

IP Pixelstrip 40

Product code: 44522

Preface

Thank you for purchasing this Showtec product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Intended and non-intended use of the device
- Installation and operation of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

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1. Introduction

1.1. Before Using the Product

**Important**

Read and follow the instructions in this user manual before installing, operating or servicing this product.

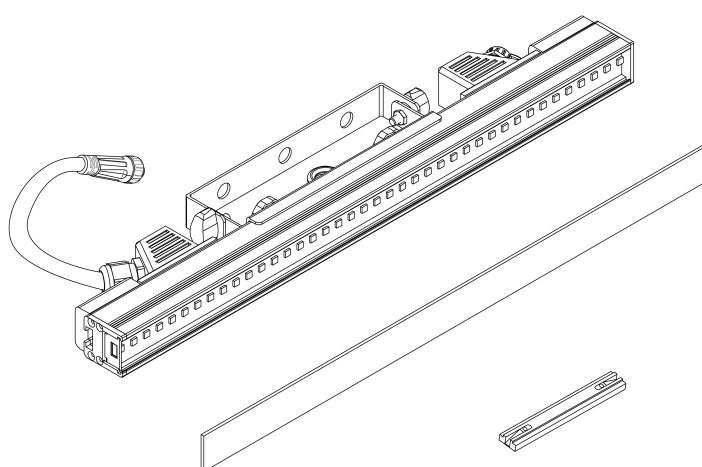
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

- Showtec IP Pixelstrip 40
- Straight alignment plate
- Smoked black cover
- User manual

Figure 1



1.2. Intended Use

This device is intended for professional use as an LED pixel bar. It can be installed indoors and temporarily outdoors. This device is not suitable for households and for general lighting.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3. LEDs Lifespan

The light output of the LEDs gradually decreases over time (lumen depreciation). High operating temperatures contribute to this process. You can extend the lifespan of the LEDs by providing adequate ventilation and operating the LEDs at the lowest possible brightness.

1.4. Product Lifespan

This device is not designed for permanent operation.

Disconnect the device from the electrical power supply when the device is not in operation. This will reduce the wear and will improve the lifespan of the device.

1.5. Text Conventions

Throughout the user manual the following text conventions are used:

- References: References to parts of the device are in bold lettering, for example: "turn the **adjustment handle (05)**". References to chapters are hyperlinked
- 0–255: Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

1.6. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.



DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.



Attention

Indicates important information for the correct operation and use of the product.



Important

Read and observe the instructions in this document.



Provides important information about the disposal of this product.

1.7. Symbols on the Information Label

This product is provided with an information label. The information label is located on the back side of the device.

The information label contains the following symbols:



This device shall not be treated as household waste.



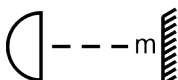
Read and follow the instructions in the user manual before installing, operating or servicing the device.



This device falls under IEC protection class III.

IP65

This device is rated IP65.



Minimum distance from lighted objects

2. Safety

**Important**

Read and follow the instructions in this user manual before installing, operating or servicing this product.

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1. Warnings and Safety Instructions

**DANGER**

Danger for children

For adult use only. The device must be installed beyond the reach of children.

- Do not leave any parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within the reach of children. Packaging material is a potential source of danger for children.

**WARNING**

Risk of epileptic shock

Strobe lighting can trigger seizures in photosensitive epilepsy. Sensitive persons should avoid looking at strobe lights.

**Attention**

General safety

- Do not switch the device on and off in short intervals. This reduces the device's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Change the lens or the LEDs if they are visibly damaged to such an extent that their effectiveness is impaired, for example by cracks or deep scratches. Contact your Highlite International dealer for more information, as servicing can be performed only by instructed or skilled persons.
- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.
- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue use immediately.

**Attention**

For professional use only

This device must be used only for the purposes it is designed for.

This device is intended for professional use as an LED pixel bar. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

- This device is not suitable for households and for general lighting.
- This device is not designed for permanent operation.
- This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

**Attention**

Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.

**Attention**

Do not expose the device to conditions that exceed the rated IP class conditions.

This device is IP65 rated. IP (Ingress Protection) 65 class means that the device is dust-tight and protected against harmful effect of water jets.

2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance may be carried out by ordinary persons. Installation and service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the installation, service and maintenance of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and avoid hazards associated with the installation, service and maintenance of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

2.3. Personal Protective Equipment

During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

3. Description of the Device

The Showtec IP Pixelstrip 40 is an LED pixel bar with pixel control. Each of the 40 RGB LEDs can be controlled individually by the dedicated Showtec IP Pixel Controller. It has an IP65-rated enclosure with fanless convection cooling and is suitable for indoor and temporary outdoor applications.

