EC, and are not disassembled or contaminated. Contact Thorlabs for more information. Waste treatment is your own responsibility. “End of life” units must be returned to Thorlabs or handed to a company specializing in waste recovery. Do not dispose of the unit in a litter bin or at a public waste disposal site.



**Annex I**



**THORLABS**  
[www.thorlabs.com](http://www.thorlabs.com)

