



AQS Neon Flex Installation Guide

Read this guide

Warranty depends on the proper handling, installation and powering of Neon Flex products.

NEVER HOT PLUG Neon Flex products
ALWAYS support the product during install.
ALWAYS check wiring, especially complex jobs.
ALWAYS ensure access for future servicability
NEVER cast concrete with the product in place.
NEVER cut off any anti-siphon device if present.

2025

IMPORTANT

Serviceability

The product must be installed in a manner that is serviceable. Any claim for product fault under the Statutory warranty or the Aqualux extended warranty does not cover any costs associated with the removal or replacement of the product itself. As such, the product must be installed with future serviceability in mind in order to facilitate access should the need arise, whether due to product fault or any other reason.

Replacement Warranty

Under our standard and extended replacement warranty, Aqualux undertakes to provide free-of-charge a replacement for the product if the product is deemed to have failed. The replacement may be either new or refurbished at our discretion. The replaced product will carry our standard warranty terms or the original product extended warranty, whichever is greater. Our replacement warranty is limited to provision of product only and does not cover service or installation costs.

Declaration of Fit-for-Purpose

Aqualux endorses the use of AQS Neon Flex for general lighting applications in environments up to and including IP65 conditions. This declaration is dependant upon professional installation methods being followed and all joins and cable splices being suitable for the installation environment.

AQS Neon Flex Neon Flex Installation

All supplied installation instructions must be adhered to. Careful handling of the LED Flex during installation is critical. Issues such as intermittent failures and cracked solder joints can arise from improper / careless handling during installation and lead to failures

Hot plugging

The product must not be hot plugged at any time. This is when the product is connected to an already energised power supply. Doing so may permanently damage the product due to electrical overstress, even though failure may not be apparent immediately.

Installation Test Procedure

Prior to commissioning and removal of access equipment, AQS Neon Flex Neon Flex should be tested to verify correct operation and that no damage has occurred during transport and installation. We recommend a period of 2-3 hrs to allow the product to reach thermal equilibrium and for any electrical faults to become apparent.

Whilst AQS Neon Flex is tested multiple times during manufacture and before supply, this final test is strongly suggested for all installations to allow any damage during transport and handling to be rectified before the site is cleared and the project commissioned.

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Notice

As of 2025, Aqualux no longer suggests installing AQS product in or near water where it may be subject to temporary or permanent immersion. Although previously an “IP68” rated product, experience has shown that due to the large number of factors beyond our control in site-specific contexts, we cannot guarantee performance in these environments.

The Evolution of Neon Lighting: LED Neon Flex

Traditional glass neon has been a staple of commercial lighting for decades, delivering rich and vibrant illumination for buildings and signage. While visually striking, it comes with several significant drawbacks: high energy consumption, the need for extremely high-voltage power supplies, and the fragility of its hand-blown glass construction.

LED Neon Flex addresses these challenges by offering an innovative alternative. Utilizing high-output SMD LEDs encased in UV- and chemical-resistant silicone, LED Neon Flex diffuses light to closely replicate the classic neon glow. Unlike traditional neon, however, it is incredibly versatile and user-friendly.

Key benefits of LED Neon Flex include:

Ease of Installation: It can be shaped and bent without special tools or skills.

Low Voltage Operation: Running on a safe 24V DC power supply, it can be cut to custom lengths (50–130mm intervals, depending on the model) and powered via a simple plug-in adapter.

Vibrant Colour Options: Beyond mono colors, RGB LED Neon Flex produces up to 16 million color variations, with Dynamic DMX versions enabling stunning color-chasing effects.

Additionally, LED Neon Flex offers flexibility in bending directions (horizontal or vertical) and customization of beam angles and shapes, making it a versatile lighting solution for modern applications.

To ensure optimal performance and long-term reliability, as well as to maintain warranty coverage, always follow the guidelines and instructions provided in the installation guide.

Installation Notes

This product has been fully tested and operated prior to shipping to confirm 100% performance.

In order to maintain this condition and for safe operation, you must follow the instructions and safety warnings described in this guide.

General

- This product must be installed by a qualified and competent professional.
- Do not work on the product with wet or dirty hands.
- **Always disconnect the power supply before attempting to maintain or service the equipment.**
- Always operate the equipment as described in this user guide.
- Never HOT PLUG the product.
- Always test prior to removal of installation services such as scaffolding or access equipment.

Installation

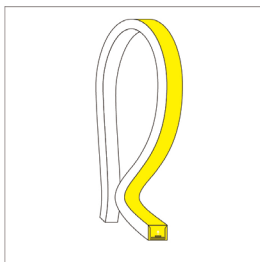
- Always make sure that the product is installed securely.
- The product must be installed within serviceable areas only.
- Local electrical and building regulations must be followed.
- Always make sure that the power and data connections are connected correctly and securely.
- This fixture should not be buried.