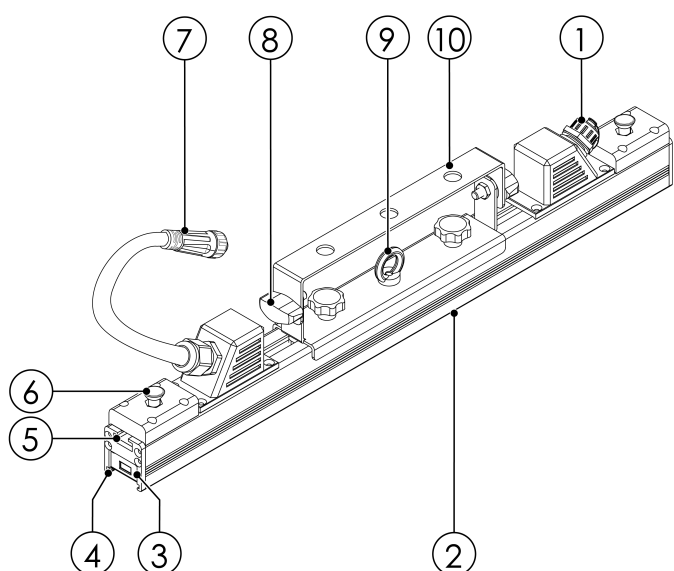
The IP Pixelstrip 40 can be daisy-chained and mixed with the IP Pixelstrip 80 with the combined data/power input cable, up to a total length of 4 meters per controller output. A straight alignment plate is included and locks into place without tools. Optional alignment plates allow for more complex configurations and 3D setups. A standard smoked black flat cover is also included and optional white flat covers, white dome-shaped covers or white rectangular covers are also available.

Note:

The Showtec IP Pixel Controller is required to drive the IP Pixelstrip 40. The IP Pixel controller can control 4 meters of IP Pixelstrip devices per output, for a total of 16 meters per IP Pixel Controller. The maximum cable length from the IP Pixel Controller until the 1st IP Pixelstrip is 20 meters. The maximum cable length from the IP Pixel Controller until the last IP Pixelstrip in a chain is 30 meters.

3.1. Overview

Figure 2



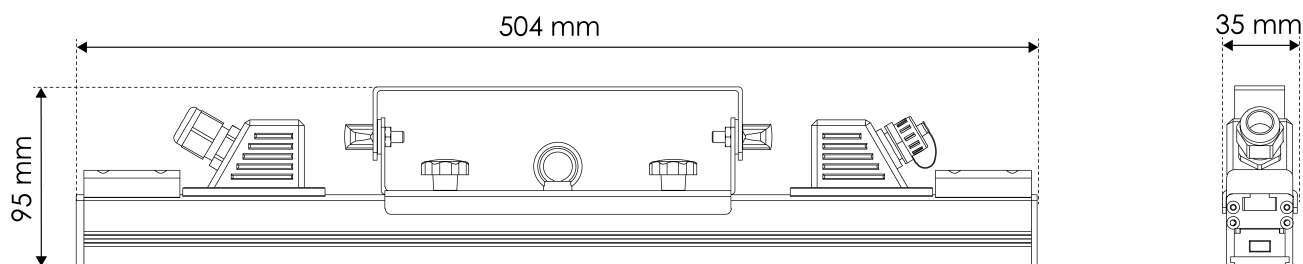
- 01) Dedicated IP65 signal/power connector OUT
- 02) 40 x RGB LEDs
- 03) Latch for cover
- 04) Opening for cover
- 05) Opening for alignment plate
- 06) Latch for alignment plate
- 07) Dedicated IP65 signal/power connector IN
- 08) 2 x adjustment screw
- 09) Safety eye
- 10) Mounting bracket

3.2. Product Specifications

Model:	IP Pixelstrip 40
Source:	
Light source type	RGB LED
Light source quantity	40
Refresh rate	16000 Hz
Brightness	9200 nits
Optical:	
Pixel pitch	12,5 mm
Dynamic effects:	
Dimmer	0–100 %
Strobe	0–20 Hz
Electrical specifications and connections:	
Power supply	48 V DC
Power consumption	16 W
Power connector in	Dedicated IP65 signal/power connector
Power connector out	Dedicated IP65 signal/power connector
Mechanical specifications:	
Height	95 mm
Width	35 mm
Length	504 mm
Weight	1,6 kg
IP rating	IP65
Housing	Aluminum
Color	Black
Product properties:	
Cooling	Passive
Rigging:	
Mounting options	Bracket
Safety attachment	Yes
Thermal specifications:	
Maximum ambient temperature	40 °C
Minimum ambient temperature	-5 °C
Included items:	
Included cables	Fixed cable
Included accessories	Smoked black cover
Included rigging	Straight alignment plate

3.3. Dimensions

Figure 3



3.4. Optional Accessories

The IP Pixelstrip 40 is delivered without the IP Pixel Controller. You need to purchase it separately.

- [44511](#) IP Pixel Controller
- [44523](#) IP Pixelstrip 80

You can additionally purchase the following accessories:

- [44531](#) Alignment Plate
- [44532](#) 90° Alignment Plate
- [44533](#) 120° Alignment Plate
- [44534](#) X Alignment Plate
- [44535](#) Flex Alignment Plate
- [44536](#) Female Alignment Plate
- [44537](#) Male Alignment Plate
- [44541](#) Flat Cover for IP Pixelstrip 40
- [44543](#) Dome Cover for IP Pixelstrip 40
- [44545](#) Rectangular Cover for IP Pixelstrip 40

Contact your Highlite International dealer for more information.

4. Installation

4.1. Safety Instructions for Installation

**WARNING**

Incorrect installation can cause serious injuries and damage of property.

If trussing systems are used, installation must be carried out only by instructed or skilled persons.

Follow all applicable European, national and local safety regulations concerning rigging and trussing.

4.2. Personal Protective Equipment

During installation, deinstallation and rigging wear personal protective equipment in compliance with the national and site-specific regulations.

