

Electroluminescent Technology

Electroluminescent technology is the new paper thin, captivating light source that is revolutionizing the way businesses market their branded message to target audiences. Any artwork supplied can be animated to light as per your specification. The Electroluminescent panels can be customized to illuminate in any size, shape, color or animated sequence.

EL panels are usually powered by mains supply but depending upon the size and illuminated area, batteries could also be used. In this case, we can prolong the life of the batteries by using a motion sensor.

Electroluminescence (EL) is set to take over back lit posters amongst a host of other light source based products that are energy deficient, expensive and bulky. The potential of this product is immense across a wide range of appliances.

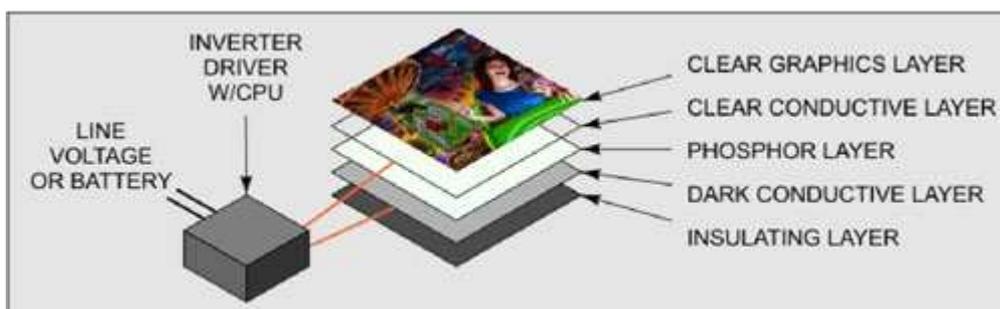
Features & Benefits of Electroluminescent Technology

Electroluminescent panels are paper thin laminated panels that illuminate as an electrical current is passed through the panel. Phosphor crystals with colored overlays are sandwiched between conductors, and as an electrical current is applied, the phosphor crystals rapidly charge and emit light which illuminates the printed overlay.

Electroluminescent lamps are produced in many forms such as Electroluminescent panels, Tape or Wire. The low power consumption makes EL technology one of the most energy efficient light sources available.

Characteristics of the Electroluminescent panels

- Can be produced to any size or shape.
- Paper Thin - Typically between 0.25mm - 0.5mm.
- Lightweight.
- Flexibility - Can be applied to a flat or curved surface.
- Strength - Almost unbreakable.
- Reliability - EL does not catastrophically fail as it consists of millions of microscopic crystals.
- Low power consumption - Consumes between 75-90% less electricity than any other light source.
- Efficiency - 80% of energy is converted to light.
- Brightness - Brightness can be varied to suit customer requirements.
- Visibility - Can be seen from far distances in darkness, smoke and fog.
- Low operating temperature - EL is a cold lighting source and does not generate heat due to its electronic luminous emission.
- No Glare - EL produces a soft even light over the entire surface.
- Waterproof.
- Landfill friendly - EL does not use any hazardous materials.
- Longevity- Over 30,000 hours depending upon brightness.
- Maintenance free.



Order Process for Electroluminescent panels

Step One - Consultation and Project Planning:

We consult with the client to fully evaluate their requirements, in order to provide them with the best solution for their application. We consult with clients in order to ensure clear, ongoing communications throughout the course of the project.

Step Two - Animation Creation (Free of Charge):

assist the client in understanding how to maximize the potential of EL for their campaign. We can either produce an animation exactly to the clients spec, or alternatively, EL International has a creative team that can propose some animation options to the client.

We will provide electronic files that demonstrate the animation in 1-2 business days. By working electronically during this stage, emailing animations in the form of .gif files can be very quick, efficient and cost-effective. Once the animation is confirmed by the client, we can build a prototype sign to these specifications, if required.

Step Three - Price Quote:

Prices are dependent upon many variables such as:

- Size
- Quantity
- % Illumination
- Animation Complexity

Therefore, once we provide the client with an animation and have full details of the project, we will be able to provide an accurate cost based on the specific customer requirements, together with the delivery lead times.

Step Four - Prototyping:

Prototyping is optional and some customers prefer to go directly into production. Prototype costs vary, depending upon the specifications of the project. We will provide you with an estimate for prototyping before any work is done. The prototype will take around 2 weeks to complete. It will serve as a "master" proof for final approval and the entire run will be based on the prototype. It is therefore important to ensure that the electronic proofs of the animation are correct prior to proceeding to the prototyping stage.

Step Five - Production:

Once the prototype has been approved, we will proceed with production once a deposit of 50% of total costs has been received. The lead time for production will depend on many factors and this will be confirmed upon order.

Step Six - Delivery:

As soon as production has been completed, the goods will be delivered. The customer is required to pay the balance of the remaining 50% of the total invoice value in order to release the goods, unless other arrangements have been agreed.

Electroluminescent Technical Specifications

BRIGHTNESS	200 cd / m2
LONGEVITY	30,000 Hours depending on the lamps environment, driving condition and duty cycle
WARRANTY	6 months factory warranty for all Electroluminescent panels and Inverters
SIGN MATERIAL	Multi-laminate construction
SIZES & SHAPES	Custom shapes available. Any size can be achieved by joining panels together
VIEWING ANGLE	>160 Degrees
APPLIED VOLTAGE	AC 50 Vrms to AC 220Vrms (For Split-Electro up to 350vac)
APPLIED FREQUENCY	50 HZ to 3 KHZ
INDOOR/OUTDOOR	Can operate in both environments
PANEL OPERATING TEMPERATURE	- 20 degrees ~50 degrees (Nor.) / 70 degrees (Max)
PANEL STORAGE TEMPERATURE	- 40C to + 70C
PANEL OPERATING HUMIDITY	0% ~ 90%
OPERATING CURRENT (100vrms/400Hz)	1.5~2.5 mA /sq.in
OPERATING POWER	Low power consumption. Approx 5-10 watts
POWER RESOURCES	DC 1.5V to 24V and or AC110/220V
POWER INVERTER	Different power configurations to optimize sign parameters
CAPACITANCE	2 - 5 nF / sq.in
THICKNESS	0.2~0.4mm (min 0.119mm For 2nd Generation Foil)
PANEL WEIGHT	A typical display with size of 152mm x 305mm weighs ~284g
SAFETY	No Ultraviolet Radiation emitted
BEND RADIUS	0.25" - Normal 2nd Generation Foil - Foldable
NORMAL EDGE SEAL	0.08"(2mm)
MIN. EDGE SEAL	0.03"(0.76mm)
LEAD PULLING	0.5kg 10sec.
LEAD BENDING	90 degrees 250gr bending 2 times
SOLDERING HEAT RESISTANCE	250 degrees 3sec>3mm distance from EL panel with extra force applied
TESTING	Environmental, Storage & temperature Shock Tests
CERTIFICATIONS	All Certifications for Electroluminescent panels and Inverters are available upon request.



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