



AMERICAN LIGHTING
BRIGHT IDEAS • INNOVATIVE SOLUTIONS

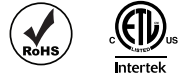
24V POLAR 2 NEON

INSTALLATION INSTRUCTIONS
P2-NF-24V Series Bulk Reels



INSTALLATION INSTRUCTIONS

P2-NF-24V Series



⚠ WARNING

These products may represent a possible shock or fire hazard if improperly installed or attached in any way. Products should be installed in accordance with these instructions, current electrical codes, and/or the current National Electric Code (NEC).

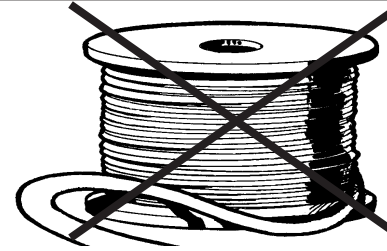
⚠ WARNING

Use this fixture with P2-NF-CONKIT-NP and 24V DC power supply only. Any other power feed may damage the fixture.

⚠ WARNING

To reduce the risk of fire, electric shock or injury to persons, use this flexible light only with American Lighting recommended drivers, controllers, power connectors, splices and extensions.

⚠ WARNING



Do not operate Polar 2 Neon while it is coiled on the reel.

⚠ WARNING

To reduce the risk of fire, electric shock or injury to persons, make sure that the electrical power to the fixture is disconnected at the source prior to installation or any servicing.

SAFETY INFORMATION

- Read all installation instructions before beginning; if not qualified, do not attempt installation. Contact a qualified electrician.
- To reduce the risk of fire, electric shock, or injury to persons, pay close attention to this manual and stay within its guidelines when using this product. Save these instructions for future use.
- Do not cover this product as the covering may cause rope to overheat, melt, or ignite.
- Do not operate Polar 2 Neon while it is tightly coiled.
- Do not submerge flexible light in liquids, or use the product in the vicinity of standing water or other liquids.
- Do not route the cord or Polar 2 Neon through walls, ceilings, doors, windows, or any similar part of the building structure.
- Secure this flexible light using only factory recommended mounting clips (P2-NF-CLIPS), track (P@-NF-TRACK-3), or channel (P2-NF-CHAN-3) all sold separately.
- Do not secure this product or its cord with staples, nails, or like means that may damage the outer jacket or cord insulation.
- Do not use if there is any damage to the PVC housing or power cord insulation. Inspect periodically.
- Do not install on gates or doors, where subject to continuous flexing.
- Do not install in tanks or enclosures of any kind.
- Risk of fire or electric shock. Uncoil flexible light prior to plugging in.
- Do not install near flammable liquids.
- Follow instructions carefully when splicing Polar 2 Neon sections or attaching power cords. Ensure that all connections, including the end cap on the last segment, are properly installed with dielectric grease and shrink tube to preclude the entrance of water (outdoor applications).
- 24V Polar 2 Neon can only be cut at 12" intervals as indicated by the cutting marks printed on the side of the PVC housing. Failure to cut at a cut mark will result in a loss of light. Before making any cuts or attaching any power cords or jumpers, be sure power source is disconnected!
- ETL Listing for 24V Polar 2 Neon is valid for lengths cut to 65 feet or less (American Lighting warrants up to 50 feet maximum run using American Lighting power supplies, sold separately)
- This product is designed for use by a qualified installer.
- This product is for decorative use only. Not to be used by children as a toy. Keep out of reach of small children.
- Do not exceed 65ft maximum run distance in any single run.
- Size your 24V DC driver appropriately for your run distance of Polar 2 Neon using 2.8W/ft as a guide. Be sure not to load a driver to 100% as this will reduce its efficiency. A 90% maximum load is recommended.