4.3. Installation Site Requirements

- The device can be used indoors and temporarily outdoors.
- The device must be installed away from heating sources and direct sunlight.
- The ambient temperature must be in the range -5 and 40 °C.

4.4. Rigging

The device can be positioned on a flat surface or mounted to a truss or other rigging structure in any orientation. Make sure that all loads are within the pre-determined limits of the supporting structure.

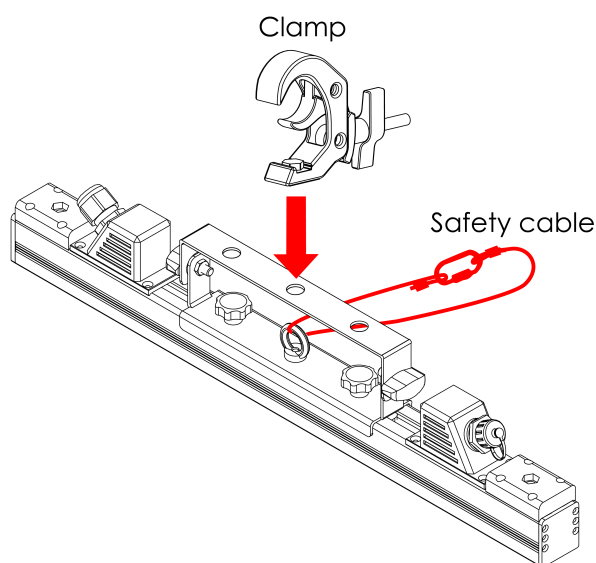
**CAUTION**

Restrict the access under the work area during rigging/derigging.

To mount the device, follow the steps below:

01) Install a clamp to the bracket. Make sure that you use a clamp suitable for attaching the device to a truss.

Figure 4



02) Attach the device to the supporting structure. Make sure that the device cannot move freely.

03) Secure the device with a secondary suspension, for example a safety cable. Make sure that the secondary suspension can hold 10 times the weight of the device. If possible, the secondary suspension should be attached to a supporting structure independent of the primary suspension. Put the safety cable through the **safety eye (09)**.

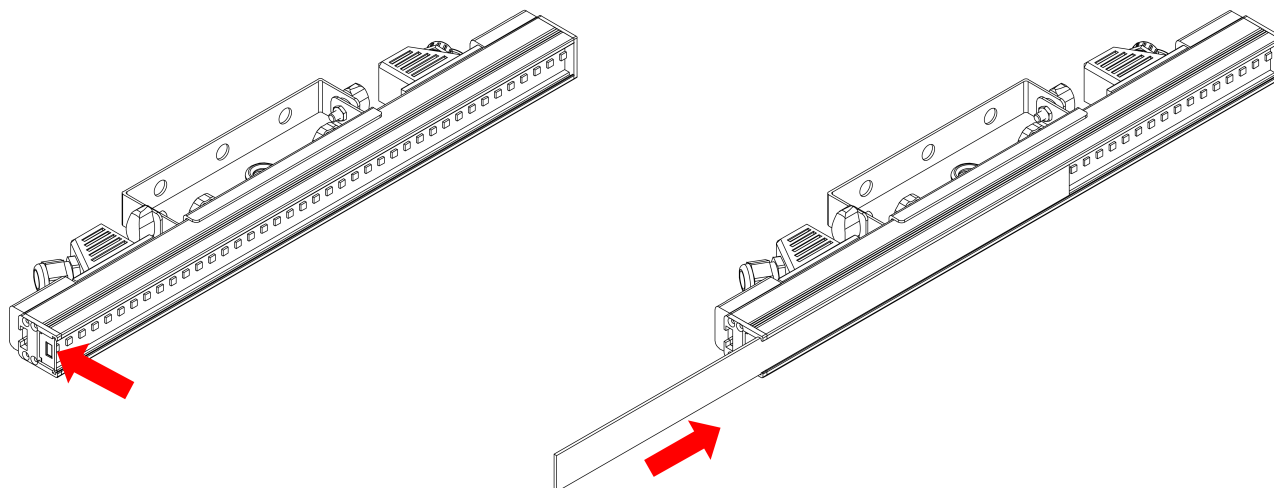
4.5. Installing a Cover

The IP Pixelstrip 40 is delivered with a smoked black flat cover. Additional covers are also available (see [3.4. Optional Accessories](#) on page 9).

To install a cover, follow the steps below:

- 01) Press down and hold the **latch for cover (03)**.
- 02) Slide the cover into the **opening for cover (04)** until the **latch for cover (03)** snaps into place.

Figure 5



To remove a cover, press down and hold the **latch for cover (03)** and slide out the cover.

