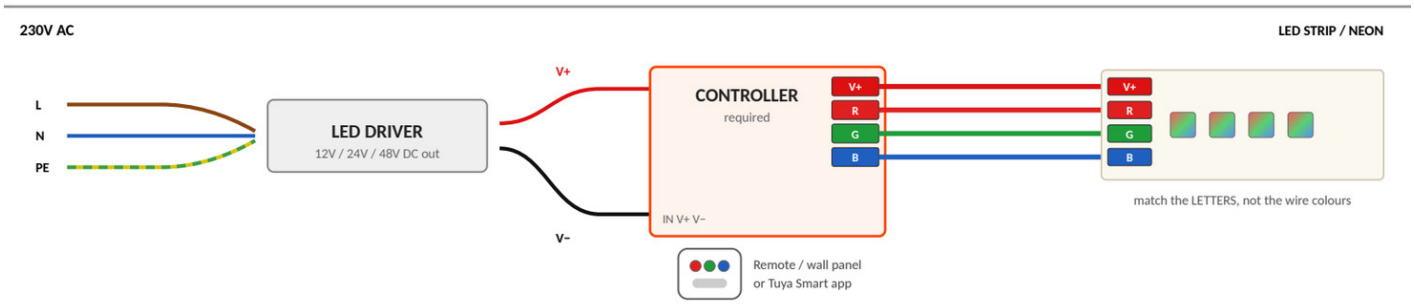
6x12mm RGB Neon Flex - Installation

6x12mm | RGB colour changing | 48V DC | 100mm cut | 15 Metre single-end feed

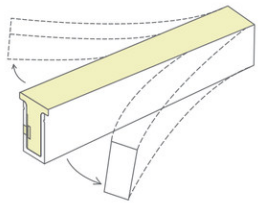
POWER & RGB WIRING



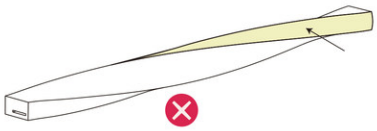
Use 48V DC for this model. Check polarity and match the terminal labels V+, R, G and B; wire colours can vary. The controller sits between the power supply and the neon.

Rated load = 10.6W/m x length. A 15 Metre run is 159W before driver allowance. Nominal current is 0.221A/m (calculated). Select a 48V constant-voltage supply and RGB controller with adequate total and per-channel capacity; follow their load allowances. Check cable voltage drop.

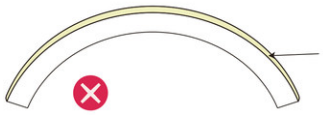
BEND DIRECTION



Horizontal / side bend



Do not twist



Do not bend vertically

Minimum bend diameter: 120mm (60mm radius). Keep the first and last full 100mm cut units straight. Never twist, kink, crush, pull or bend vertically.

Isolate power before work. Mains connections require a qualified installer. Never connect the neon directly to mains. Use a matching DC supply and four-terminal RGB controller; standard PWM RGB is not addressable pixel lighting. Fully unroll before switching on.

Keep the power supply and controller in an environment suitable for their own ratings. IP67 refers to the neon body; installed joints and cable entries must also be correctly protected.

Connections & installation planning

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Use the termination system specified for this RGB model. Do not substitute two-wire single-colour fittings or three-wire pixel connectors. Drawing dimensions are accessory references only.

Front cable exit

Bottom cable exit

Left cable exit

Right cable exit

Closed end cap

Four-core RGB
V+ common positive, R, G and B.

Confirm the fitting, exit direction and sealing kit for the order.

INCLUDED CABLE & TERMINAL MATCHING

Terminal	Connection
V+	Common positive
R	Red channel
G	Green channel
B	Blue channel

20cm four-core cable included; optional 1-5 Metre leads. Match the letters, not assumed wire colours. Select cable capacity and length for the load and voltage drop. No conductor size is implied by the photo.

