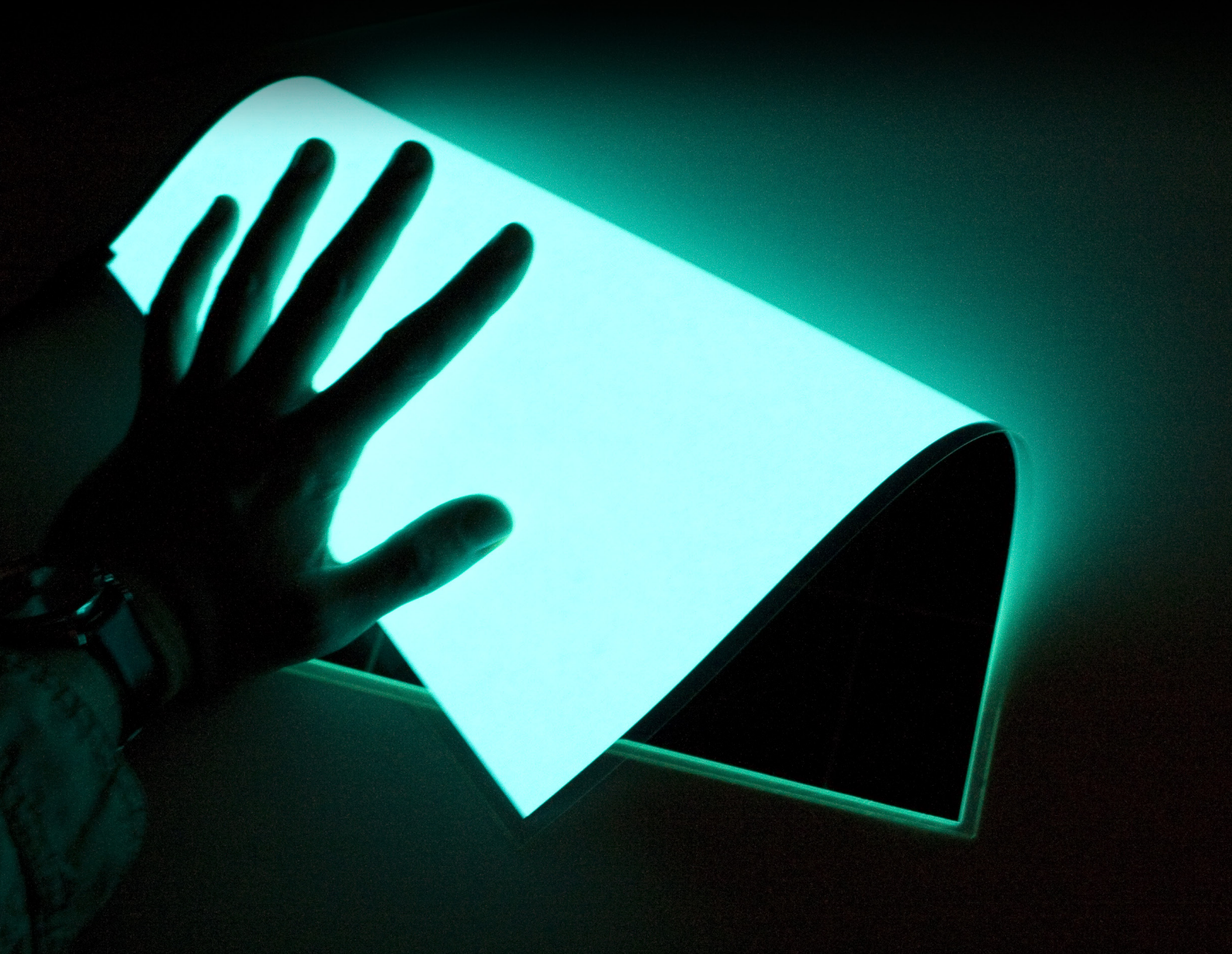


Surelight

EL Parallel Panels



Surelight

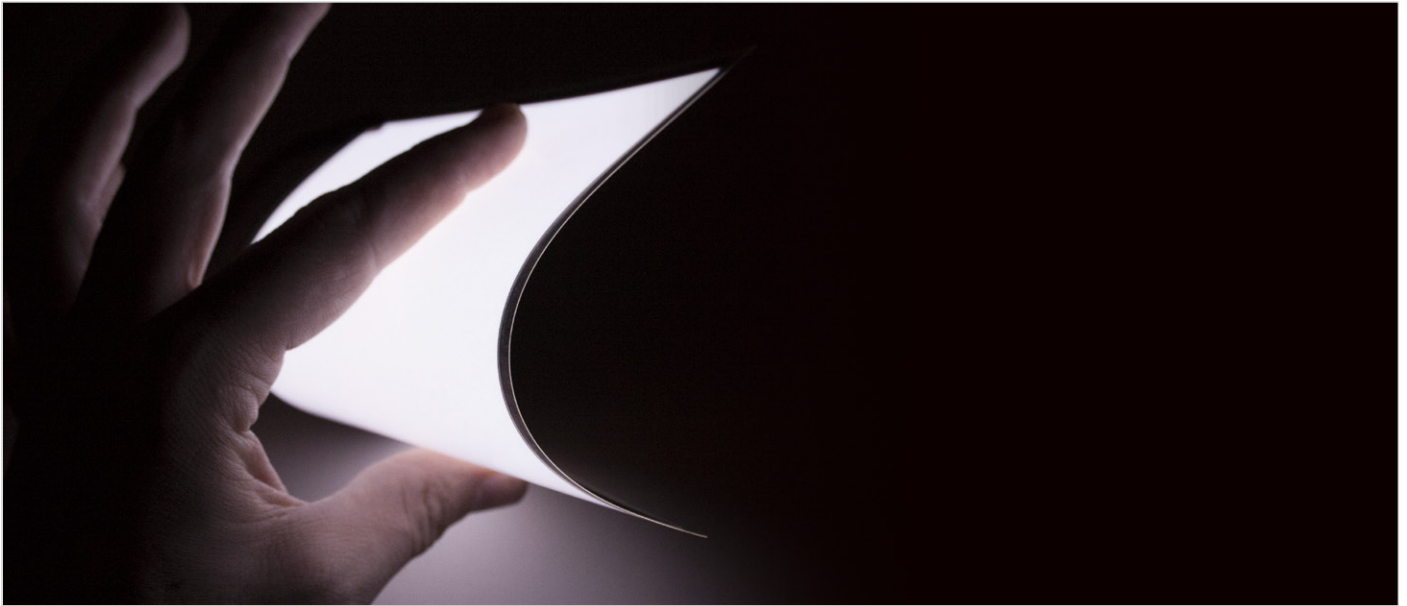
EL Parallel Panels



Electroluminescent technology is the paper thin, enticing light source that is revolutionising the way businesses market their branded message to target audiences. Electroluminescent Panels (EL Panels) are set to take over back lit posters with 75% of energy saving amongst a host of other light source based products that are energy deficient, expensive and bulky. EL Panels can be used across a wide range of applications including retail displays, signage, advertising, architecture, automotive applications, entertainment, safety lighting and more.

Surelight's Electroluminescent Panels can be customised to illuminate in any size, shape, colour or sequence, making them ideal for making eye catching retail displays or engaging animated point of sale displays. Surelight's Electroluminescent Panels have been used in a wide range of bars and night clubs in both signage or in architectural roles, built into stone counter tops, tables or even floors, the list of applications of our Electroluminescent Panels is endless.