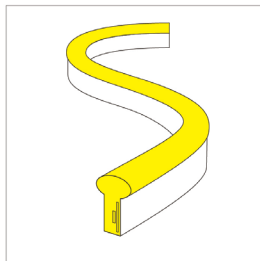
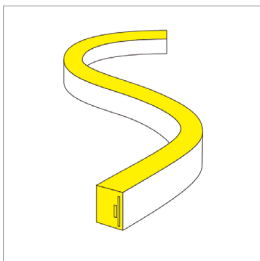
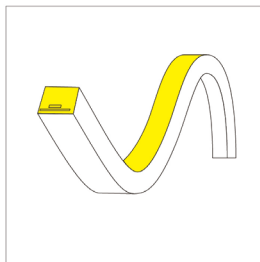
This user guide is intended to cover as much detail as possible and care has been taken to ensure the accuracy of the information contained within, however should additional information or clarification be required that is not covered within this guide or associated data sheets, or if there are any uncertainties regarding the installation and operation of this product, Aqualux **MUST** be contacted before any work is carried out on the fixture or associated products.

Failure to comply with this guide and local electrical and construction regulations may result in serious injury or even death - always isolate power before working on electrical products and ensure adequate measures are taken to mechanically support fixtures at all times.

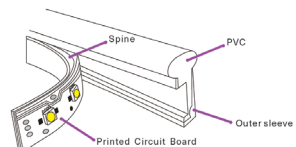
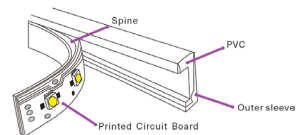
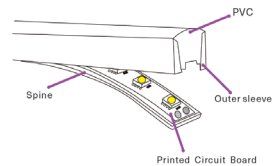
- Although this product does not generate a great amount of heat, it is recommended that you do not cover or conceal it.
- Do not route the product through walls, doors, windows, or building structures which could lead to certain segments overheating.
- Do not roll out the product onto rough surfaces or over sharp corners. This will damage the product.
- Do not use the product if the outer jacket is damaged, there are loose electrical connections or if the conductors are visible without insulation.
- Do not secure the product with staples, nails, or anything that might damage the insulation material.
- Do not install the product on/in places where it is subject to continuous flexing.
- Do not operate/run the product in temperatures exceeding 45C or 113F.
- Do not operate the product over the specified voltage or LED lifetime will decrease.
- Do not leave any part of the product unsecured.
- Constant movement over time from weather/wind can cause damage.
- Do not reverse polarity when connecting from both ends. This will damage the internal PCB. If in doubt, test connections with a multi-meter before applying power.
- Do not energise the product whilst in packaging.
- Do not cut while the LED flex neon is connected to power.
- Must always be used with an electrical isolation transformer providing SELV (safety extra low voltage).
- Do not cut off the anti-siphon protection device, if present.



Horizontal Bending



MECHANICALLY SUPPORT FIXTURES AT ALL TIMES.

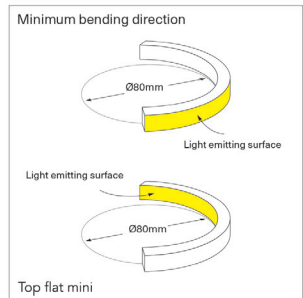
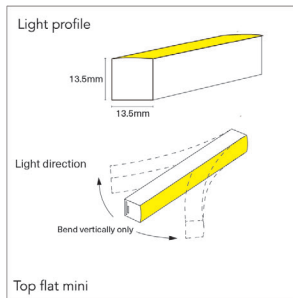
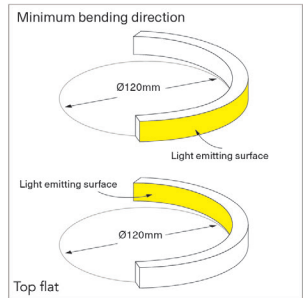
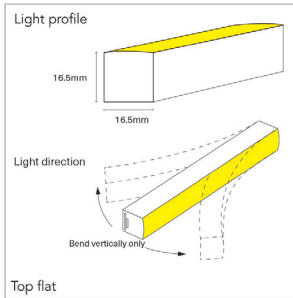
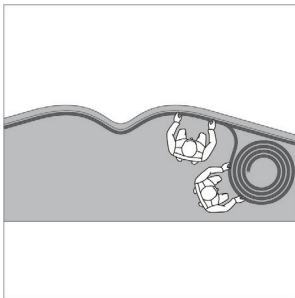