Channels, fixings & cable care

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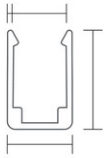
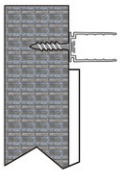
CORRECT CHANNEL AND PROGRESSIVE INSERTION

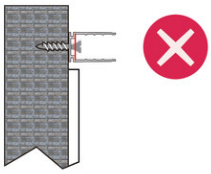


Illustrated channel
8mm outside / 6.2mm clear width
13.6mm height / 0.9mm wall

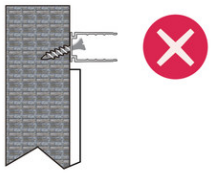
Optional clips / channel. These are accessory dimensions, separate from the neon body. Confirm fit before installation.



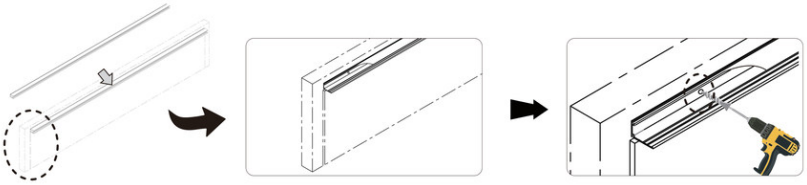
Correct: flush fixing



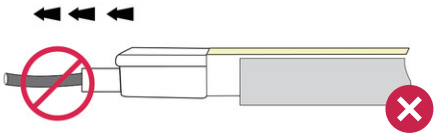
Wrong: protruding head



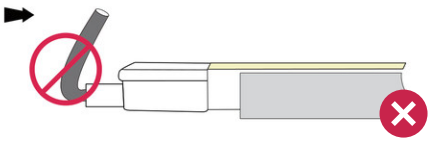
Wrong: angled screw



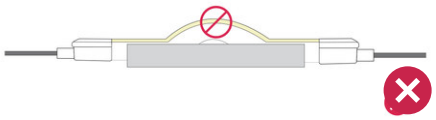
Fix and clean the channel before fitting the neon. Deburr edges and remove swarf. Insert from one end by hand, supporting the body evenly. Do not force connectors into the channel or trap a hump.



No pulling load



No sharp cable fold



No trapped hump

Keep the connector and cable unstressed. The illustrated fitting arrangement needs 9.91-20.07mm clearance; confirm this against the supplied fitting. Cable seals must not carry the cable weight.

Installation steps 1-3

6x12mm | RGB colour changing | 48V DC | 100mm cut | 15 Metre single-end feed

Isolate power. The following steps apply to a soldered termination kit. Use the exact kit instructions and a competent installer; factory-terminated made-to-measure lengths avoid field soldering.

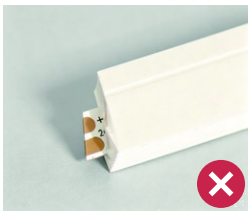
Two-core demonstration photos
These photos illustrate cutting, tinning and soldering using a two-core single-colour product. The same basic technique applies to four-core RGB (V+, R, G, B) and five-core RGBW (V+, R, G, B, W). Follow the product's cut marks and match each wire to its labelled pad. Do not copy the two-core wiring or assume wire colours. This guide covers four-core RGB; RGBW is mentioned for comparison only.

01 PLAN THE ROUTE AND LENGTH

Measure the route and identify the printed 100mm (10cm) cut marks. Stay within the 15 Metre single-end run limit. Allow space for fittings and keep end units straight. Cut from the unpowered tail, preserving the supplied feed.

02 CUT SQUARELY AT THE MARKED POSITION

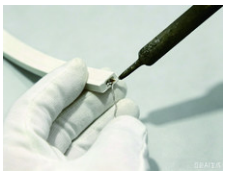
Cut squarely at the printed mark



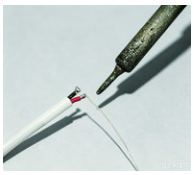
Wrong: uneven or crushed cut

Keep the PCB flat and avoid crushing or tearing the silicone. A cut between the marked positions can damage a complete section.

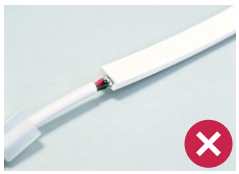
03 TIN THE PADS AND FOUR CONDUCTORS



Tin the solder pads



Tin each conductor



Wrong: solder burr / bridge

For RGB, tin and inspect all four joints. Avoid loose strands, solder bridges and overheated pads.