EL Parallel Panels



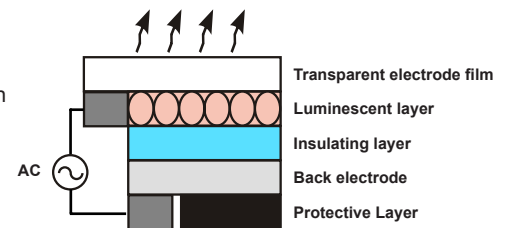
Key Features

- Ultra thin and flexible
- Highly efficient - Low energy, low temperature
- Can be cut to desired shape
- Vibration & shock resistant
- Different section can be activated separately on special request

EL Parallel Panel Construction

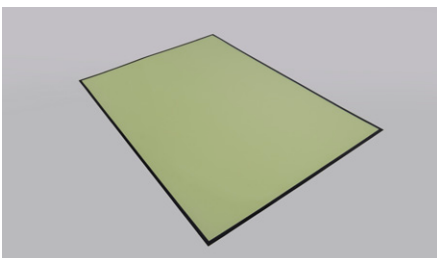
Electroluminescent Parallel Panels from Surelight are made of a multi layer material containing fluorescent dyes, dispersed in a binder with a high electrical constant. When an alternating current (AC) is applied the EL Panel (sheet) emits light.

EL Panels emit light from 50VAC and increase in brightness with higher voltage up to 200VAC. The frequency should be over 50Hz. Brightness increases with higher frequency up to 1000Hz. However we recommend that frequencies in the range of 400-600Hz and voltages of no greater than 160VAC are used, otherwise the parallel panels life will rapidly deteriorate.



