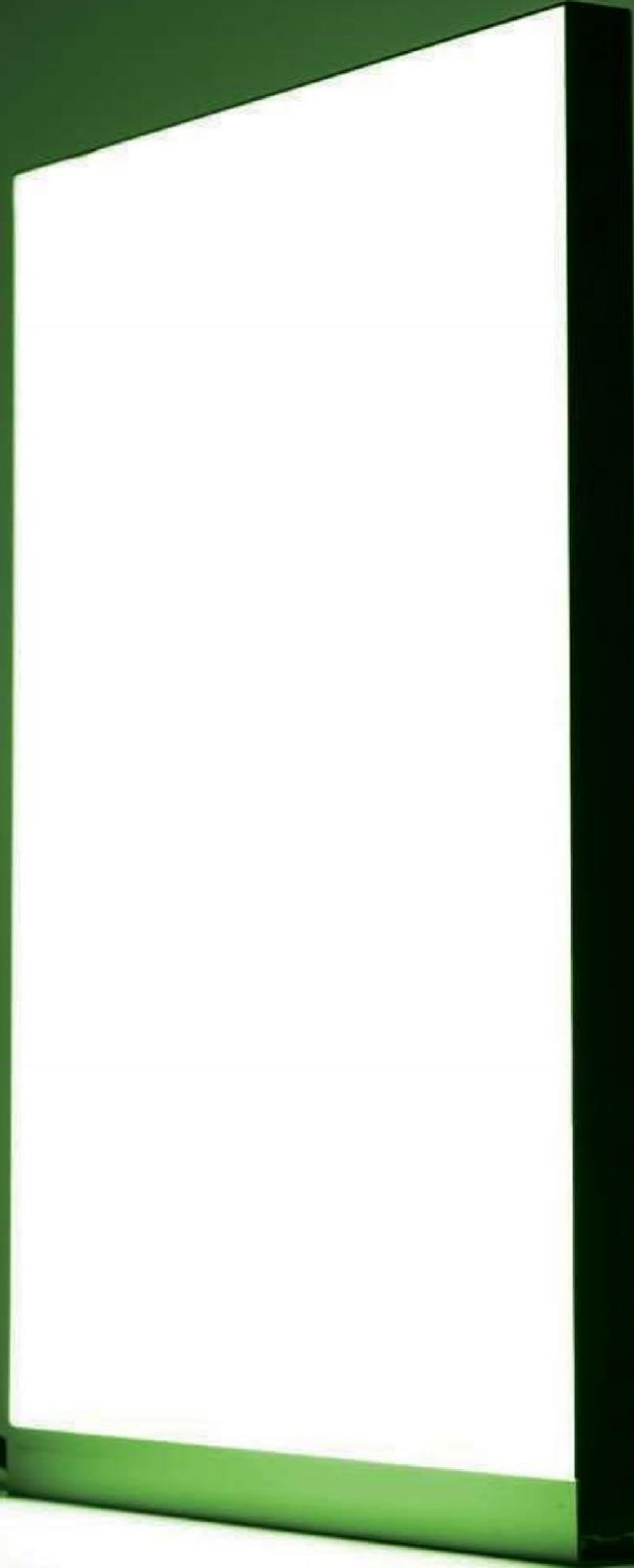


PIXALUX[®]

USER GUIDE



PIXALUX[®]

Read Before Installation!

Congratulations on your recent purchase of a Pixalux® Structural Light Panel! Pixalux® is an innovative product that enables so many unique opportunities for bespoke and commercial lighting applications.

Pixalux® is unlike other products on the market, so please take the time to consult this guide for the best ways to use the product, from handling through to installation.

If you have any questions, get in touch via the methods listed below.

Contact Information

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based on a license from PIXALUX® Australia

Your Pixalux® Structural Light Panel is made in Austria by ANA-U GmbH

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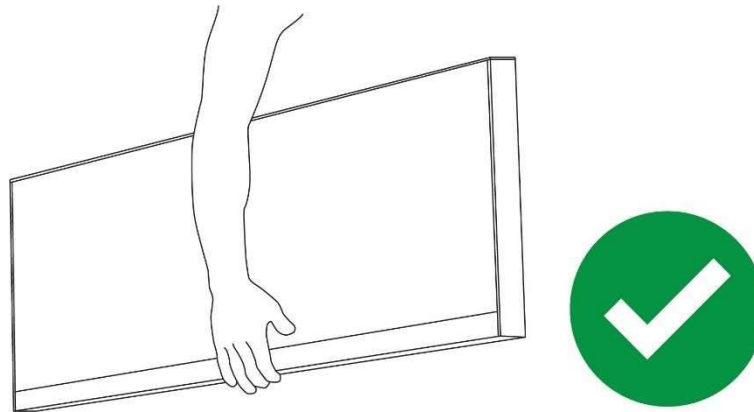
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Handling

Whilst the Picalux® Structural Light Panel is structural, it is also both a lighting and display product that must always be handled with care during transport and installation. As a general rule, we recommend that you treat the panel like glass during handling.

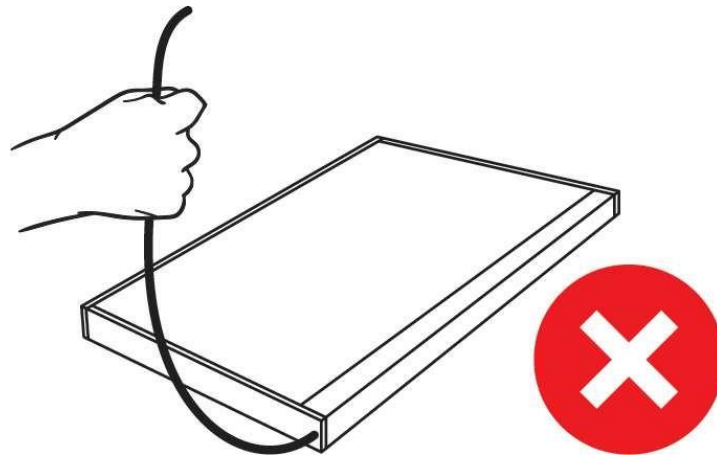
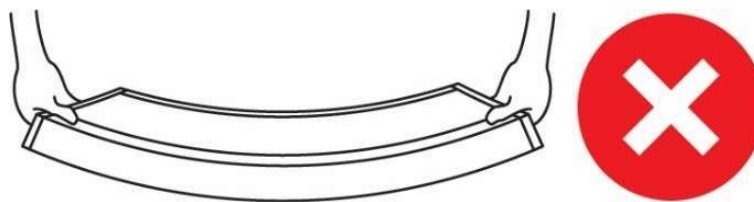
Recommended Handling Procedure

- The panel should always be carried in a vertical orientation to prevent any bending
- The surfaces and cable should be protected to prevent any accidental damage
- When panels are large and heavy, follow the correct OH&S handling procedures



Handling Practices To Avoid

- Do not carry the panel flat where it can bend
- Do not handle the panel by the power cable
- Don't drag, throw, drop or handle the panel in any way that is rough which could cause damage



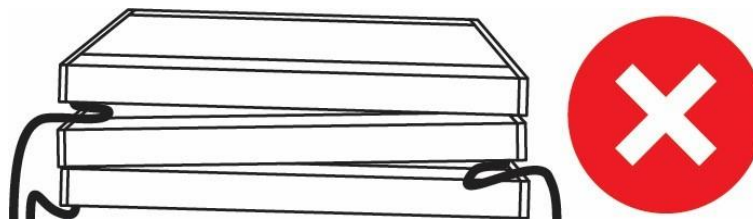
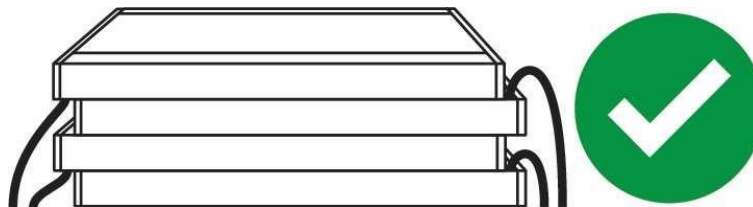
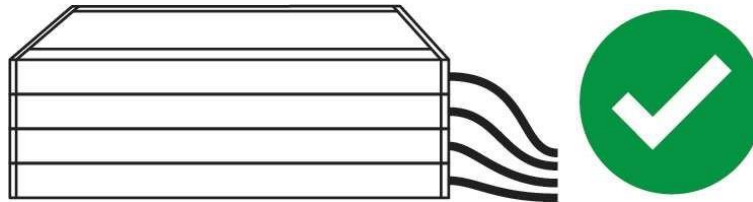
Storage & Transport

Every order is shipped in a purpose-built plywood crate to ensure the panels are safe at all times. We recommend reusing the original crate and packaging for any storage or transport requirements to ensure your panels are secure.