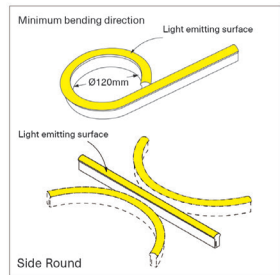
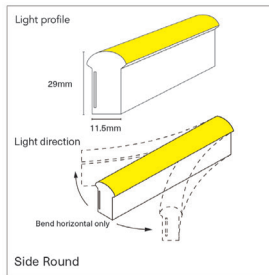
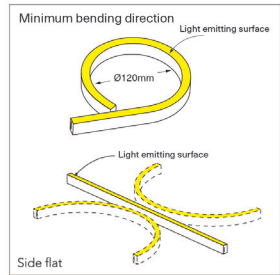
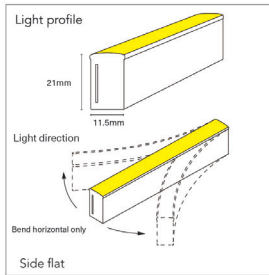
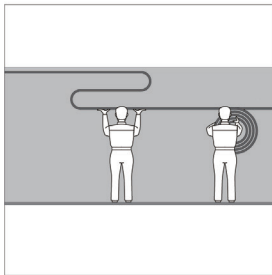
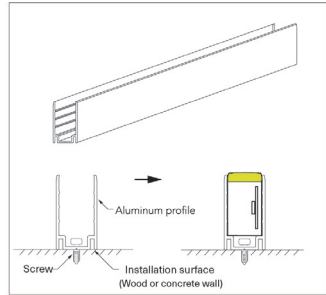
Mounting Product

LED neon flex is a highly durable product but must be installed in accordance with the pictures shown below, which indicate the minimum bending parameters as well as the correct bending direction for each specific variant of model.

LED neon flex must be installed by at least 2 people, who can support the product in various locations as shown. During installation, care should be taken to ensure the bending radius is not exceeded.

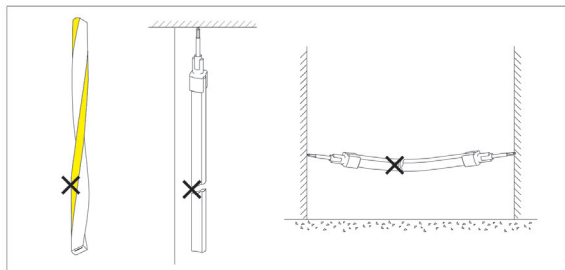
NOTE: Drawings for illustration purposes only. For specific information please refer to your datasheet.





General DO NOTS

The images give indication as to what is not acceptable as an intended installation or during installation of other fixing methods.



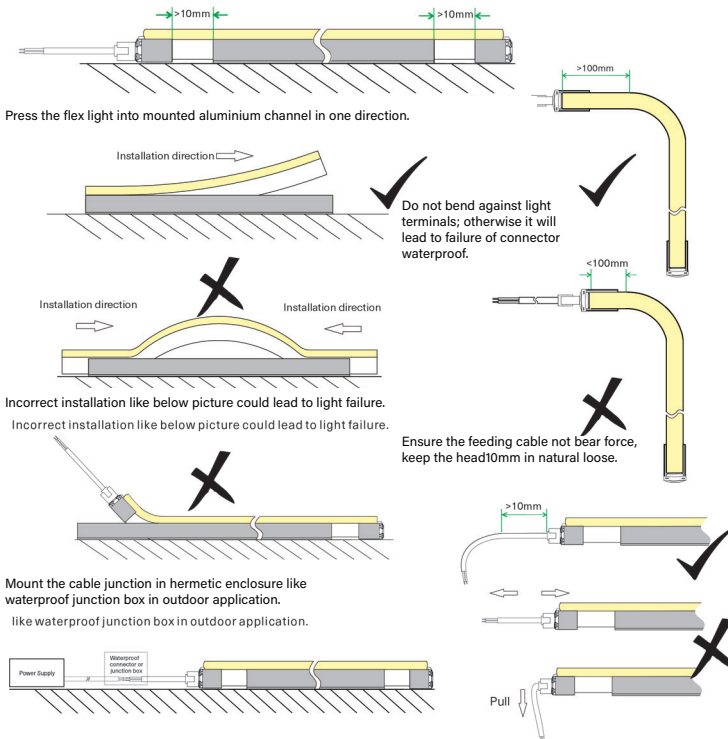
General Mounting

LED neon flex can be fastened to surfaces using appropriate accessories available from Aqualux. Please refer to data sheets or contact technical support for a copy.

The use of glues and resins as fixing agents should be avoided. If the use of a glue or adhesive compound cannot be avoided, a neutral pH silicone-based compound is suggested. High VOC, Epoxy-based resins, cyanoacrylate or other adhesives will void the warranty.

If unsure call Aqualux to discuss. Use of glues and resins may void the warranty of the product, unless it's use is agreed in writing by Aqualux as part of a detailed project specification. The images indicate one type of fixing available in the accessories range.

The different fixings serve different purposes, however when in doubt technical support should be contacted. Quantities of accessories and fixings are dependent on the type and its effect on the variant of Neon Flex with which it is being used with. Care should be taken to ensure drooping is avoided, and to ensure that neon flex is fastened adequately to avoid stresses on product itself.



Cable Joins

- All cable joins must be to the highest degree achievable for the intended installation environment.
- Any cable joins outside or exposed to rain or moisture **MUST** be IP68-grade, preventing any moisture from entering the cables.
- If moisture enters a cable, it will siphon / track up into the product over time, leading to failure.
- Aqualux suggests the use of resin filled boxes, gel-boxes or inline dual-gland connector systems, such as those available from Amphenol.

Example:

Amphenol
SC-L-PG12-05-RD