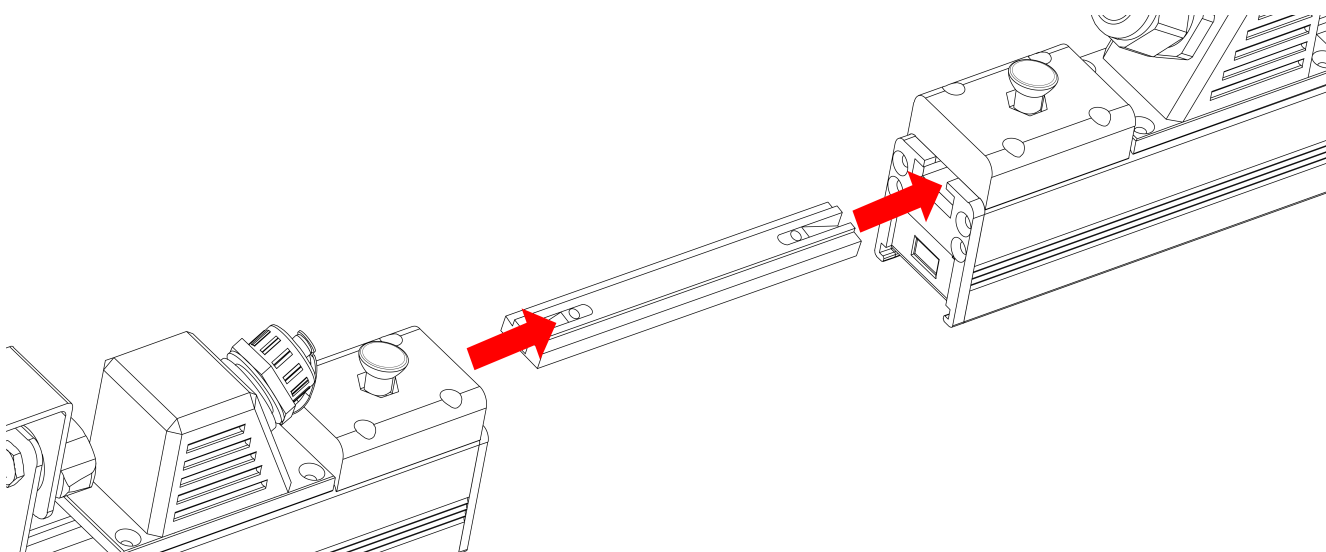
4.6. Connecting Multiple Pixelstrips

The IP Pixelstrip 40 can be connected to other IP Pixelstrip devices using alignment plates. The device is delivered with a straight alignment plate. Other alignment plates are also available to create more complex configurations, including 3D setups (see [4.7. Creating a 3D Setup \(Optional\)](#) on page 15).

To connect multiple IP Pixelstrip 40 devices, follow the steps below:

- 01) Slide the alignment plate into the **opening for alignment plate (05)** on the 1st device until the **latch for alignment plate (06)** snaps into place.
- 02) Slide a 2nd device onto the alignment plate until the **latch for alignment plate (06)** of the 2nd device snaps into place.
- 03) Connect the **dedicated IP65 signal/power connector IN (07)** of the 2nd device to the **dedicated IP65 signal/power connector OUT (01)** of the 1st device.

Figure 6



To disconnect a IP Pixelstrip 40 device, pull up the **latch for alignment plate (06)** on the device and remove the alignment plate.

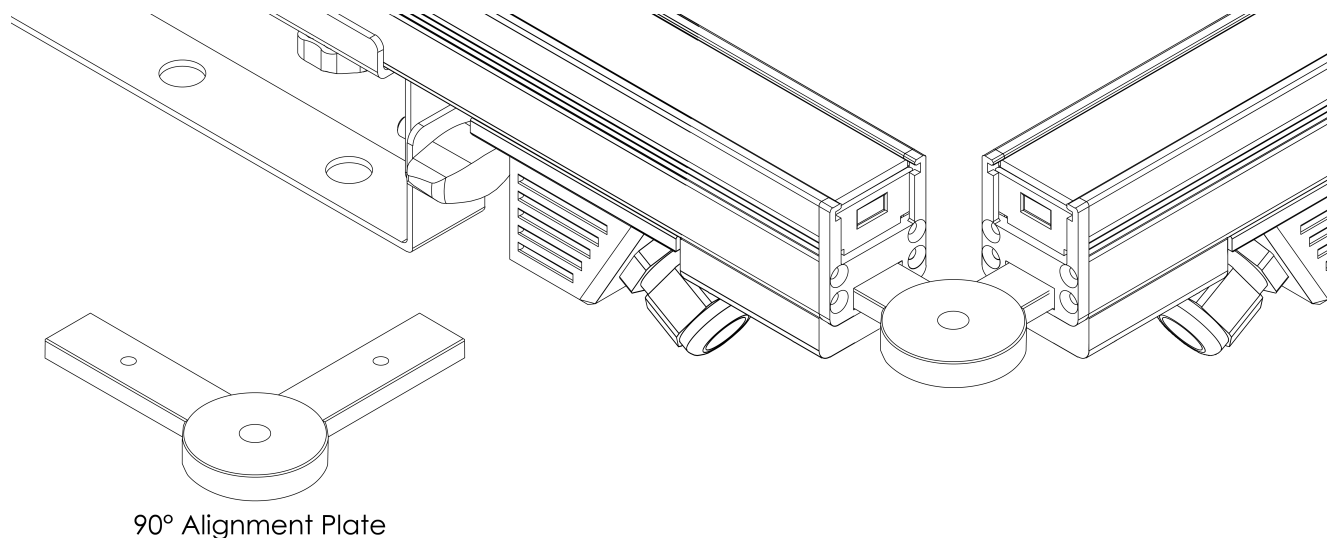
Note:

The 90° alignment plate, 120° alignment plate, X alignment plate and female alignment plate (see [1.1. Before Using the Product](#) on page 3) contain threaded holes which should only be used to create 3D layouts (see [4.7. Creating a 3D Setup \(Optional\)](#) on page 15). Do not use these holes as a single mounting point. Alignment plates shall only be used to connect multiple IP Pixelstrip 40 devices and shall not be used for rigging or mounting.

