

SEWGLO™ ILLUMINATED THREAD INFORMATION SHEET

We are excited to introduce the newest product in the Ellumiglow lineup! SewGlo™ Illuminated Thread is a one-of-a-kind light up fiber that can be designed into nearly any product. It is derived from the Electroluminescent platform, and shrunk down to the nano-scale. It's a unique woven light that can be hand or machine sewn, stitched, or embedded for a light that can be applied to nearly anything. At only 0.3-.4mm (300-400µm) in DIA, the SewGlo™ fiber is as small and flexible as common thread, yet provides wonderful lit accents to any fabric.

Both soft and water resistant, SewGlo™ is able to be a 1:1 direct replacement for common thread, only SewGlo™ will provide illumination to anything it is attached to. In the auto industry, making custom logos in seats, arm rests, visors and more, SewGlo™ provides an easy way to add lit decorative benefits for interior accent lighting. In the wearable or smart textile (commonly referred to as "e-textiles") market, adding luminescent accents to sporting goods, apparel, children's clothing, backpacks, shoes, hats, or safety gear has never been easier. For stage performances, now lit accents can be added to props, backdrops, scenery, clothing and much more. In the electronics space, adding lighting to mobile phone cases, watches, headphones, glasses and more can add visual effects to commonly used items. It can even be used in medical devices, home décor, patio furniture, umbrellas, tents, to name just a few. The muted colors of SewGlo™ when off allow the product to blend into fabrics completely until illuminated.

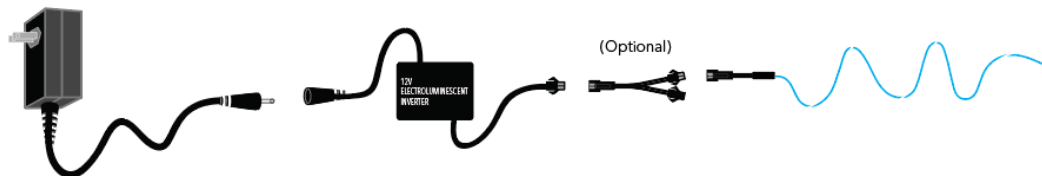
We understand the need for SewGlo™ Illuminated thread to be washable. We've got you covered! The unique coating on the material is capable of multiple wash cycles (machine wash cold, hang dry). This allows even more uses for the product as it can actually be laundered and treated like regular clothing items! For volume inquiries of SewGlo™ or customization option, please feel free to contact us for more information.

WIRING DIAGRAM:

BATTERY OPERATION



PLUG-IN OPERATION



BENDING

SewGlo™ fiber is extremely flexible, so much that it can even be knotted. Typically, common EL Wire has a core wire that can break with a few back and forth bends, but SewGlo™ is meant to be and remain flexible. Keep in mind that eventually, back and forth flexing will make the product not last as long, but when used in a typical clothing application, it should last about the lifespan of the garment being used. The most common area where SewGlo™ breaks is at the connection area. This is because we typically use a more rigid braided multi-strand wire, which then connects to the single filament SewGlo™ fiber. These two parts have varying flexibility and durability. Keeping the connection area as still as possible is recommended.

POWER

SewGlo™ 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 Electroluminescent inverters, the power consumption of SewGlo™ cable is roughly 1/4 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 may be able to get 60-120ft of SewGlo™ cabling! Make sure when ordering your SewGlo™ Wire that you get an appropriate inverter that covers your TOTAL wire length required. 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 SewGlo™ Wire can be combined to run from one battery pack or inverter. NOTE: Inverters that use a low frequency are typically not recommended as the thread requires a higher frequency (over 800Hz) for best results.

BRIGHTNESS

SewGlo™ Wire has a beautiful glow, but it's not going to be as bright as say, an LED. Typical brightness of SewGlo™ is around 60-80cd/m, which when using at night, it looks great. During the day, the product will get washed out by sunlight or brightly lit rooms.

SEWING

SewGlo™ thread, as the name may imply is SEWABLE! You can hand stitch into various fabrics easily, just like normal thread. For machine applications like sewing machines or embroidery machines, we recommend a lower setting (<5kpsi). SewGlo™ has a relatively high breaking point, but low elongation. This means that if too much pressure is exerted quickly onto the fiber, it can break. Sewing machines can cause extra strain on the thread, so using at a lower pressure setting can limit errors. For Embroidery machines can have various settings, let the machine know the size of the thread is 0.4mm and run at a lower pressure setting.

CONNECTING

If you are looking to connect SewGlo™ thread to a connector or wire, use the QR Code below to download a step by step tutorial!



FAQ

- **What is SewGlo™ Wire?**
SewGlo™ Wire is a brand-new technology that is similar in nature to EL Wire, but MUCH smaller. Typical EL Wire is around 1-5mm in DIA, and SewGlo™ is only 0.3-0.4mm DIA. A uber-flexible alternative allows the product to be sewn directly to nearly any type of fabric, and provide a lit accent to anything it touches. SewGlo™ Wire is flexible, efficient and all kinds of fun. It requires an inverter to operate, which operates on a frequency between 800-6500Hz. 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.
- **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 snip with a pair of sharp scissors, and apply a dab of waterproof glue at the end. This will keep debris and moisture out of the wire and keep it lasting time after time.
- **How Do You Cut and Connect SewGlo™ Wire?**
For information on how to connect please contact us.
- **Can EL 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 embroidery and sewing.
- **Do You Make Custom SewGlo™ Wire Inverters?**
Yes, for any custom inquiries or bulk purchases, please contact us via phone or email.