

SewGlo™ CONNECTION GUIDE

Making a connection with SewGlo™ is a little different than standard EL Wire, but the process is similar. There are two conductors that illuminate the SewGlo™ thread, each about the size of a human hair, so an extra set of hands or wire holder is especially helpful. Follow along this guide to help make a solid connection that will ensure your SewGlo™ Illuminated Thread is connected properly.

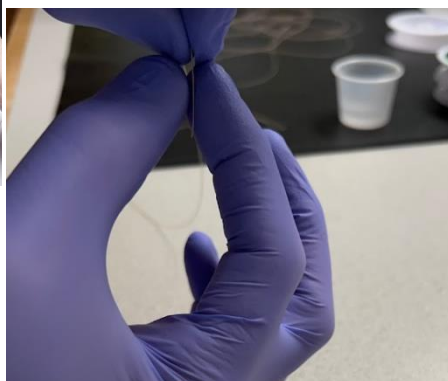
STEP 1: Remove Outer Film

The first thing you need to do is separate the two conductors. There is an outer film that keeps the thread moisture resistant which first needs to be removed. We recommend soaking the last 1-2" of thread in a high alcohol content (>80% or higher) Isopropyl Alcohol for about 30 seconds to 1 minute.



STEP 2: Separate Conductors

As you work from the tips of your fingers, gently pull the wire towards outward (as if you were training a moustache). Repeat steps numerous times until you feel the wires gently separating from one another. Do not use a knife or wire strippers as this will damage the nano wires.



When finished, you should end up with about a 1" end of the wire where the two conductors are separated.

STEP 3: Expose Conductor

You will notice the outside conductors have a very thin fibrous filaments wrapped around the core. You will braid these together with your hands and set out of place. The inside conductor has a milky white appearance. The white wire is actually the phosphor coating, so you will need to expose the wire beneath the phosphor. This is the fun part!

Take a lighter, and at the very tip of the phosphor, light it on fire... **CAUTION: The wire will catch fire nearly immediately and burn upward on the rest of the exposed wire. EXTREME CAUTION IS RECOMMENDED.**



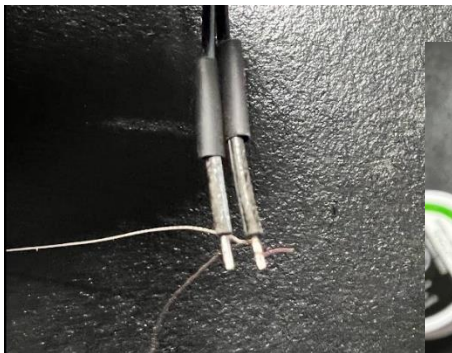
Once it burns about 1" of the phosphor off (which should take less than 1 second), blow out the fire. Wait a few seconds and gently rub the burnt wire with your hands and you should have the second conductor exposed and both appear a copper color.

Next, take a connector and apply 3pcs of shrink tubing over, like pictured below.



STEP 4: Solder Conductor

Starting with the larger (previously phosphor wrapped wire), wrap the tiny wire around your connectors wire a few times. It may help to use tweezers as it is very small. Solder the wire to your connector wire, and move onto the smaller fibrous threads. Use extreme delicacy with this wire as it is easiest to break at this stage. Wrap the fibrous bundle of wires around your other conductor, and use a glue to fix this wire into place. **OPTIONAL:** You can also choose to solder the fibrous bundle to your wire, however the soldering iron can become too hot and break the fiber. If soldering, use on the lowest setting your solder will melt.



Once wires are soldered, place the smaller heat shrink connectors over your exposed soldered connection and apply heat gently. Lastly, slide the remaining heat shrink tubing over both conductors and apply heat. You should end up with a connection area that looks like the following.