Storage Guidelines

- Always store the panels on a flat, smooth and clean surface
- Use padding between layers where available such as the foam that they're shipped with which helps to prevent scratching
- Do not stack panels on top of each other with any particles in between the panels as this may cause unwanted effects in illumination or physical damage to the surface

- Do not stack the panels in any way where the cable might be crushed or damaged



Care & Maintenance

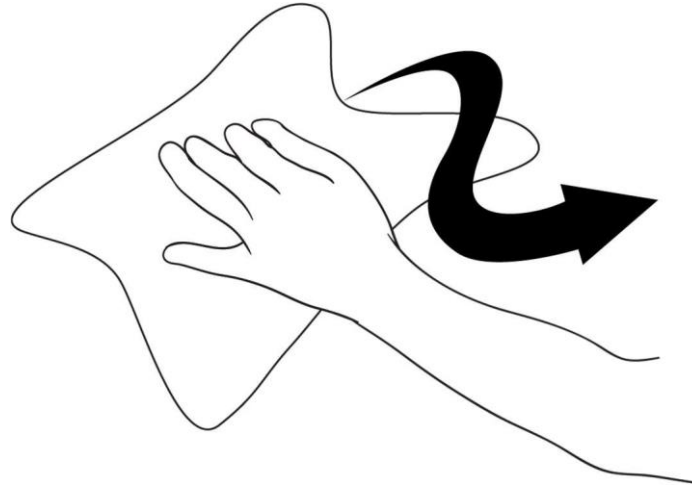
Caring For Your Panel

The Pixalux® Structural Light Panel is made from acrylic, which means it's only as strong as acrylic. With rough treatment the surface can scratch or be damaged by severe impacts.

- Avoid repeated interactions with hard or sharp objects that will increase the rate of surface scratching
- Do not expose the panel to any outdoor weather conditions especially wet weather
- Do not expose the panel to any impacts, blunt force or projectile impacts
- Do not expose the surface to any harsh chemicals such as acidic or corrosive fluids
- Only use fluids on the panel surface that are suitable for use with acrylic

Cleaning Your Panel

- Use a microfibre cloth or a similar cloth that does not cause scratching
- Dampen the cloth with isopropyl alcohol, methylated spirits, or a similar cleaning fluid that is suitable for acrylic surfaces
- Use a gentle circular motion to work off any dirt or stains



Renewing The Surface

If the panel surface becomes severely scratched, it is possible to renew the surface by polishing out the scratches. For this process, we recommend obtaining a fine grade automotive polish and following the recommended manufacturers procedure.

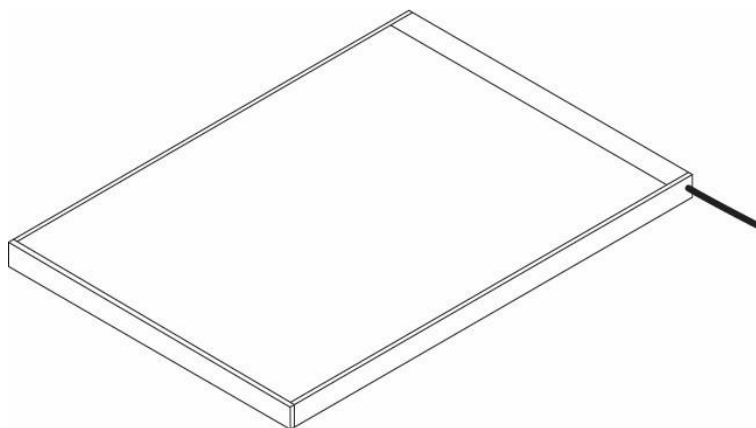
Protecting Your Panel

If you intend to use the panel in a high traffic environment that will increase the risk damage or the rate of general wear and tear, a simple solution is to use a transparent protective layer such as a sheet of acrylic, polycarbonate or glass. This protective layer will protect your panel and can easily and cheaply be replaced should any damage occur.

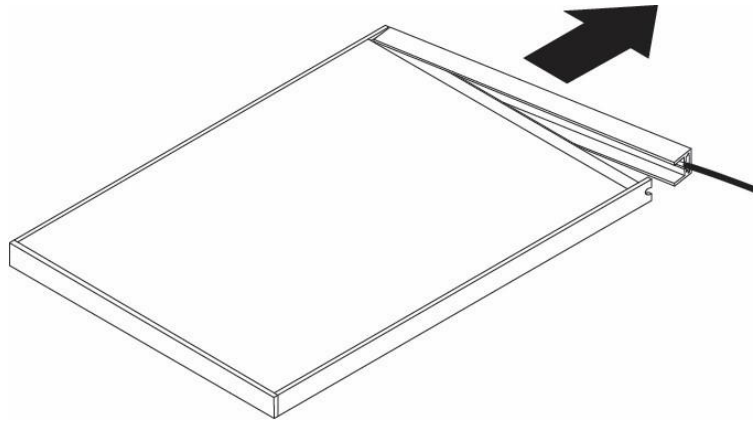
Removing The LED Extrusion Profile

In the event that the cable or LEDs need to be changed, the LED extrusion profile can be removed. 1.

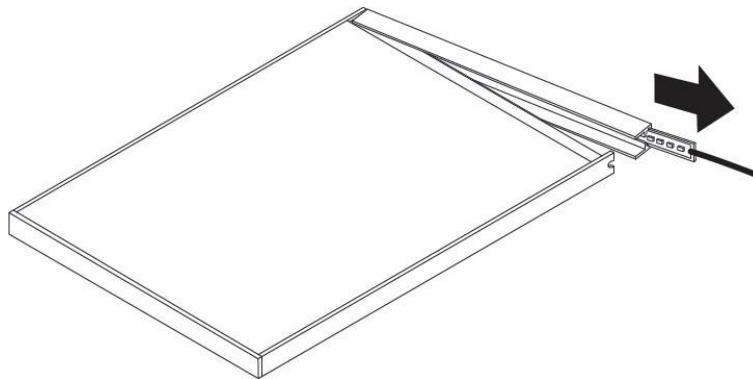
Place the panel on a flat supported surface



2. From the cable end, start by firmly pulling the extrusion profile away from the panel. If the profile is difficult to remove, the process can be started by using a flat head screw driver as a lever. Do not lever against the edge tape.



- Slide the LED strip out of the extrusion. In the situation where the strip is fixed to the extrusion, simply remove the entire extrusion profile.



