

VynEL™ ILLUMINATED LIGHT PANEL

Flexible, flat electroluminescent lighting for wearables, vehicles, marine, signage, and consumer products. Thinner than a credit card, heat-bondable or sewable, available in virtually any shape or color.

PRODUCT LINE

	Decal Window · Signage	HD Heavy Duty · Most Popular	Flow Apparel · Wearables	Cling Automotive · Vehicle	Splash Marine · Submersible
Thickness	0.5-0.8mm	0.5-0.8mm	0.25-0.5mm	0.5-0.8mm	1-1.6mm
Flexibility	Moderate	HD Rigid	Most Flexible	Stretch/3D	Most Robust
Water Rating	Resistant	IP67	Wash rated	IP67+	Submersible
Attachment	Adhesive	Heat Bond/Sew	Heat Bond/Sew	PSA Wrap	Sew/Bond
Brightness	300-400 cd/m ²	300-400 cd/m ²	250-350 cd/m ²	300-400 cd/m ²	300-400 cd/m ²
Best use	Retail, windows	Outerwear, gear	Shirts, shorts	Vehicles, aircraft	Marine, life gear

VARIANT SELECTION GUIDE

Decal: Windows and Signage

Backlit signage, window displays, retail installations, and advertising panels. Adhesive-backed for application to rigid and semi-rigid surfaces. Available in custom die-cut shapes.

Flow: Performance Apparel

The most flexible VynEL variant at 0.25-0.5mm. Designed for lightweight garments like shirts, shorts, and athletic wear. Heat bonds to cotton, polyester, and blended fabrics.

Splash: Marine and Submersible

Fully encapsulated for submersible environments. Used in life jackets, marine safety gear, wetsuits, and aquatic applications. Thickest and most robust variant at 1-1.6mm.

HD: General and Outerwear

The most popular variant. At 0.5-0.8mm with a textured finish, it is rated for outerwear, jackets, backpacks, hats, footwear, and sporting goods. Machine wash cold, hang dry. 25-cycle wash rated.

Cling: Automotive and Vehicle

Pressure-sensitive wrap-style application for vehicles, aircraft, and buses. Stretches to conform to curved body panels and compound curves. Requires UV-inhibitor PPF as a final protective layer. Applies like 3M automotive wrap.

BEST PRACTICES

Bending and Flexibility

Maintain a minimum bending radius of 5mm to avoid dark spots or shorts at the EL layer. For storage, lay flat or hang vertically. Do not coil tightly.

Power Selection

Each inverter or battery pack covers a specific square-inch range. Calculate combined area across all panels and select an inverter rated for that total. Multiple panels connect in parallel using splitters.

Driving Frequency

For maximum lifespan, drive VynEL at 400Hz. Higher frequencies produce more brightness but accelerate phosphor wear. For applications requiring long service life, keep frequency below 2,000Hz.

Heat Bonding

Heat bond to most fabrics using 300°F / 30-40 lbs pressure for 15-20 seconds with a heat press. Keep the lighting element facing away from the heating element. Flow panels are pre-bonded and ready to press directly.

Sewing

Do not sew through the active panel area. Ellumiglow can add a non-conductive border around any panel for sewing attachment. Contact us to spec a border when ordering.

Wiring

Polarity matters at the inverter input. Polarity from inverter to panel does not matter. Route wiring away from moving parts and heat sources. Use waterproof connectors for outdoor or washable applications.

WIRING DIAGRAMS

BATTERY OPERATION



PLUG-IN OPERATION



LEARN MORE

Wiring guides, integration videos, power calculators, and product specs:
ellumiglow.com/pages/el-guide



FAQ

Does VynEL require an inverter?

Yes. All EL-based products require a high-frequency inverter. Battery packs and wall-outlet adapters are both available.

Can VynEL panels be cut?

Panels can be cut but custom-shaped manufacturing produces the best longevity. Contact us before cutting.

How waterproof is it?

HD panels are rated IP67 and withstand up to 25 machine wash cycles. Splash is fully submersible. Cling requires PPF for outdoor durability.

What colors are available?

Vibrant Blue (teal phosphor), Brilliant Pink, Magnetic Green, Charged Orange, Lavender White, and Fiendish Red. Custom colors available via filter overlay.

Can VynEL be customized?

Yes. Custom shapes, sizes, colors, graphic overlays, connectors, and skins are all available. Max single panel size is 31" x 64" (78 x 163cm). Contact info@ellumiglow.com.

What is the inverter noise level?

Standard inverters operate audibly. Custom-tuned inverters reduce noise up to 95% and extend panel life. Recommended for all production applications.