Ordering EL Parallel Panels from Surelight

There are several ways to order EL Panels:



Standard format

A2 - 609 x 435 mm
A3 - 435 x 317 mm
A4 - 312 x 230 mm
Y1 - 415 x 135 mm



Special format (encapsulated with connector)

Any size (within the standard formats) can be ordered.



Custom Size & Shape (encapsulated, with connector)

Special form, shapes and formats can be arranged from your specification

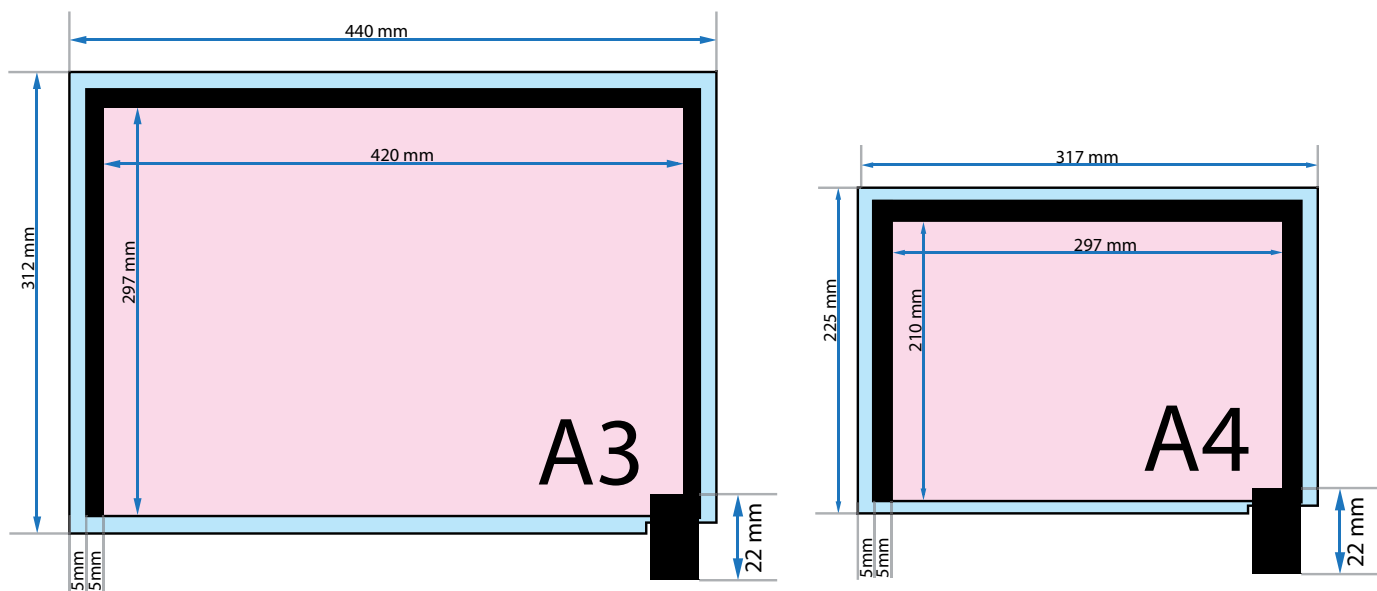
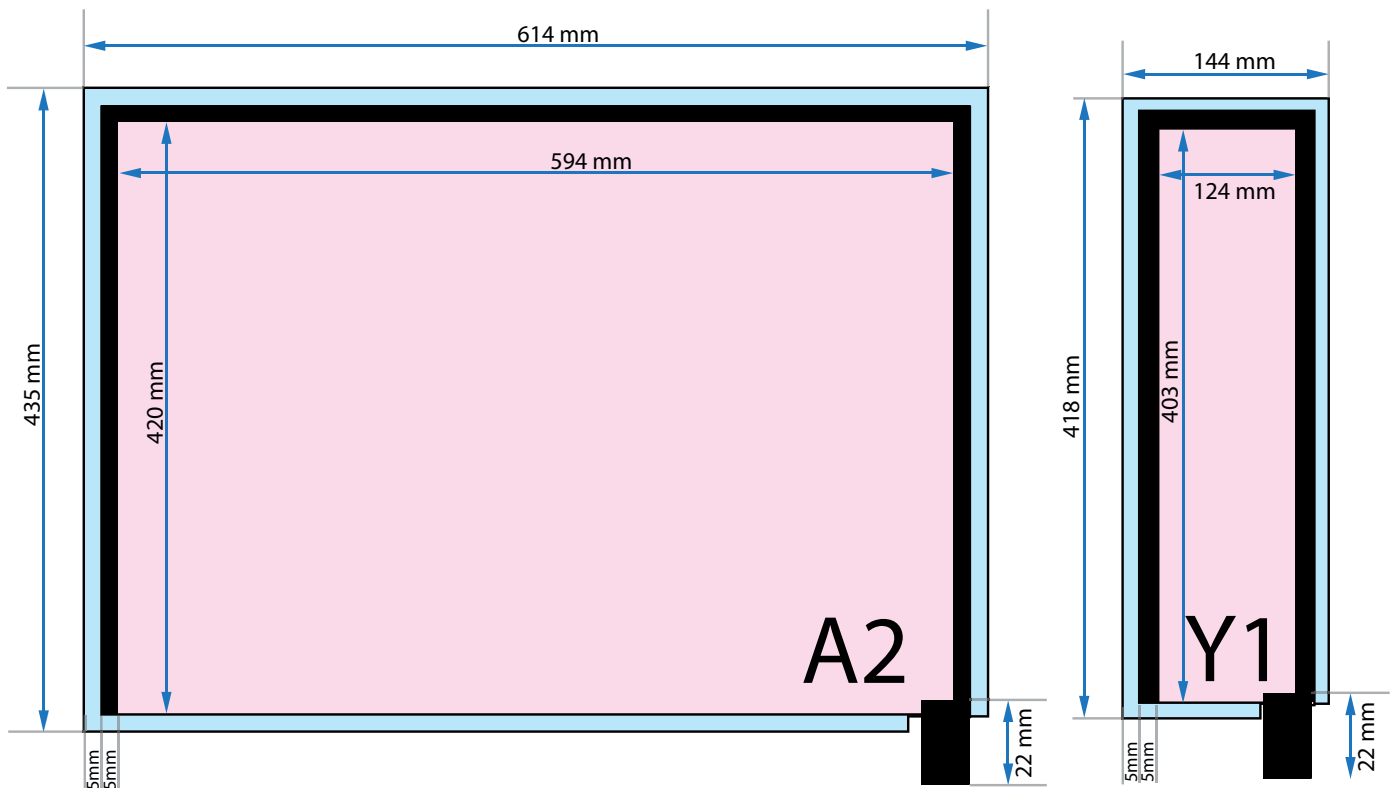
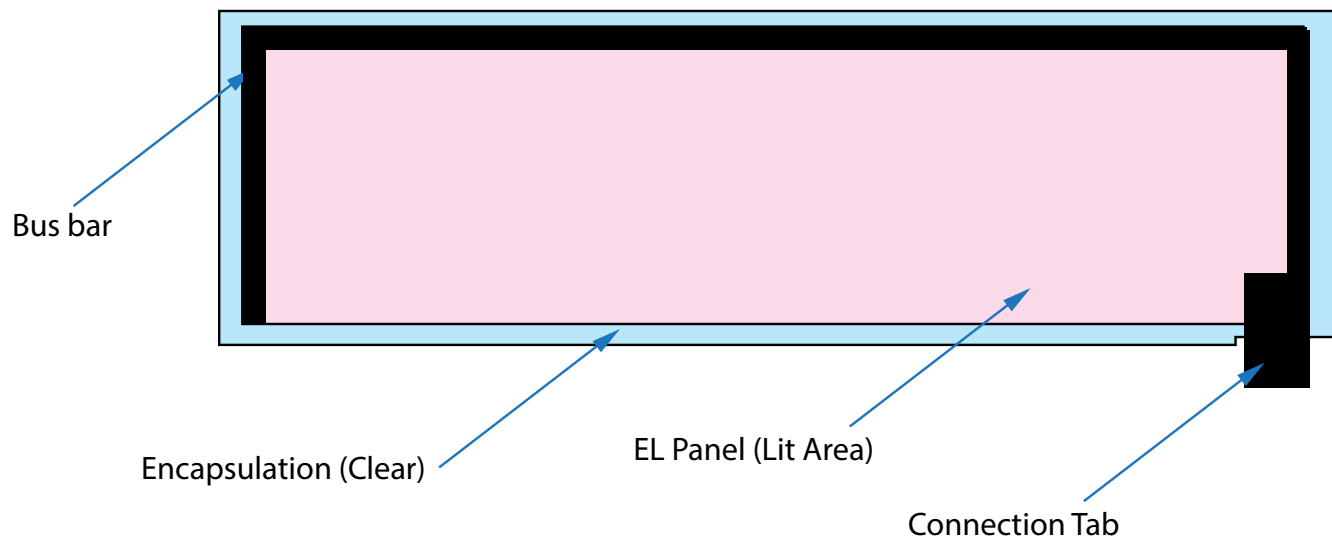