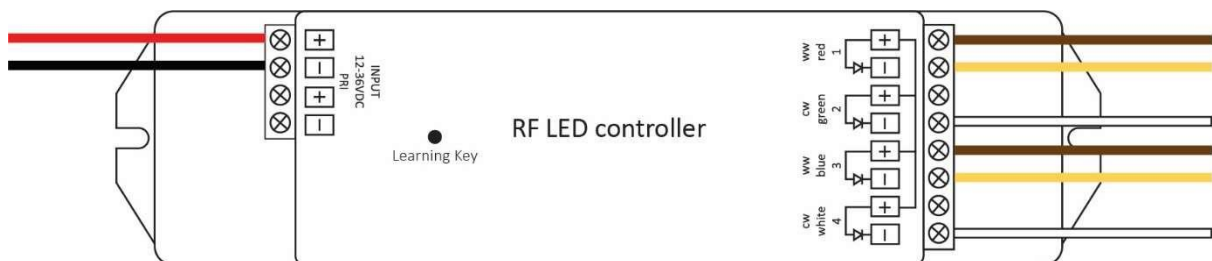
Installation

Wiring Diagram

The following wiring diagrams below apply when using the universal RF receiver SR-1009FA. If using other control hardware, the wire colours are labelled below.

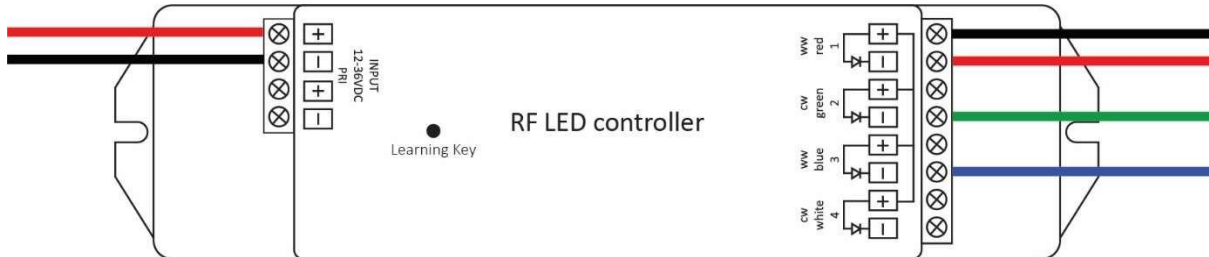
Adjustable White Panel (CW+WW)

- 3-core wire
- Brown = positive channel
- Yellow = warm white channel
- White = cool white channel



RGB Panel

- 4-core wire
- Black = positive channel
- Red = red channel
- Green = green channel
- Blue = blue channel

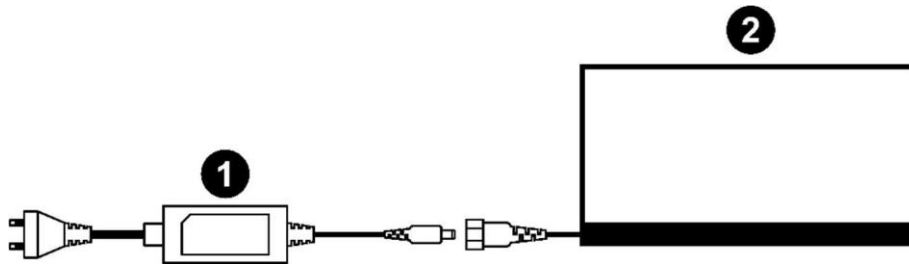


Panel Configuration Examples

Below are some example configurations depicting how panels can be wired using our standard range of accessories. There are many different ways that panels can be connected. Always remember to calculate the required power when designing your configuration.

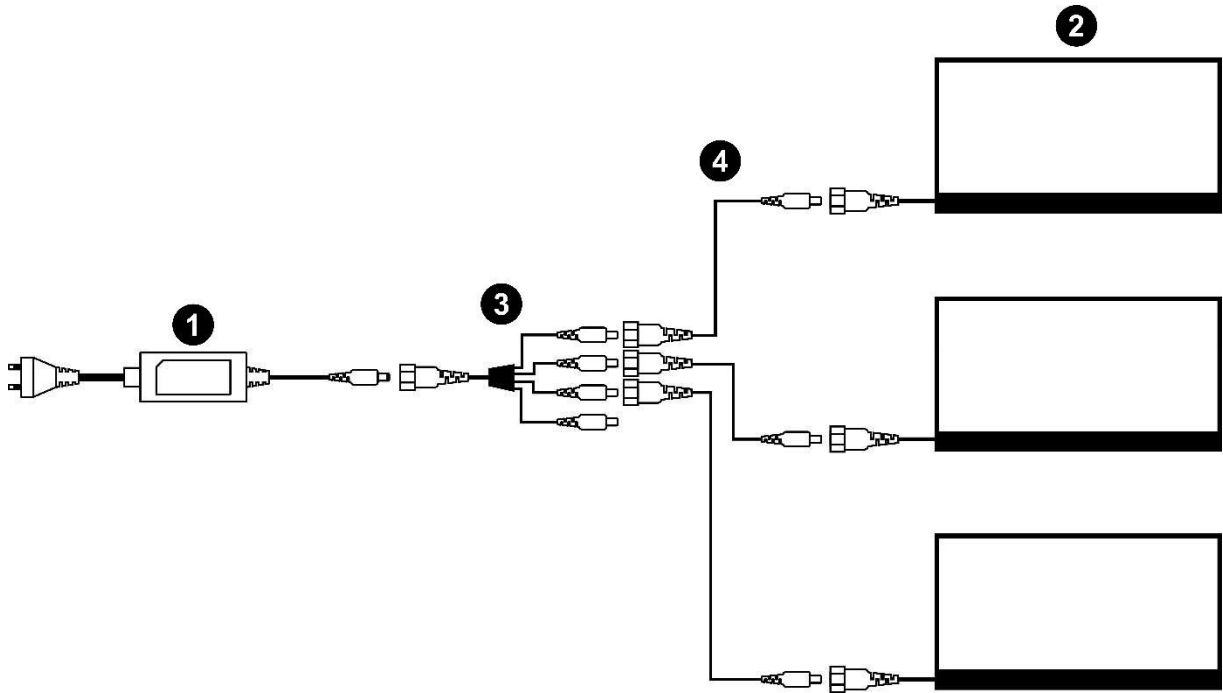
Single White LED Panel Configuration

1. DC transformer
2. White Pixalux® Structural Light Panel



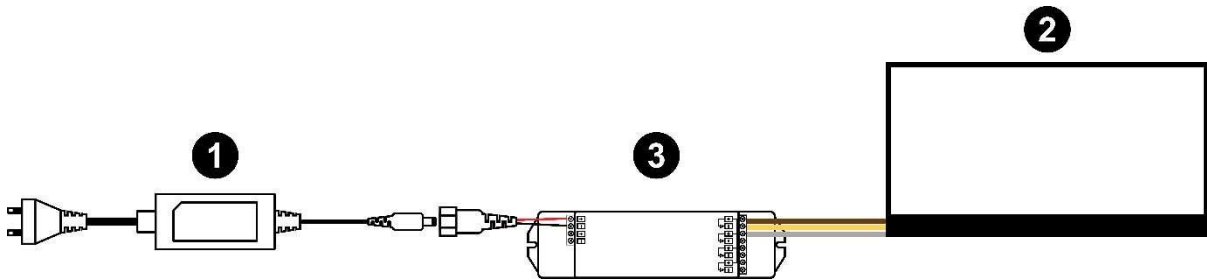
Multiple White LED Panel Configuration

1. DC transformer
2. White Pixalux® Structural Light Panel x 3
3. 4-way DC splitter
4. DC extension cable (1-5m) x 3



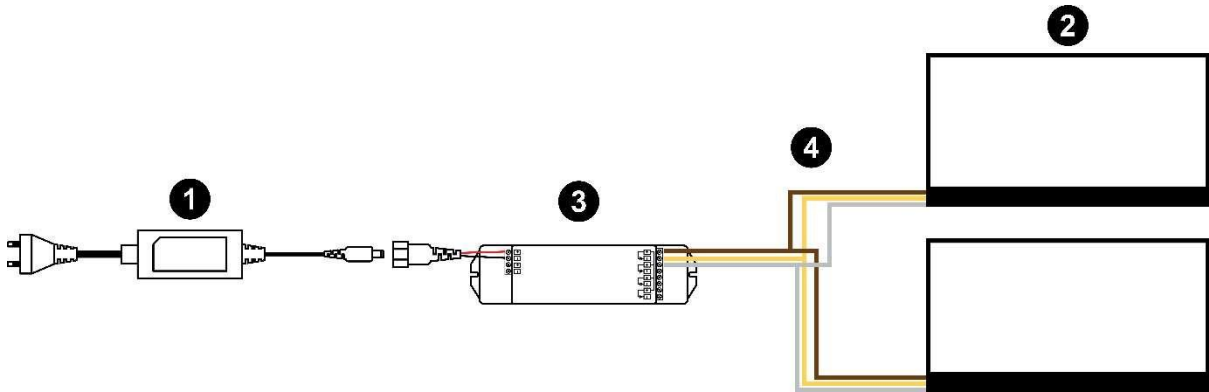
Single Adjustable White Panel Configuration

1. DC transformer
2. Adjustable White Pixalux® Structural Light Panel
3. Universal RF receiver (SR-1009FA)
4. Controller (not pictured)



Multiple Adjustable White Panel Configuration

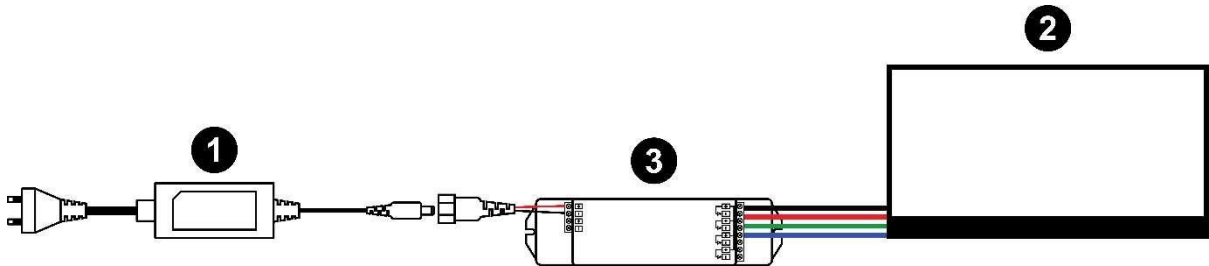
1. DC transformer
2. Adjustable White Pixalux® Structural Light Panel
3. Universal RF receiver (SR-1009FA)
4. Adjustable white extension cables
5. Controller (not pictured)



Note: Multiple panels can be connected to one universal receiver where multiple sets of wires are inserted into the same terminal. Do not overload the receiver with more than 5A of current.

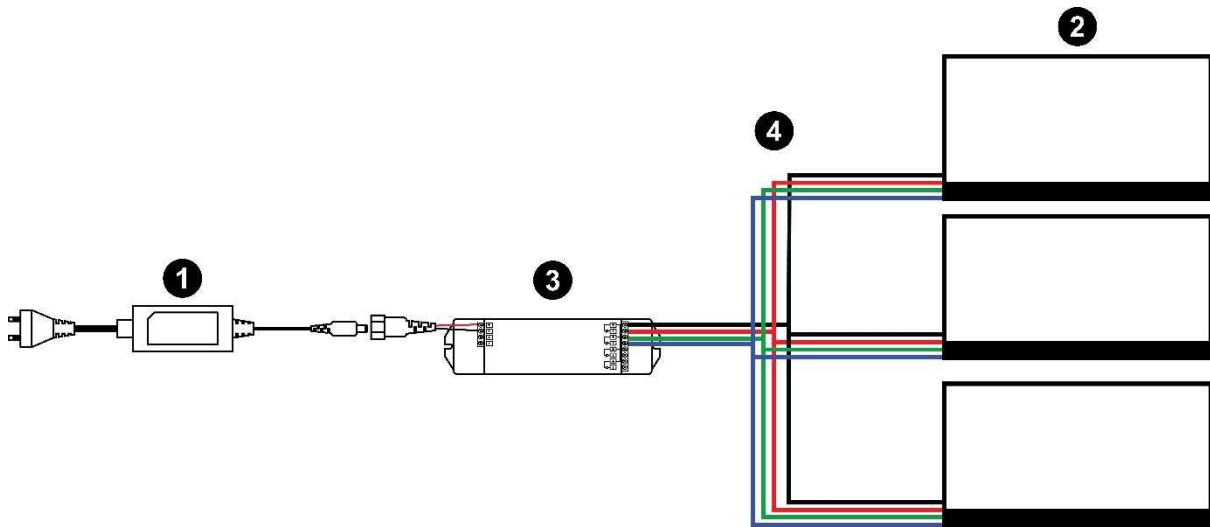
Single RGB Panel Configuration

1. DC transformer
2. RGB Pixalux® Structural Light Panel
3. Universal RF receiver (SR-1009FA)
4. Controller (not pictured)



Multiple RGB Panel Configuration

1. DC transformer
2. RGB Pixalux® Structural Light Panel
3. Universal RF receiver (SR-1009FA)
4. Adjustable white extension cables
5. Controller (not pictured)



Note: Multiple panels can be connected to one universal receiver where multiple sets of wires are inserted into the same terminal. Do not overload the receiver with more than 5A of current.

Applying Vinyl Graphics

For signage applications you can affix a self-adhesive vinyl (SAV) graphic directly to the panel surface to create a backlit graphic. There are numerous techniques, and if you are unfamiliar with this process start by reading this guide <https://www.wikihow.com/Install-a-Vinyl-Graphic>

If you want to change graphics frequently, an alternative solution is to use a translucent backlit film or stretch fabric that does not stick to the panel. This will require a system for holding it in place such as a sleeve or frame.

Masking The LED Input Edge

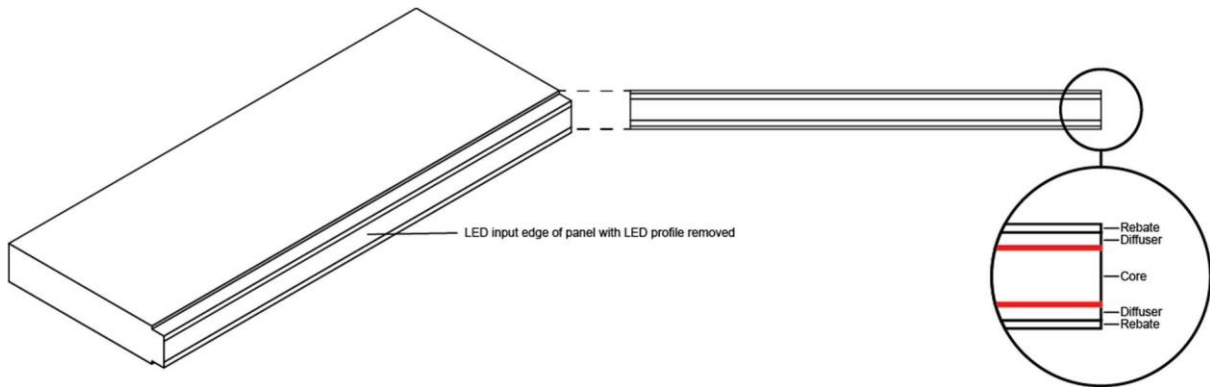
Water used in applying graphics can enter the panel through the tiny gap between layers making the surface appear patchy. Masking the edge helps to minimise any water that might enter.

1. The red line indicates where there is a tiny gap between the layers
2. Mask the panel using a strip of packing tape along the LED input edge, making sure to overlap the two diffuser layers and the core

TIP: You can also block this gap permanently by using a very small amount of clear silicone, ensuring that the build-up does not interfere with the LED extrusion fitment.

