How To Embroider With SewGlo™ Thread
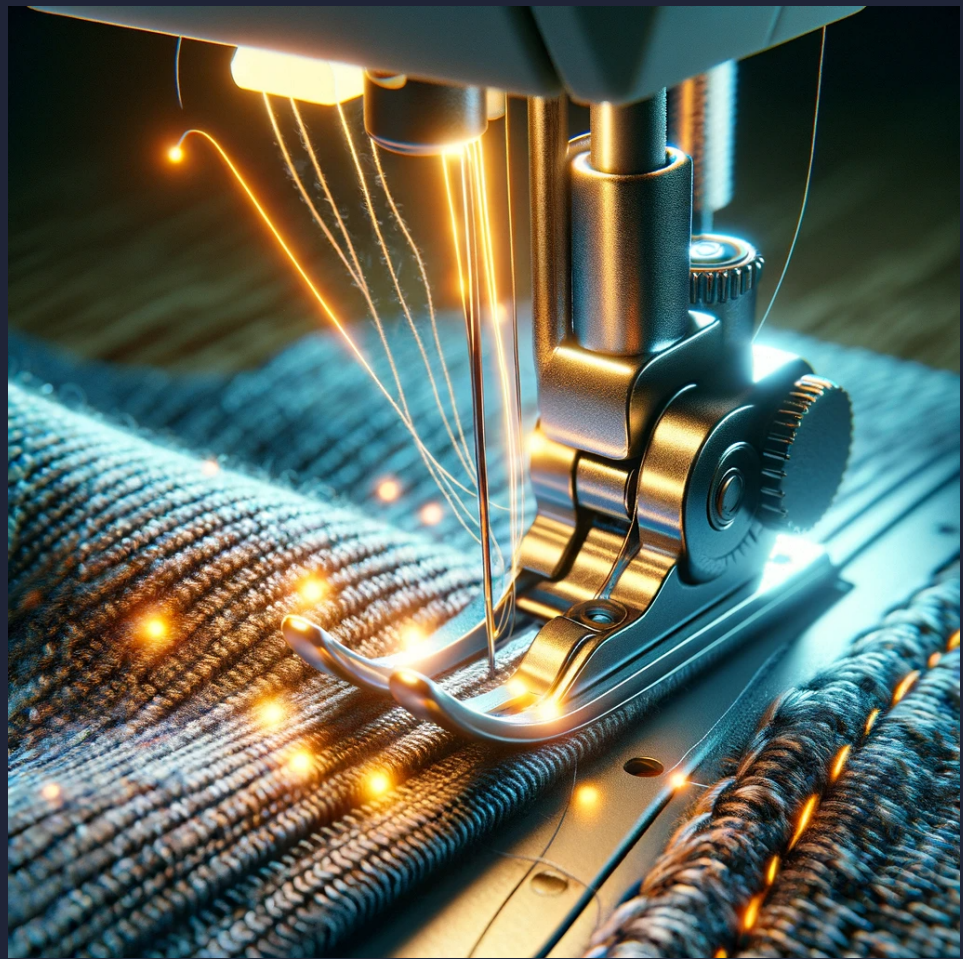
Want to know the basics of Embroidering with SewGlo Thread? Use this guide to find out how.

Introduction

Congratulations on taking the next step in illuminating your life! This resource guide will help you understand how you can incorporate SewGlo™ illuminated thread into your garments.

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.

Resources

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 cm2, 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

EMBROIDERY SETTINGS

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

Resources

EMBROIDERY 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)

EMBROIDERY 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.

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What Can You Make?

Light Up Your Life with SewGlo™
Illuminated Thread!

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