4.6.1. 90° Alignment Plate (Optional)

The 90° Alignment Plate (44532) (see [3.4. Optional Accessories](#) on page 9) allows for the connection of 2 IP Pixelstrip devices at a 90° angle.

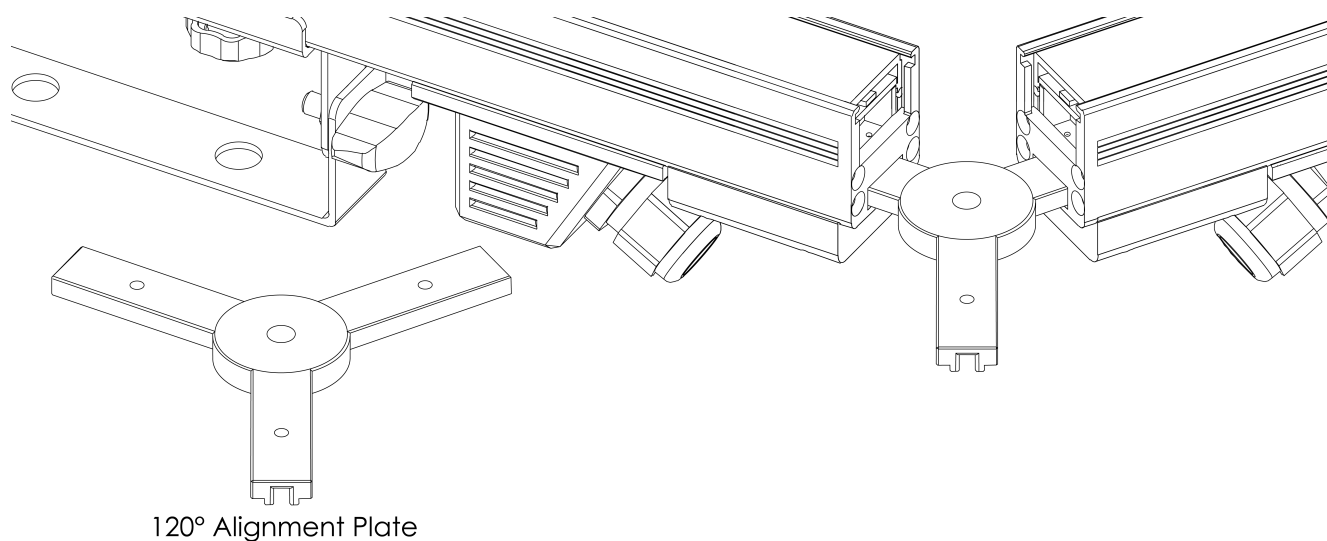
Figure 7



4.6.2. 120° Alignment Plate (Optional)

The 120° Alignment Plate (44533) (see [3.4. Optional Accessories](#) on page 9) allows for the connection of 3 IP Pixelstrip devices at a 120° angle.

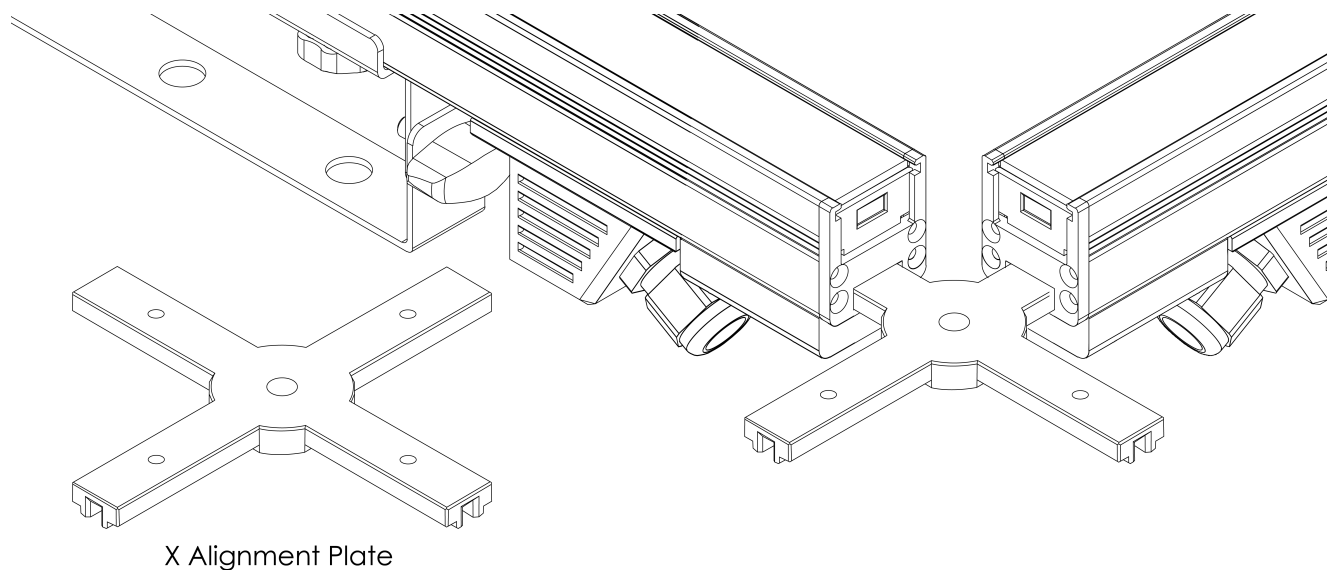
Figure 8



4.6.3. X Alignment Plate (Optional)

The X Alignment Plate (44534) (see [3.4. Optional Accessories](#) on page 9) allows for the connection of 4 IP Pixelstrip devices at a 90° angle.

