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TruEL™ WIRE INFORMATION SHEET

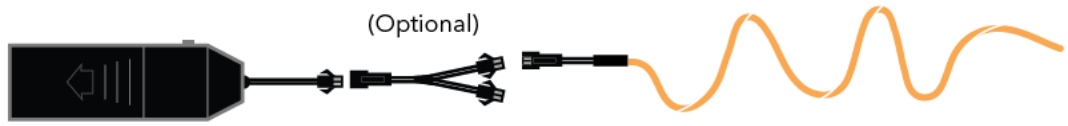
Introducing to the newest product in the Ellumiglow lineup! TruEL™ Wire is setting a new standard for flexible, illuminated cables and we are excited to share this product with you! TruEL™ cable was designed to address the concerns and shortcomings over the development of standard EL Wire in the past two decades, and we've been working hard to make EL Cable the best product possible. One of the most common issue among our customers are stemmed around one topic in particular; the angel hair wires.

We figured out a way to remove the angel hair wires for TruEL™ cable, and instead we powder coat and seal two core wires. This provides vastly more support, durability, strength, and allows the product to shine brighter than any other Electroluminescent wire on the planet. By expanding the cores and separating the layers inside the wire, this allows for vastly more uses and abilities of the wire, thus making it a safer, longer lasting product. In previous generations of EL Wire, the small angel hair wires would be the "weakest link" (said in British accent), in any application. This meant pulling the wire taught over a distance would cause premature failure of the product because the conductors would get stretched and stressed, eventually causing the conductors to "pop" or break, which would short out the line. Even applications like stage performances were short lived with EL Wire because repeated flexing of the angel hair wires could no longer support the flexing and break. This meant endless hours of repair and replacing. With TruEL™ Wire, the flexing lasts orders of magnitude longer without the reliance of the angel hair wires. Not to mention more abuse like foot traffic among other uses. TruEL™ Wire has proven to be far more reliable in a commercial setting and we are excited to share this product with you.

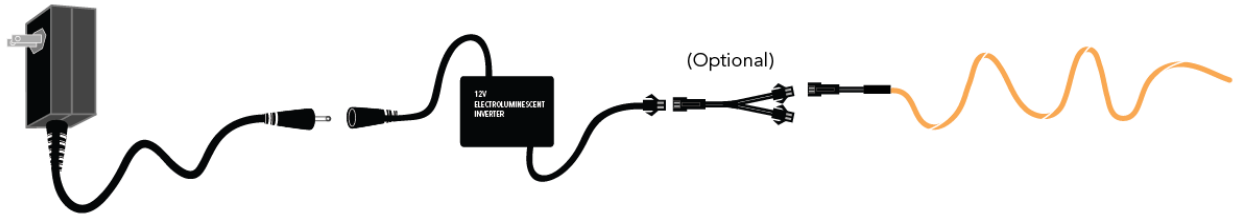
We understand the need for EL Wire to be used outdoors. However, traditional commonly used PVC jacketing would not allow for any kind of lasting glow outdoors. This causes the wire to yellow over time, and jacketing to become brittle and crack from UV exposure. Our proprietary TPU allows the product to keep the same bright glow without yellowing or becoming brittle. TruEL™ also has far better moisture resistance, chemical resistance, durability, UV resistance, heat resistance, and tensile strength. Those differences allow the product to proudly be used in outdoor (or indoor) environments, lasting far longer. The development of TruEL™ Wire allows for many more uses of the product, far less maintenance, and less headaches overall. We look forward to hearing your feedback and seeing what you create with TruEL™ products.

WIRING DIAGRAM:

BATTERY OPERATION



PLUG-IN OPERATION



BENDING

TruEL™ Wire is flexible, but we recommend a bend radius of 0.75" (~15mm) or more, to ensure long lifespan of your product. Too many back and forth bends in any one spot will make the wire eventually degrade (and fail), however comparing to typical EL Wire, the time it takes to break is orders of magnitude longer. The back and forth flexing and lifespan will ultimately depend on how much bending and contouring the product goes through in a particular area. When using in costuming applications, we recommend keeping the cable free from knees and elbows. This will keep your TruEL™ Wire lasting far longer and minimize your frustration.

