

SewGlo™ ILLUMINATED THREAD

TECHNICAL SPECIFICATION · V2.1

This specification covers the SewGlo™ LT, HD, and XR Illuminated Thread variants. All values are reference-only unless expressly agreed in writing. Data was obtained from tests on standard samples at room temperature. Ellumiglow, LLC reserves the right to update specifications as product development continues.

Parameter	SewGlo™ LT 0.30mm · Ultra-Fine	SewGlo™ HD 0.48mm · Heavy Duty	SewGlo™ XR 0.48mm · Structural
PHYSICAL PROPERTIES			
Diameter (mm)	0.30 ±0.03	0.48 ±0.05	0.48 ±0.05
Break Strength	≥7 N	≥60 N	Aramid core
Elongation	3-5%	3-5%	Aramid limited
Features	Thin, flexible	Thick, mechanical	Structural core
OPTICAL PROPERTIES			
Luminance (1m, 110V/2kHz)	≥13 cd/m ²	≥20 cd/m ²	≥40 cd/m ²
Rated Lighting Time	3,000 h	3,000 h	3,000 h
ELECTRICAL / OPERATING			
AC Voltage	80-200 V	80-200 V	80-200 V
AC Frequency	400-4,000 Hz	400-4,000 Hz	400-4,000 Hz
Optimal Frequency	800-6,500 Hz	800-6,500 Hz	800-6,500 Hz
Working Temp	-30 to 150°C	-30 to 150°C	-30 to 150°C
Max Processing Temp	180°C	180°C	180°C
DURABILITY			
Martindale Abrasion	8,000 cycles (knit)	3,000 cycles (sewn)	3,000 cycles+
Gakushin Friction	N/A	6,000 cycles (1kg)	6,000 cycles+
Washing Cycles	100 (machine)	100 (machine)	100 (machine)
High Temp / Humidity	70°C / 95%, 14d	70°C / 95%, 14d	70°C / 95%, 14d
Weathering Resistance	Level 3-4	Level 3-4	Level 3-4
COMPLIANCE			
Chemical Safety	REACH 209, qualified	REACH 209, qualified	REACH 209, qualified
Anti-EMI	9kHz-6.2MHz, qualified	9kHz-6.2MHz, qualified	9kHz-6.2MHz, qualified
Anti-static	Contact/Air discharge, qualified	Contact/Air discharge, qualified	Contact/Air discharge, qualified
TYPICAL APPLICATIONS			
Sewing machine	Caution / low tension	Yes	Yes
Industrial sewing	Not recommended	Yes	Yes
Embroidery machine	Low speed only	Yes	Yes
Load-bearing seams	No	Limited	Yes
Max continuous run	Short-moderate	Moderate	50m+
Primary applications	Embroidery, fine detail	Sewing, production runs	Safety apparel, structural, automotive
Availability	In Stock	In Stock	Launching Soon

VARIANT SELECTION GUIDE

SewGlo™ LT

Best for: script lettering, fine logos, intricate embroidery on lightweight fabrics, hand sewing, hobby machine use. At 0.30mm it is the thinnest variant and the most flexible. Not suited for industrial machines under high tension or load-bearing seams.

SewGlo™ HD

Best for: general apparel, production runs, jackets, hats, bags, stage builds, automotive interior trim. Runs on commercial sewing and embroidery machines. At 0.48mm and 60N break strength, it is 8x stronger than LT and handles the demands of volume manufacturing.

SewGlo™ XR

Best for: safety apparel, load-bearing seams, architectural textiles, automotive interior stitching. Aramid core provides structural-grade tensile strength. The only variant rated for continuous 50m+ runs. Launching soon; contact Ellumiglow for pre-order.

All Variants

Machine wash cold, hang dry. 100-cycle wash rating. Available by the meter, in kits (1m / 2.5m / 5m), and on bulk spools. OEM spool sizes and custom connection configurations available. Contact info@ellumiglow.com.

NOTE ON DATA

Above data should be taken as reference values only. Unless expressly agreed in writing, they should not be recognized as indicative or guaranteed values for the material. Unless otherwise stated, all data were obtained from tests conducted on standard samples at room temperature.