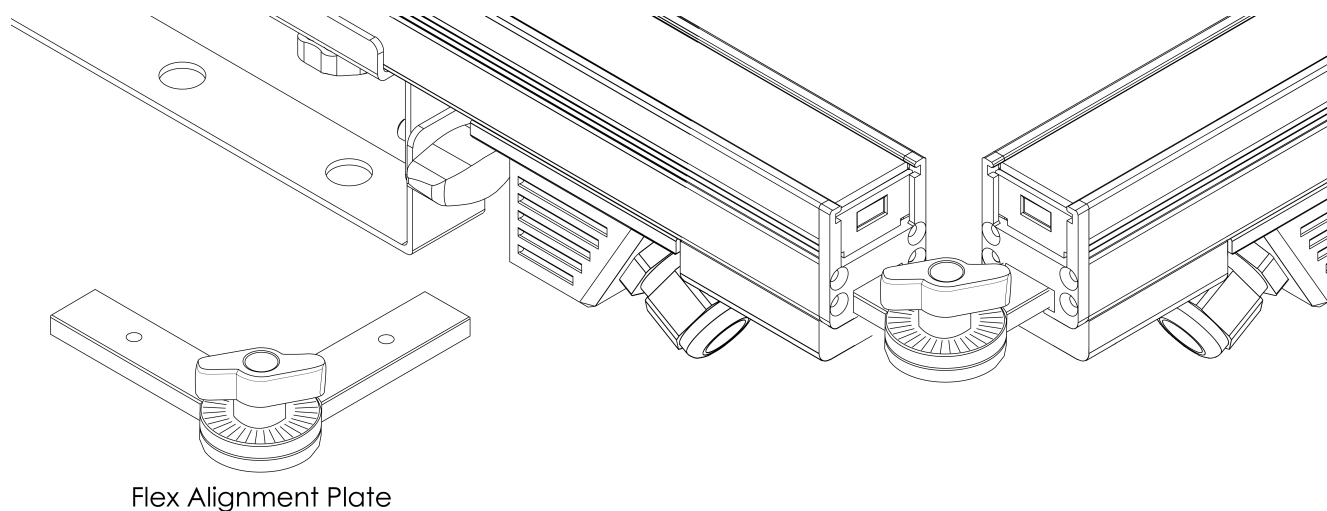
Figure 9



4.6.4. Flex Alignment Plate (Optional)

The Flex Alignment Plate (44535) (see [3.4. Optional Accessories](#) on page 9) allows for the connection of 2 IP Pixelstrip devices at any angle.

Figure 10



4.7. Creating a 3D Setup (Optional)

It is possible to create a 3D setup. This requires 1 male alignment plate (44537) and 1 female alignment plate (44536). Additionally, you need 1 90° alignment plate (44532), 1 120° alignment plate (44533), 1 X alignment plate (44534) or 1 flex alignment plate (44535) (see [3.4. Optional Accessories](#) on page 9).