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POWER

TruEL™ Wire can be powered by either battery pack or an inverter that plugs into a wall outlet. Each inverter or battery is rated for a specific range of illuminated length. If you already have inverters, the power consumption of TruEL™ cable is roughly double what current EL Wire inverters are rated for. For instance, if your inverter is rated for 15-30ft, you will want to make sure you use between 7.5-15ft of TruEL™ Wire. Make sure when ordering your TruEL™ Wire that you get an appropriate inverter that covers your TOTAL wire length. Inverters or battery packs can power multiple wires or a single strand, however keep in mind the TOTAL length of wire (combined) is what you should keep in mind when selecting your battery pack. For example, one 20ft section requires the same battery pack as twenty 1ft segments of wire. We offer a multitude of splitters and many strands of TruEL™ Wire can be combined to run from one battery pack or inverter. **FALL '21 UPDATE:** We have recently released a line up of TruEL™ Commercial Inverters that run on a specific voltage and frequency designed to maximize the brightness out of the product.

BRIGHTNESS

TruEL™ Wire has a wide range of brightness possibilities, making this product so exciting. Typically, EL Wire brightness ranges from 75-150cd/m, which looks great at night but gets washed out during the day. TruEL™ Wire can support higher voltages and frequencies when comparing to common EL Wire so a vast amount of brightness potential has just been unlocked. Below is a quick graph to illustrate how voltage plays in with the overall lifespan of the product. In short, the lower the frequency, the longer the lifespan of the product becomes. However, an easy way to increase the brightness of the product is to increase the frequency. This in turn lets you achieve brightness levels up to 1000cd/m, but the sacrifice is lifespan of the product. In some instances, like stage performances or parades, a shortened lifespan is a sufficient trade-off for increased brightness.

DOWNLOAD
TruEL Wire Connection Guide

Watch Instructional Video

FAQ

- **What is TruEL™ Wire?**
  TruEL™ Wire should be known as the way EL Wire should have always been made. It is essentially two thin copper wires wrapped in a coating of Phosphor. There are two electrodes in the wire, and when a specific voltage and frequency are applied, the wire magically lights up evenly along the length. TruEL™ Wire is flexible, efficient and all kinds of fun. It requires an inverter to operate, which operates on a frequency between 400-4000Hz. Many times batteries or inverters tend to operate in an audible range, so depending on the battery or inverter you are using, you may hear a high pitched frequency when operating. If you are looking for a custom solution that reduces noise up to 95%, please feel free to call or email us.
- **Does TruEL™ Wire Need An Inverter?**
  Yes. All Electroluminescent material needs an inverter to operate. The inverter sends a specific voltage and frequency to the phosphor layer through the wire. This excites the phosphor particles inside and creates a beautiful glow. TruEL™ Wire Inverters have a higher voltage which produces a higher light output than common EL Wire.
- **Can TruEL™ Wire Be Cut?**
  Yes, TruEL™ Wire can be cut at any point along the line. The wire will continue to glow to the point where it is cut. We recommend to cut at a 30° angle and immediately after cutting to apply an end cap to the wire. This will keep debris and moisture out of the wire and keep it lasting time after time.
- **How Do You Cut And Connect TruEL™ Wire?**
  For information on how to connect TruEL™ Wire, please scan the QR Code above
- **Can TruEL™ Wire Customized?**
  Yes, we offer customized wire and lengths for many different applications. If you have a project in mind, please feel free to contact us and we will be happy to help. We offer both custom cutting and connecting services as well as custom profiles.
- **Do You Make Custom TruEL™ Wire Inverters?**
  Yes, for any custom inquiries or bulk purchases, please contact us via phone or email.