STEP 5: Time to Test

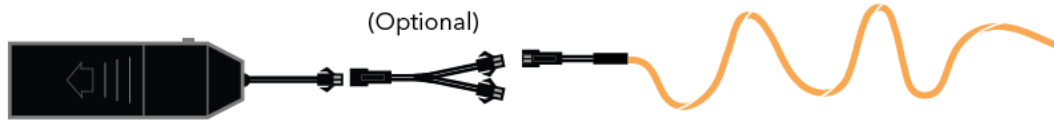
To ensure your connection is working properly, hook up to a SewGlo™ inverter or battery pack to test. At this point you should have a working connection! If you have troubles connecting or lighting up your wire, feel free to send any images to info@ellumiglow.com so we can help further.



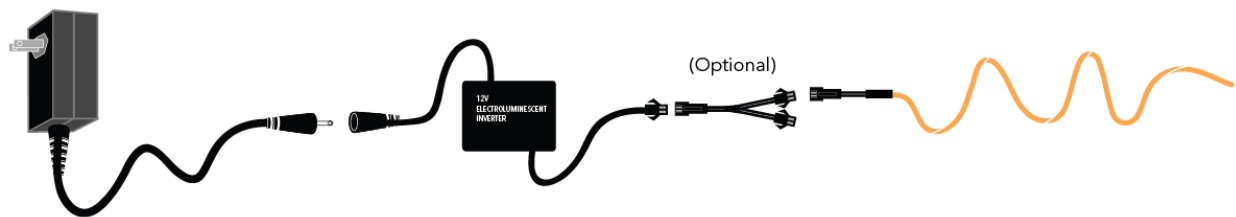
For custom inquiries, if you would like us to pre-install a connector for you, we are happy to do so. Please check the SewGlo™ page on the website for more details, or feel free to contact us for volume inquiries.

WIRING DIAGRAM:

BATTERY OPERATION



PLUG-IN OPERATION



ADDITIONAL INFORMATION

What's great about SewGlo™ Illuminated Thread is the multitude of uses for it! From stage performances, wearables, costuming, safety, and much more, SewGlo™ is sure to be a favorite among designers, prop makers, and fashion brands. We will continue to expand and enhance the SewGlo™ product line to include different types of thread for many industries. For volume inquiries, make sure to contact us to find out how we can help bring your concept to production.

FAQ

- What is SewGlo™ Illuminated Thread?**
 SewGlo™ Illuminated Thread is a brand new technology that essentially takes Electroluminescent technology and reduces it to the nano-scale. What it is doing is taking a high voltage and frequency to excite the phosphor and creating a glow. There are two electrodes in the tiny wire, and when a specific voltage and frequency are applied, the wire magically lights up evenly along the length. SewGlo™ cabling is the most flexible and efficient lighting on the planet. It does require 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 SewGlo™ 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. SewGlo™ Wire can use a much wider application uses than common EL Wire, LEDs (or any other type of lighting for that matter), as anything that can be sewn can now have light embedded into it!
- How Bright is SewGlo™ Thread?**
 SewGlo™ Thread has a brightness range of around 60-80cd/m. This means it is suitable for low light conditions, but it is not bright enough to be seen in daylight or well lit environments. It should be used for outdoor and night time activities, or areas where control of the lighting conditions is available. If you need help selecting the right inverter for your project, please feel free to contact us.
- Can SewGlo™ Wire Be Cut?**
 Yes, SewGlo™ 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 immediately apply a dab of waterproof glue to the end of the thread to avoid moisture or debris entering. This will keep the phosphor from degrading and keep it lasting time after time.
- Can SewGlo™ Be Sewn With a Sewing Machine?**
 One of the most brilliant things about SewGlo™ thread is the ability to use common sewing machines or embroidery machines to create custom illuminated logos, patterns, clothing, seats, and many, many more applications.
- Can SewGlo™ Wire Customized?**
 Yes, we offer customized wire for many different application uses with volume orders. 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.
- Can You Make A Custom SewGlo™ Inverters?**
 Yes, for any custom inquiries or bulk purchases, please contact us via phone or email.