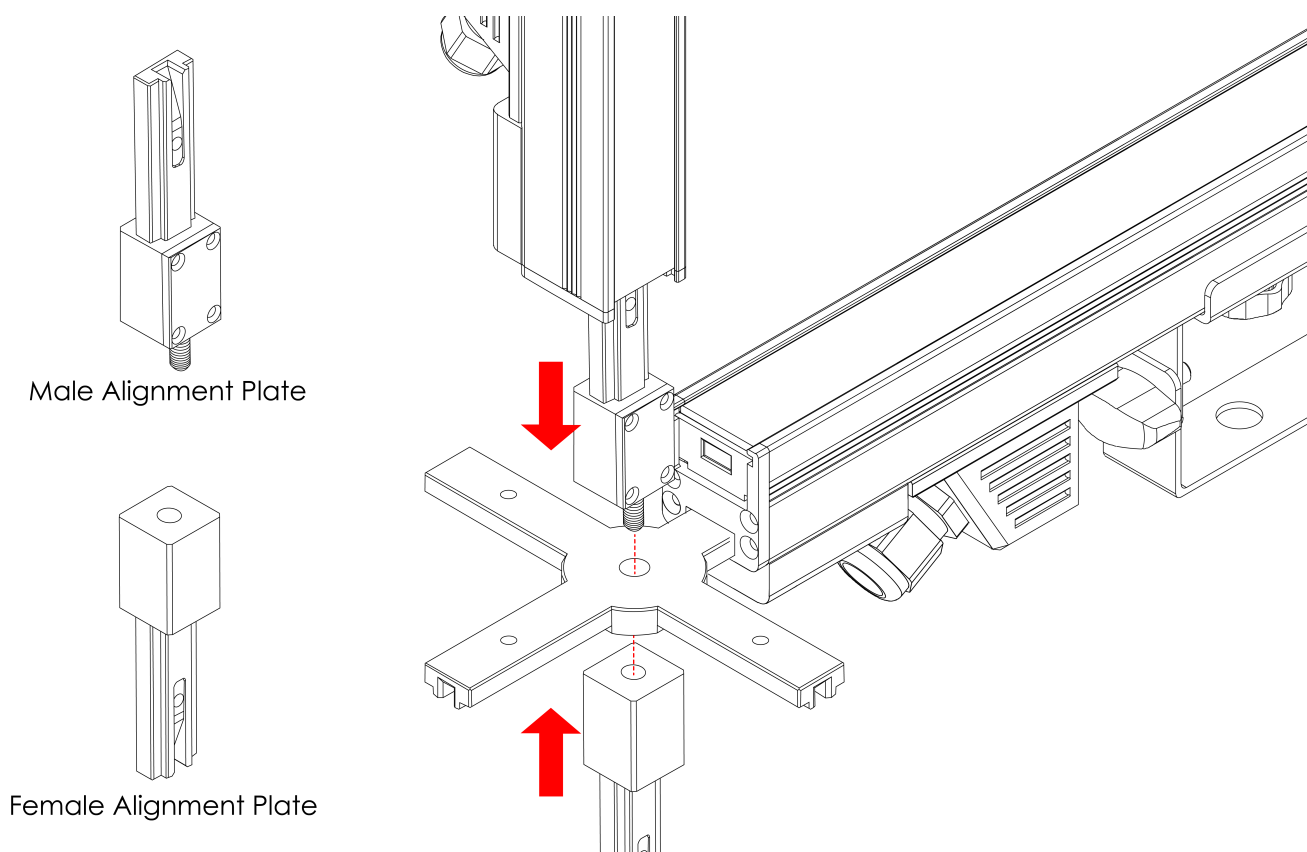
Note:

A 3D setup cannot be made with rectangular or dome covers, as the covers will touch. It is only possible to create a 3D setup with the included smoked black cover or a flat white cover (optional) (see [3.4. Optional Accessories](#) on page 9).

To create a 3D setup, follow the steps below:

- 01) Place the threaded end of a male alignment plate through the center hole of an alignment plate, e.g. an X alignment plate.
- 02) Screw the female alignment plate onto the male alignment plate.
- 03) Connect an IP Pixelstrip 40 device by sliding the **opening for alignment plate (05)** onto the alignment plates until the **latch for alignment plate (06)** snaps into place.
- 04) Repeat step 3 for all IP Pixelstrip 40 devices in the setup.

Figure 11



5. Setup and Operation

5.1. Warnings and Precautions



DANGER
Electric shock caused by short-circuit

This device is IP65 rated.

- Do not expose the device to conditions that exceed the rated IP class conditions.
- Keep the connectors sealed with the rubber caps when the connectors are not in use.
- Do not connect the cables from above the connectors, if the device is installed outdoors. Make a 'drip loop' in the cable so that rain water cannot enter the device.
- Make sure that the cable run is not too heavy. A heavy cable run can cause damage to the connectors. If the connectors are damaged, their ingress protection (IP) can deteriorate.



Attention
Connect all data cables before supplying power.
Disconnect power supply before connecting or disconnecting data cables.

5.2. Safety Instructions for Operation



Attention
This device must be used only for the purposes it is designed for.

This device is intended for professional use as an LED pixel bar. It can be installed indoors and temporarily outdoors. This device is not suitable for households and for general lighting.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.



Attention
Power supply

Connect the device only using the dedicated cables.