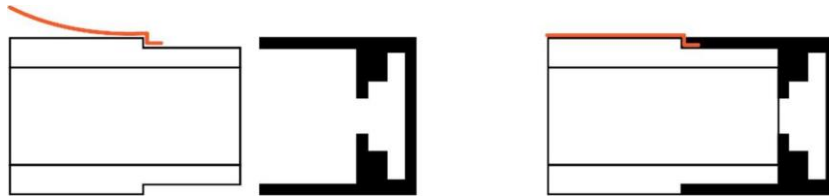
3. If water does enter the panel, allow the panel to stand upright on the LED input edge without the LED profile, this will allow the water to escape naturally over time. To speed the process up, a wet-dry vacuum cleaner can be used to assist in removing the water.

CAUTION! Do not stand the panel on the ABS edge tape that protrudes from the panel, always make sure the panel is directly supported on the acrylic edge.



Preventing Light Bleed

Along the input edge, run the vinyl a small distance over the rebate section and carefully install the LED profile over the vinyl edge taking care not to scrunch the vinyl. On the other edges allow the vinyl to overlap the edge tape by 1mm.



Applications

There are many different applications available for the Pixalux® Structural Light Panel, however they're all derivatives of either a horizontal or vertical illuminated panel.

- A horizontal illuminated panel is most commonly used for shelving or another type of display surface where there is often an object directly on the panel surface.
- A vertical illuminated panel is where the panel is typically used for signage or backlighting.

General Tips For Fixture Design

As every Pixalux panel is different, and every application unique, it's difficult to make specific recommendations for how the panel is fixed. Please observe the following checklist prior to installation:

- Never use the panel in an application where it's bending under load or its own weight



- The recommended weight limit is 13 kg/m
- Allow up to a 14mm diameter hole for the power plug (white LEDs)
- Make sure the power cables are long enough to reach where they need to go
- All supporting surfaces should be clean and free from debris
- Use only in a dry interior application
- Do not use as shelving for a span greater than 600mm without longitudinal support

- Where ever possible, allow a way to remove a panel for serviceability
- Do not subject the panel to any harsh chemicals or abrasives
- Do not modify the panel in any way

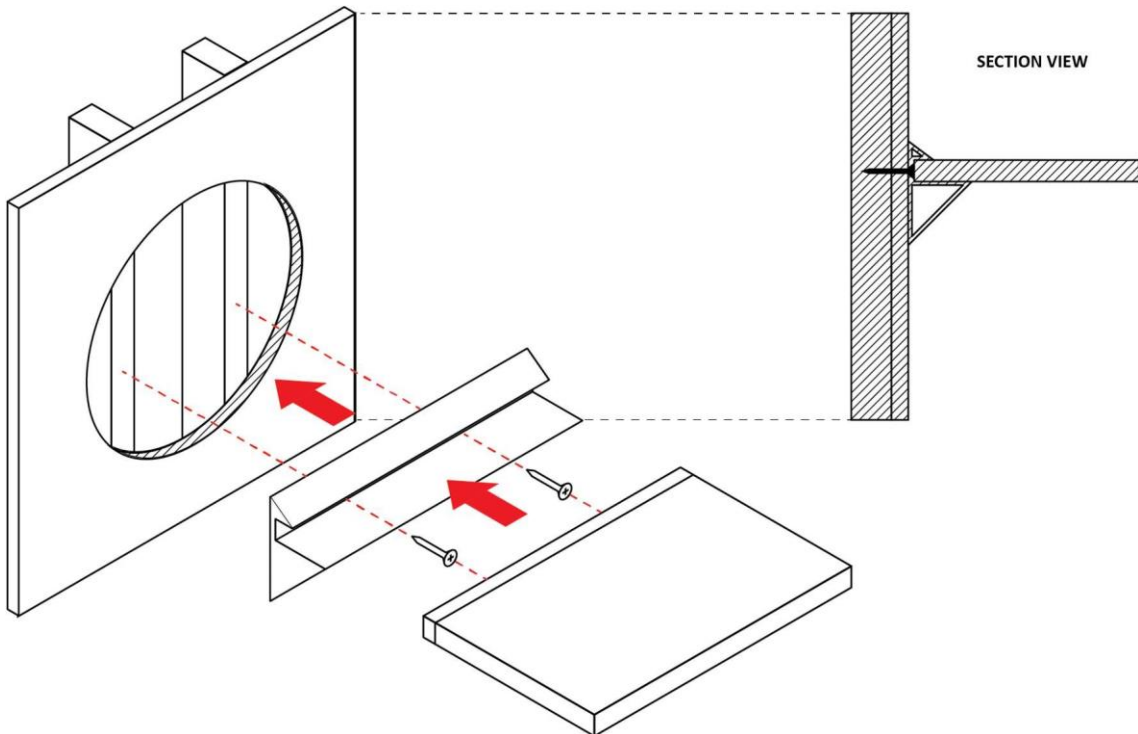
Types Of Panel Support

Short spans and light load only	Short spans and light load only	Long spans and medium load
Medium spans and medium load	Long spans and medium load	Long spans and large load

Horizontal Application Examples

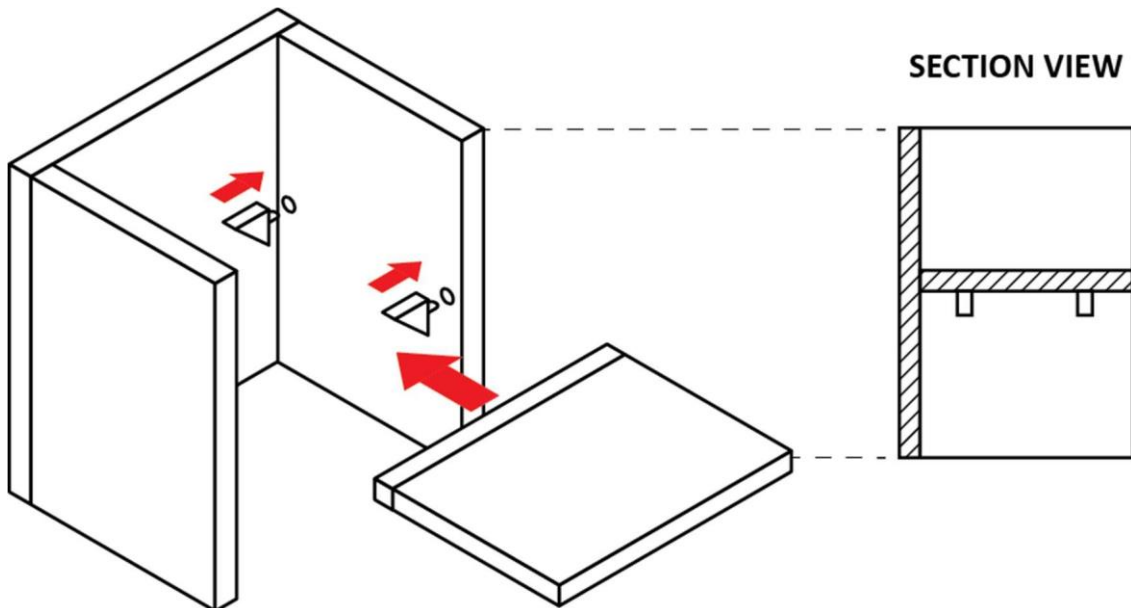
Cantilevered Shelf

Use with the Cliffhanger cantilevered shelf bracket or equivalent. Bracket must be fixed to studs or noggins.
Maximum panel depth of 300mm.