⚠ WARNING

When using outdoor portable lighting products, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the following:

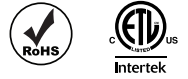
- Use dielectric grease and shrink tube at all power connections, including end cap when using outdoors.
- Use ground fault circuit interrupter (GFCI) protection on the circuit(s) or outlet(s) when using outdoors.
- Use only UL approved outdoor extension cords, such as type SW, SOW, STW, STOW, SJW, SJOW, SJTW, or SJTOW. This designation is marked on the jacket of the extension cord.

PRODUCT INFORMATION

24V Polar 2 Neon is sold in 150ft reels. Each reel includes a pre-attached 5ft power adapter cord (4C x 18AWG, without plug, without inverter), four spare DIY power adapter cords, and an end cap on the dead end. Polar 2 Neon is compatible with Trulux controllers, receivers and drivers. See facing page for more details. Mounting accessories include P2-NF-CLIPS (bag of ten aluminum mounting clips), P2-NF-TRACK-3 (3ft plastic track) and P2-NF-CHAN-3 (3ft mounting channel); all sold separately. Jumpers (linking extensions) include 6", 3ft, 10ft and 20ft lengths (P2-NF-JUMP-5, P2-NF-JUMP-3, P2-NF-JUMP-10, and P2-NF-JUMP-20, respectively), sold separately. Power consumption = 2.8 W/ft; Maximum run = 65 feet. This product requires the use of a 24V DC driver (sold separately); Use the driver chart on the next page to size the driver correctly.

INSTALLATION INSTRUCTIONS

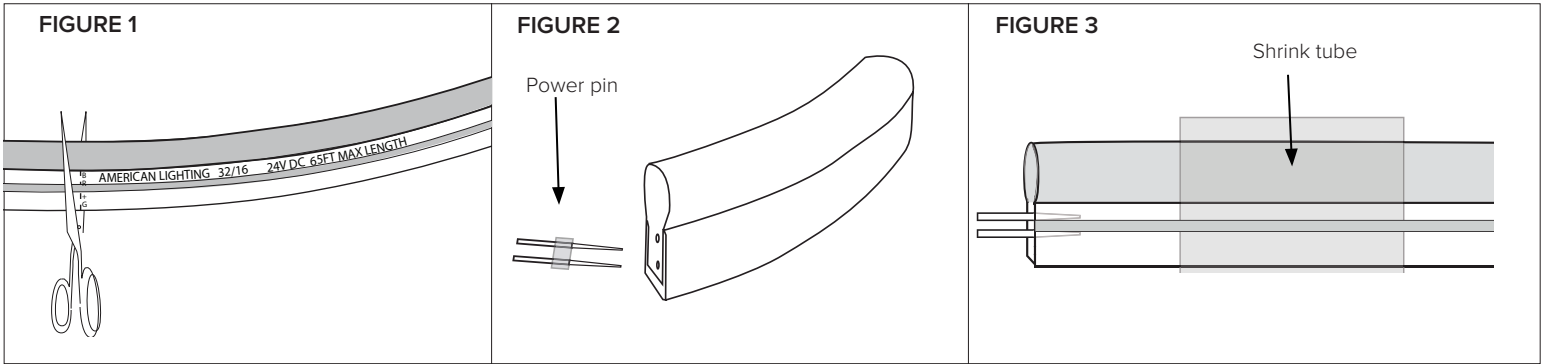
P2-NF-24V Series



CUTTING AND CONNECTING POLAR 2 NEON (SEE FIGURES 1-4)

NOTE: Reels include one pre-attached power adapter cord with 4 additional power adapter cords (no plug/no inverter).