Installation steps 4-7

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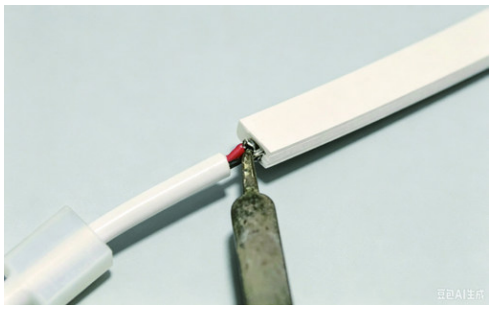
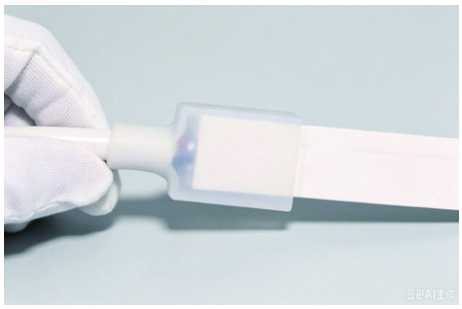
Use the manufacturer-specified sealing compound and matching fittings. Do not power the neon or expose it to moisture until the specified full cure is complete.

04 CONNECT AND CHECK



Two-core demonstration photo. The same soldering technique applies to four-core RGB and five-core RGBW. For this RGB product, connect V+, R, G and B to the matching labelled pads and inspect all four joints before sealing.

05 SEAL AND SEAT THE FEED

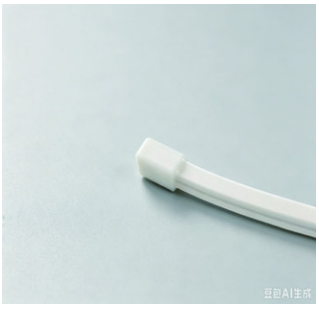


Cover the exposed end with the specified compound and seat the matching feed fitting fully. Fill the interfaces as the kit instructions require.

06 SEAL ENTRY AND PERIMETER

Seal around the cable entry and fitting perimeter. Support the lead so the seal carries no pulling force or cable weight.

07 SEAL THE TAIL AND CURE



Seal the tail end, fit the closed cap and inspect the whole perimeter. Follow the kit-specific cure time before testing or outdoor exposure.

Sealing quality determines the finished joint protection. A connector label does not independently certify the completed assembly.

Commissioning, care & troubleshooting

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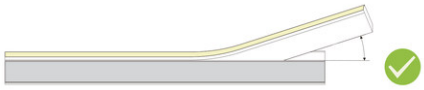
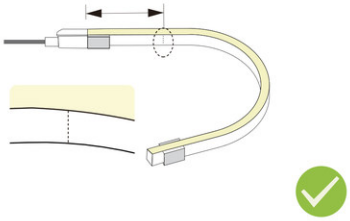
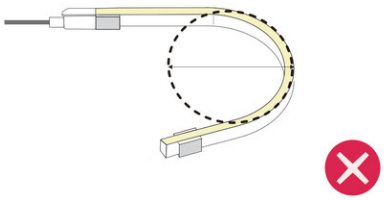


Insert gently, below 15°



Keep the end unit straight



No bend below 120mm diameter

BEFORE SWITCHING ON

Confirm 48V DC at the correct input, four-core V+/R/G/B wiring, compatible controller, adequate load capacity, 15 Metre run limit and 100mm (10cm) cuts. Check broad horizontal bends, straight end units, flush fixings, supported cables, sealed joints and completed cure. Fully unroll before testing.

Test red, green and blue separately, then mixed colours and dimming. The whole run changes together. This RGB product has no dedicated warm-white or cool-white LED channel.

TROUBLESHOOTING - ISOLATE BEFORE INSPECTION

Symptom	Checks
No light	Check supply output, controller input, V+ and all connections.
Wrong / missing colour	Check R, G and B terminal matching, joints and controller settings.
Dim far end	Check voltage drop, cable length/load and run limit; seek a feed redesign.
Flickering	Check supply stability, total/per-channel load and connection quality.
First section off	Inspect cuts, PCB damage and water ingress. Replace and reseal.

Care and warranty: Isolate power before maintenance. Replace damaged or poorly sealed sections. Four-year product warranty. Lifetime and operating temperature for this RGB model are to be confirmed; obtain the project-specific limits before installation.