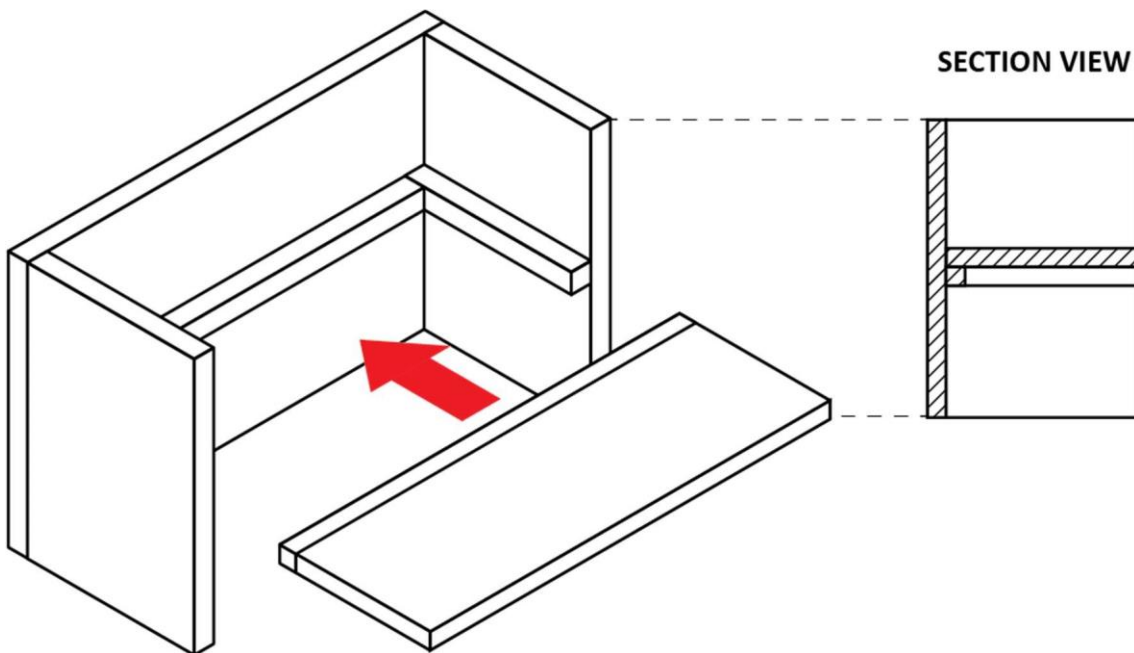
Pin Supported Shelf

Support the panel along the short edges using standard shelf pins. Do not use for a span greater than 600mm. A greater number of shelf pins is recommended. For use with light loads only.



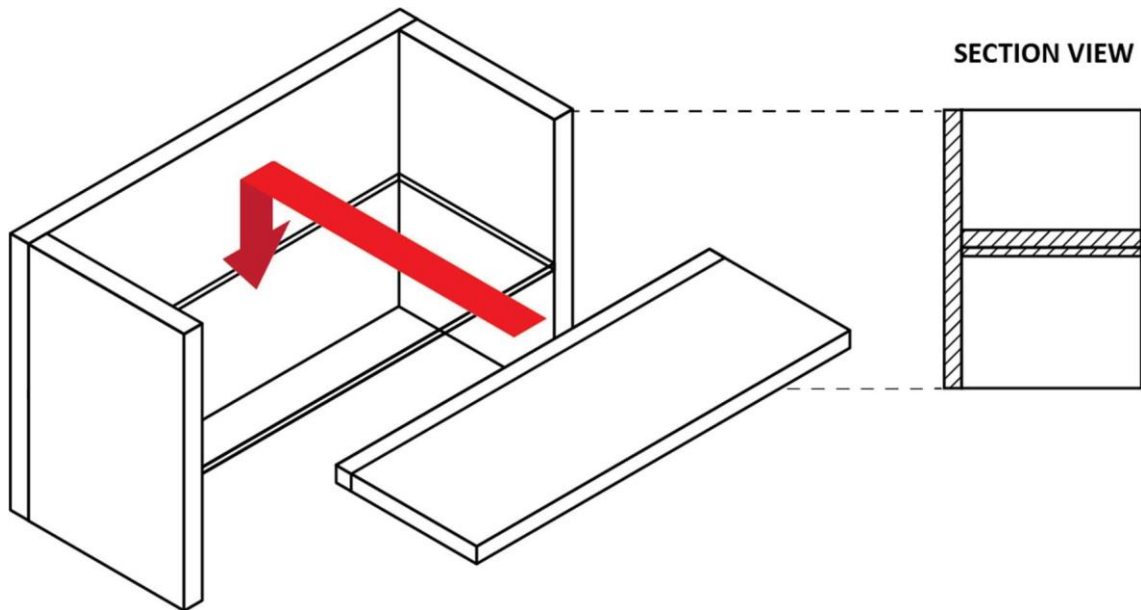
Edge Supported Shelf

Support the panel with a lip along the two short edges and the rear edge for greater strength using permanent edges.



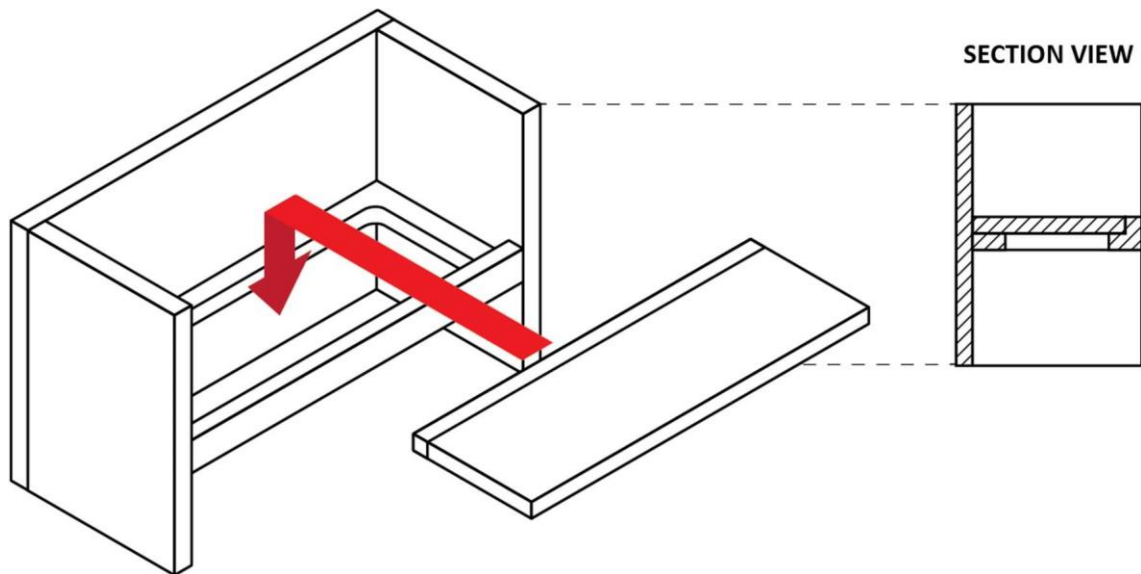
Supported Shelf (Glass)

Where an existing glass shelf is already installed, your PixaLux® shelf can be installed by placing it on top of the glass shelf. Because the glass is transparent this will allow double sided illumination without any hindrance. You can also use the same method for any kind of shelf, however you will be limited to illumination from one face only.



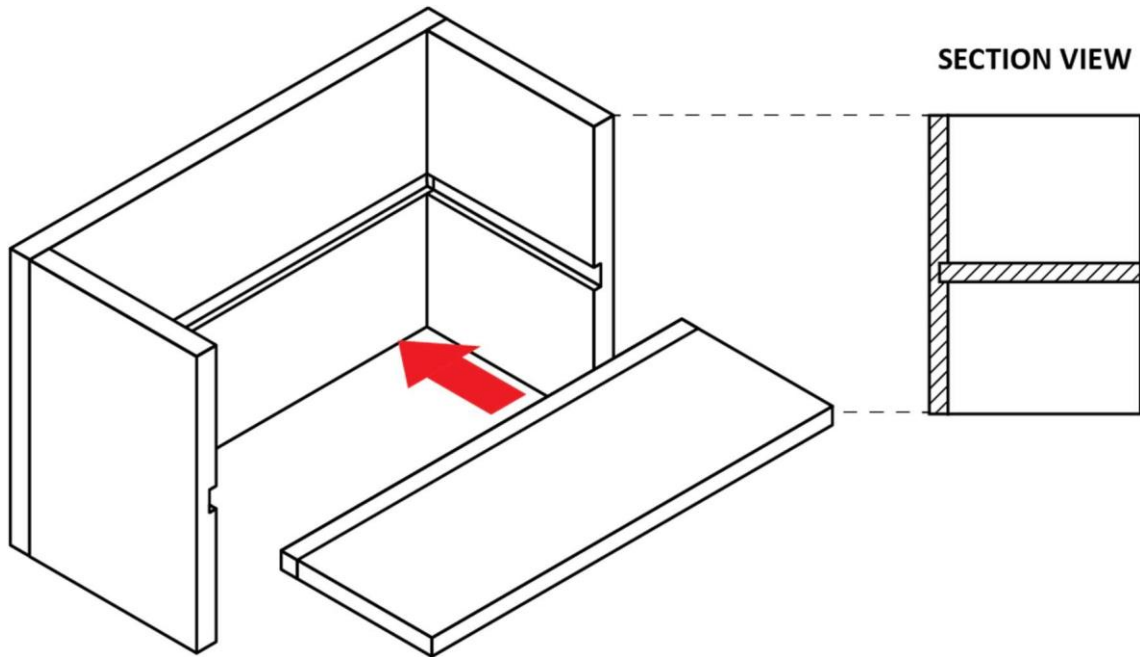
Drop-In Shelf

Where you require discrete integration, you can create a support for the panel around the perimeter with a front face return using the same material as the joinery to conceal the panel.



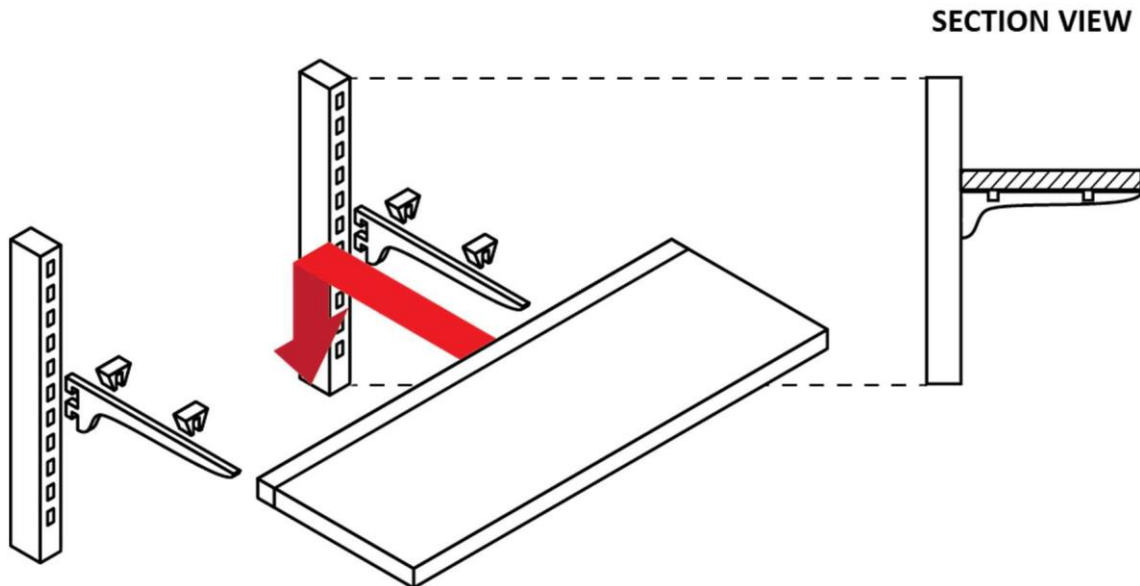
Rebated Shelf

For a seamless installation, channels can be rebated into the internal faces of the carcass. The rebate will also hide the edge finishes of the Pixalux panel, instead showing only illumination. Be sure to allow more than 16mm at the rear rebate to conceal the aluminium extrusion profile.



Bracket Supported Shelf

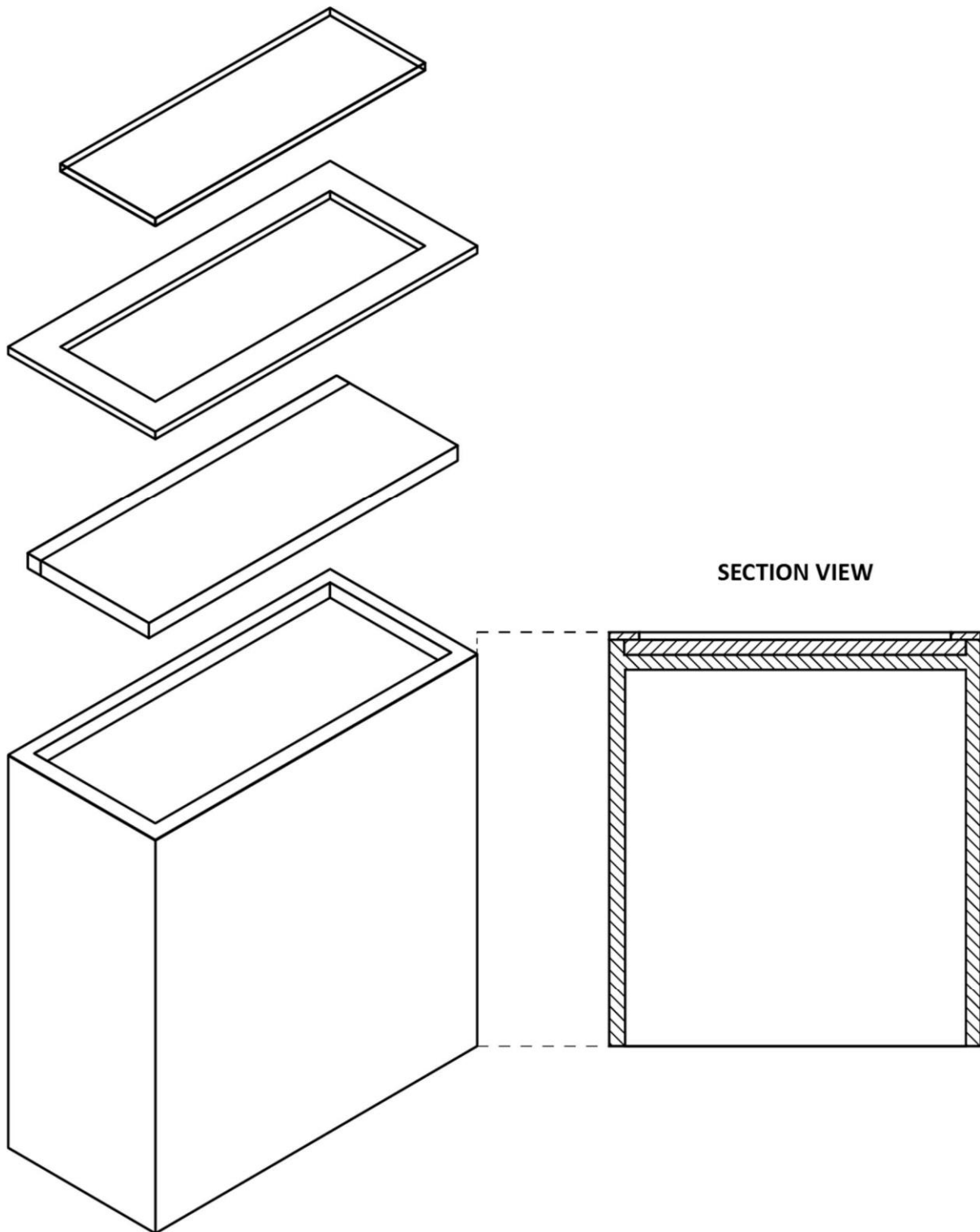
Standard shelf bracket arms are suitable for supporting Pixalux so long as large and grippy contacts are used underneath the panel, such as those used to support glass. Alternatively, place the panel on to an existing glass shelf. Be careful to ensure that the panel is secure from slipping. Light loads only.