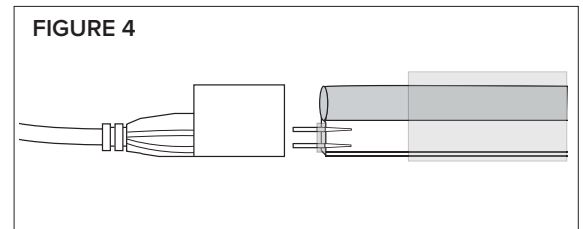
1. Determine the required length for the lighting application.
2. Cut the Polar 2 Neon squarely at the nearest cut mark using a PVC pipe cutting tool or sharp shears. Cut marks are located every 12” and marked on the side of the housing. See Figure 1.
3. If using a new reel with the power cord attached, skip to steps 10 and 11. If using a previously cut length of Polar 2 Neon, you’ll need to add a DIY power connection kit (steps 4-9).
4. Trim off any wires that protrude from the cut end of the Polar 2 Neon.
5. Holding the non-pointed side of the power pin with a pair of pliers, line up the pointed pins on the other end with the four conductors inside the Polar 2 Neon. See Figure 2.
6. Push the pointed pins into the Polar 2 Neon until flush, being sure to make solid contact with the flexible light’s internal wires.
7. Slide the shrink tube over the power pins, onto the Polar 2 Neon. See Figure 3.
8. Push the power cord sheath onto the assembly until fully seated. See Figure 4.
9. Use heat to affix the heat shrink tube making sure that it is centered over the junction of the Polar 2 Neon and the power cord sheath.
10. When using splice kits and/or jumpers, follow steps 4-9 above, making connections in a similar manner.
11. Attach end cap to other end of flexible light to cover exposed dead end.



DRIVER SELECTION:

NOTE: A 24V DC driver is required to control 24V Polar 2 Neon. Alternatively, use Trulux single color controllers. To learn more about controllers, visit www.americanlighting.com/trulux. Visit the App Store or Google play marketplace to download the Trulux application.

1. Select a driver based on the attached load. See Wattage Range Chart below.



WATTAGE RANGE CHART		
LED Driver*	Wattage	Length
LED-DR30-24	3 - 27W	2 - 9 feet
LED-DR60-24	6 - 54W	2 - 19 feet
LED-DR100-24	10 - 90W	4 - 32 feet
LED-DR150-24	15 - 135W	6 - 48 feet
ELV-30-24	3 - 30W (non-dimming) / 18 - 30W (ELV/triac dimming)	2 - 10 feet (non-dimming) / 7 - 10 feet (ELV/triac dimming)
ELV-45-24	3 - 45W (non-dimming) / 27 - 45W (ELV/triac dimming)	2 - 10 feet (non-dimming) / 10 - 16 feet (ELV/triac dimming)
ELV-60J-24	3 - 60W (non-dimming) / 36 - 60W (ELV/triac dimming)	2 - 10 feet (non-dimming) / 13 - 21 feet (ELV/triac dimming)
ELV-80J-24	3 - 80W (non-dimming) / 48 - 80W (ELV/triac dimming)	2 - 10 feet (non-dimming) / 18 - 28 feet (ELV/triac dimming)

*LED-DR series drivers = 10% minimum - 90% maximum load non-dimming (dimming with Trulux controls)

ELV Series drivers = 10% minimum - 100% maximum load non-dimming; 40% - 100% dimming with most electronic low-voltage dimmers

To power lengths greater than 48 feet, but less than 65 feet,
use a larger driver, furnished by others.

INSTALLATION INSTRUCTIONS

P2-NF-24V Series



MOUNTING

Note: Polar 2 Neon and Polar 2 RGB Neon share the same track, channel and end caps.

1. Make mounting clips using cut pieces of track or order clips (P2-NF-CLIPS, 10 per pack, sold separately) for curves and shapes on a flat mounting surface; or for straight line applications, use P2-NF-TRACK-3 (3ft length, sold separately) mounting tracks; P2-NF-CHAN-3 (3ft aluminum channel) is also available (sold separately).
2. Make sure that the distance between any two parallel runs of lighting is at least 1/2" apart.
3. Gently press flexible light into track, channel and/or clips so that it snaps into place.

**DO NOT TWIST, HANG VERTICALLY, SUSPEND UNSUPPORTED IN THE MIDDLE, BEND UPWARDS (ARCH) OR DOWNWARDS (DIP).
MAXIMUM BEND RADIUS FOR SIDE-TO-SIDE BENDS IS SHOWN BELOW.**