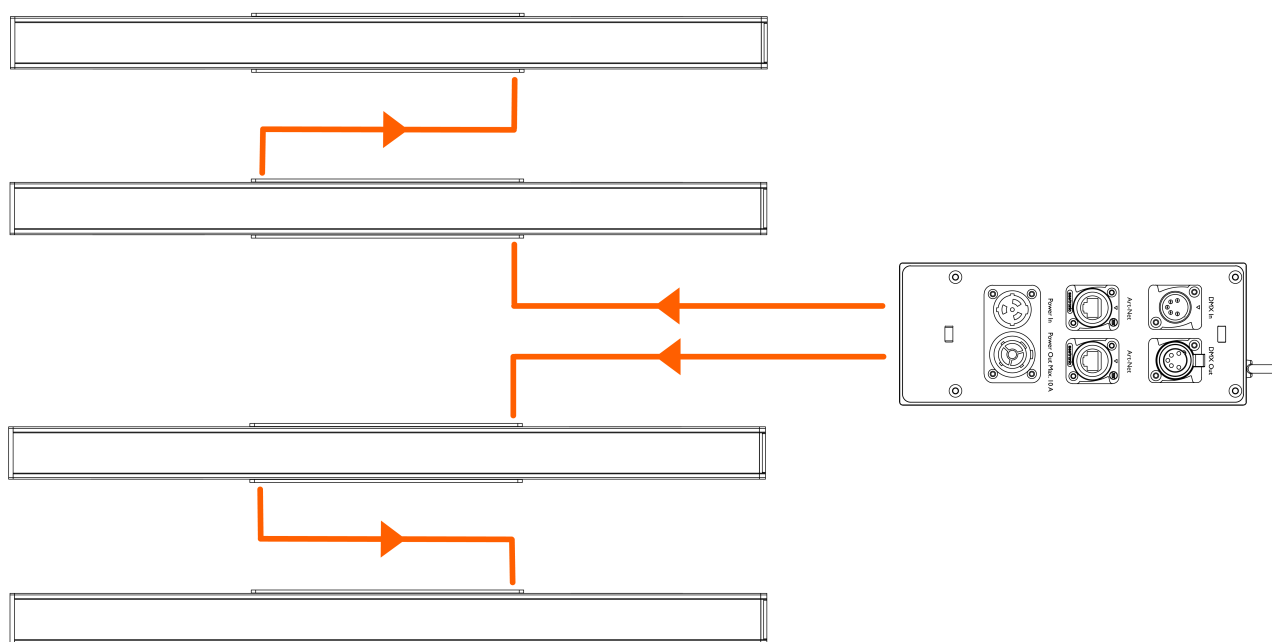
5.3. Setup Example

The Showtec IP Pixel Controller (see [3.4. Optional Accessories](#) on page 9) is required to drive the IP Pixelstrip 40. Multiple IP Pixelstrip 40 devices can be connected to the IP Pixel Controller in various configurations.

To connect multiple IP Pixelstrip 40 devices to the IP Pixel Controller, follow the steps below:

- 01) Connect the IP Pixel Controller to the 1st IP Pixelstrip 40 device with the **dedicated IP65 signal/power connector IN (07)** of the 1st IP Pixelstrip 40 device.
- 02) Connect the 1st IP Pixelstrip 40 device to the 2nd IP Pixelstrip 40 device (see [4.6. Connecting Multiple Pixelstrips](#) on page 12).
- 03) Repeat step 2 for any additional IP Pixelstrip 40 devices.
- 04) Repeat steps 2 and 3 for the other outputs of the IP Pixel Controller.

Figure 12



Note:

The IP Pixel controller can control 4 meters of IP Pixelstrip devices per output, for a total of 16 meters per IP Pixel Controller. The maximum cable length from the IP Pixel Controller until the 1st IP Pixelstrip is 20 meters. The maximum cable length from the IP Pixel Controller until the last IP Pixelstrip in a chain is 30 meters. It is possible to mix IP Pixelstrip 40 devices with IP Pixelstrip 80 devices, as long as the maximum output length is followed.

6. Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts.

Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not function at all	No power to the device	<ul style="list-style-type: none"> Make sure that the device is connected to an IP Pixel Controller and the IP Pixel Controller is connected to power supply
	The LEDs are defective	<ul style="list-style-type: none"> Contact your Showtec dealer
The device responds erratically	The factory settings of the IP Pixel Controller are changed	<ul style="list-style-type: none"> Refer to the manual of the IP Pixel Controller
The device does not respond to DMX control	There is an issue with the setup of the IP Pixel controller	<ul style="list-style-type: none"> Refer to the manual of the IP Pixel Controller
The device responds erratically to DMX control	There is an issue with the setup of the IP Pixel controller	<ul style="list-style-type: none"> Refer to the manual of the IP Pixel Controller
	In case of a setup with multiple devices, one of the devices is defective and disturbs data transmission on the link	<ul style="list-style-type: none"> To find out the defective device, bypass one device at a time until normal operation is restored

7. Maintenance

7.1. Preventive Maintenance

**Attention**

Before each use, examine the device visually for any defects.

Make sure that:

- All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
- There are no deformations on housings, fixings and installation points.
- The power cables are not damaged and do not show any material fatigue.

7.1.1. Basic Cleaning Instructions

The external lens of the device must be cleaned periodically in order to optimize the light output. The cleaning schedule depends on the conditions at the site where the device is installed. When smoke or fog machines are used at the site, the device will need more frequent cleaning. On the other hand, if the device is installed in well-ventilated area, it will need less frequent cleaning. To establish a cleaning schedule, examine the device at regular intervals during the first 100 hours of operation.

To clean the device, follow the steps below:

- 01) Disconnect the device from the electrical power supply.
- 02) Allow the device to cool down for at least 15 minutes.
- 03) Remove the dust collected on the external surface with dry compressed air and a soft brush.
- 04) Clean the lens with a damp cloth. Use a mild detergent solution.
- 05) Dry the lens carefully with a lint-free cloth.
- 06) Clean the DMX and other connections with a damp cloth.

**Attention**

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.
- Make sure that the connections are fully dry before connecting the device to the power supply and to other devices.

7.2. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

8. Deinstallation, Transportation and Storage

8.1. Instructions for Deinstallation

**WARNING**

Incorrect deinstallation can cause serious injuries and damage of property.

- Let the device cool down before dismounting.
- Disconnect power supply before deinstallation.
- Always observe the national and site-specific regulations during deinstallation and derigging of the device.
- Wear personal protective equipment in compliance with the national and site-specific regulations.

8.2. Instructions for Transportation

- Use the original packaging to transport the device, if possible.
- Always observe the handling instructions printed on the outer carton box, for example: "Handle with care", "This side up", "Fragile".

8.3. Storage

- Clean the device before storing (see [7.1.1. Basic Cleaning Instructions](#) on page 19).
- Store the device in the original packaging, if possible.

9. Disposal

Correct disposal of this product



Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

10. Approval



Check the respective product page on the website of Highlite International (www.highlite.com) for an available declaration of conformity.