Integrated Counter (Illuminated Top Surface)

This example below is but one of many ways to create an integrated illuminated surface. This type of configuration is typically used for display counters or bars.

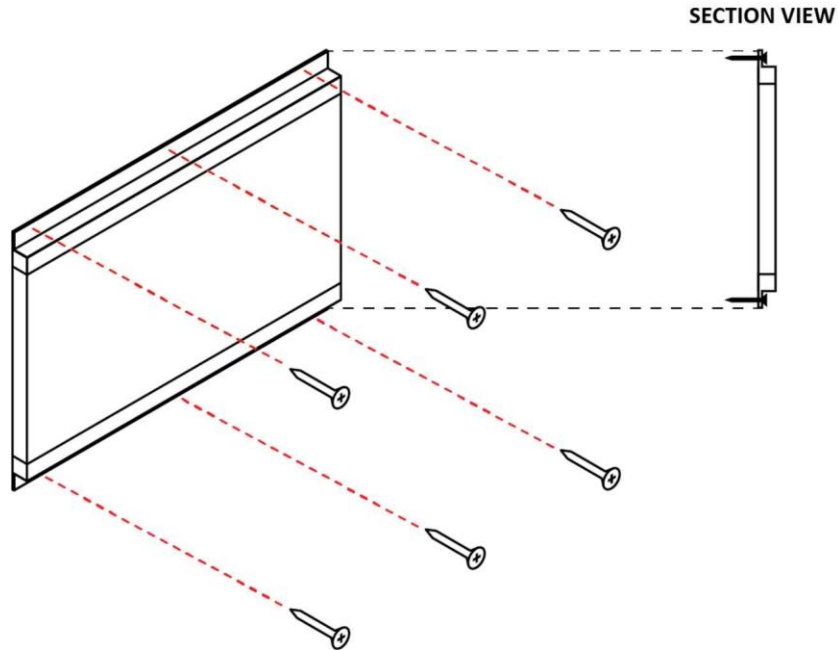
A recess is created for the panel, with a cut-out overlapping the top surface to seal in the panel. A transparent insert is used to create a flush surface and to protect the panel.



Vertical Application Examples

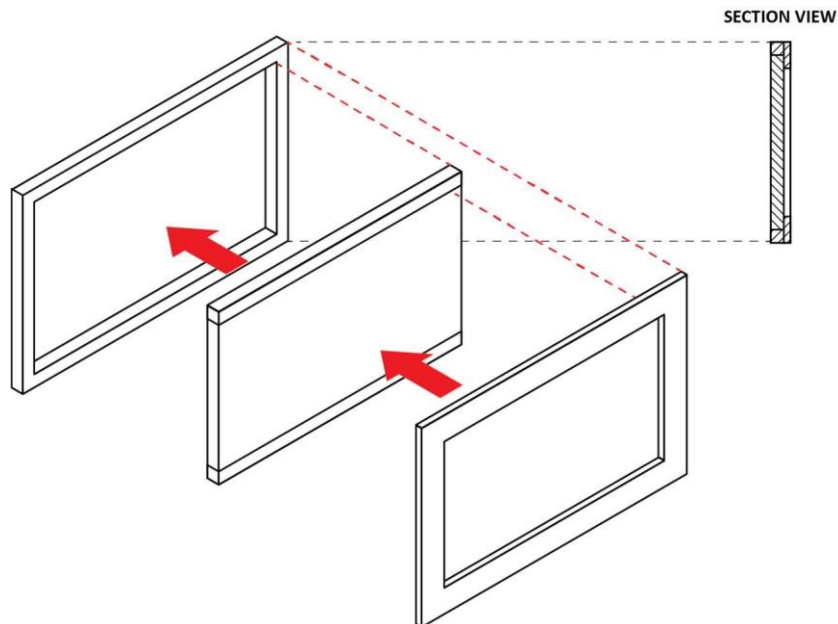
Wall Mounted Panel

You can easily mount the panel directly to a wall by specifying both aluminium channels with 'H' profiles. Screw through the H profiles on the panel into the wall to fix it in place, running the power cable through the wall behind. For maximum strength, fix into studs, noggins or other structural elements inside the wall.



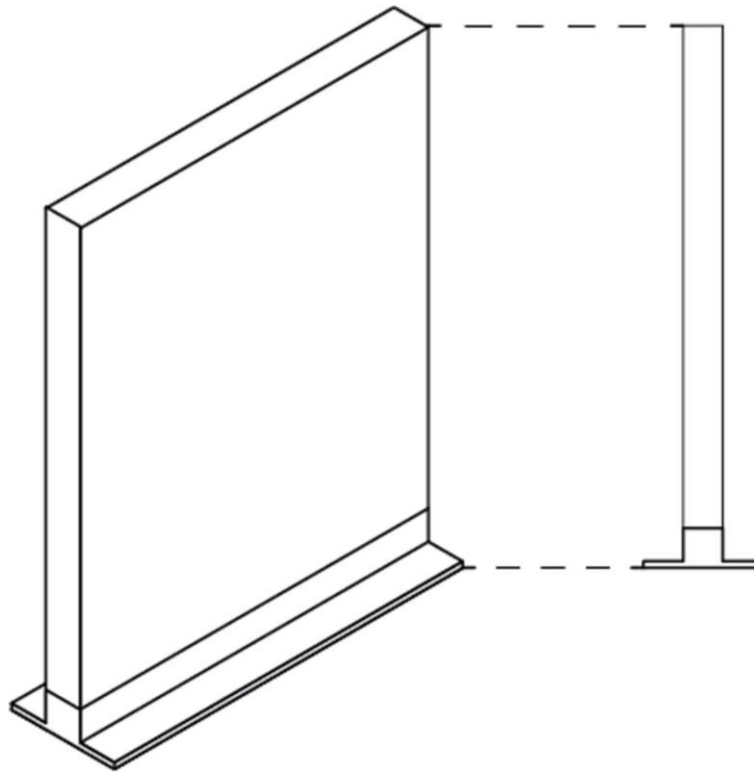
Integrated / Rebated Sign

Create a recess that fits and supports the panel, with a front cover plate that secures it in place and conceals the edge finishes. While this creates a border, it means the frame can be finished however you like, while also making it easy to remove the panel or to change graphics.



Surface Mounted or Freestanding Sign

Using the T, Ω, Panel Stand profile, or a mechanism of your own devising, you can easily create a vertical, double sided sign where the panel is free to stand on its own. Both T and Ω profiles have flanges that allow the panel to be fixed. Not suitable for panels with a depth greater than 400mm.



General Specifications

Weight	18.9 kg/m ³
Tensile strength	70 MPa
Flexural strength	116 MPa
Plastic grade	7 (acrylic)
Recyclable	Yes*
Operating temperature	0°C – 50°C
IP rating	IP20
LED type	Constant voltage
Voltage	24V
Colour	1800k – 7000k, RGB, tuneable white
Power consumption	6 – 28 W/m

*Panel must be disassembled into separate components (LED tape, aluminium, & panel)