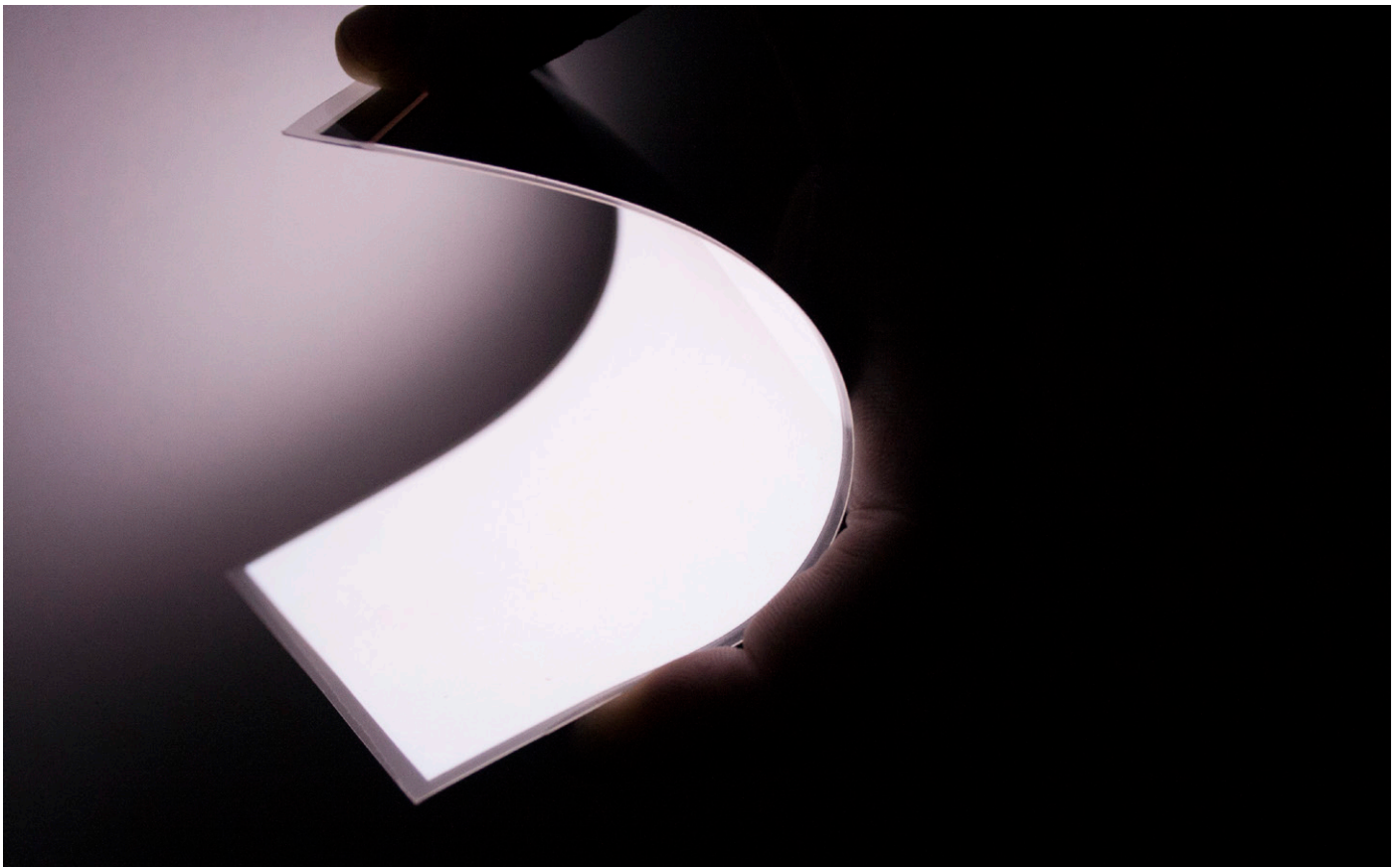
Animated Multi EL Panel displays

Whilst the production method is more technical than traditional shaped EL Panels, Surelight offer multi EL Panel animation for point of sale, advertising applications, retail display etc, please contact us for more information regarding Animated EL Panel displays.

Different sections of EL are printed and a custom programmed inverter operates the EL panel to make the EL glow, it is sequenced to turn each printed area on as required. Full colour overlays are printed to cover the EL, letting the printed EL areas shine through in sequence. Because EL is paper thin, animated EL is ideal for applications where other technologies cannot be used.

EL Parallel Panel - Available Standard Sizes





EL Panel Applications

- LCD Backlighting
- Advertising Display
- