

## SEWGLO™ ILLUMINATED THREAD EMBROIDERY INFORMATION

SewGlo™ Illuminated Thread is a one-of-a-kind light up fiber that can be designed into nearly any product. Our standard SewGlo™ Embroidery thread is 0.3mm (300µm) in DIA, which is similar in size and flexibility as common thread, yet provides wonderful lit accents to any fabric.

Use this guide to help find the appropriate machine settings which have worked for us in prototyping and production of various types of embroidered thread solutions. Note: This guide should be used for reference only, as there are many different types of embroidery machines, as well as materials, durometers, etc.

### EMBROIDERY MACHINE

- ① Needle Type: #18
- ② Embroidery Type: plain embroidery, cording embroidery
- ③ Stitch Type: plain stitch, satin stitch, tatami stitch
- ④ Automatic Jumping Stitch: ON

Max length and jumping length being 3 mm, When the pattern size is below 3\*3 cm<sup>2</sup>, max length and jumping length being 1 mm

- ⑤ Cutting thread, locking at the start, end knot: OFF
- ⑥ Automatic segmentation of stitches: OFF
- ⑦ Automatic sewing down: OFF
- ⑧ Stitch Spacing

Stitch Type	Fiber Diameter (mm)	Stitch Spacing (mm)	Stitch Length (mm)
Satin Stitch	0.3	0.9	≤2cm
Tatami Stitch	0.3	1.8	4mm
Plain Stitch	0.3	---	4mm
Plain Stitch (Cord Embroidery)	0.3	---	1.5mm

### TENSION

Tension should be applied different according to different fabric textures (E.g., on soft woven fabric, we measured data below).

Upper thread 100-120 (Tajima thread tension gauge)

Bottom thread 30-35 (Tajima thread tension gauge)

When pulling the thread, it should be smooth with relatively low resistance.

The back side should look like upper thread (2) bottom thread (1)

### SPEED

300-400 needle/min (plain embroidery);

400-600 needle/min (cord embroidery)

## FABRIC & BOTTOM YARN

- ① Fabric: TPU film, woven fabrics, artificial leather easier than natural leather (for leathers, Embroidered SewGlo™ thread is more challenging than Stitching SewGlo™ thread which is recommended for its strength.)
- ② Bottom yarn: normal yarns like cotton, etc. Same fineness as SewGlo™ thread (0.3mm).

## SPECIAL NOTES:

- ① **The key point is to avoid the fiber getting stabbed by the needle.** If the needle pierces through the thread, it will short out the conductors and not allow the product to illuminate.
- ② One single thread should be used under the length of 10 m for uniform luminance. Parallel connection of multiple threads (within 10 m) is suggested for a complicated pattern.
- ③ Make sure to leave 10-20 cm at the start or end for connecting.
- ④ User can rewind the SewGlo™ thread onto embroidery thread cones for later use.

## CONNECTING

If you are looking to connect SewGlo™ thread to a connector or wire, use the QR Code below to follow along!

DOWNLOAD STEP BY STEP GUIDE



WATCH VIDEO



## 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.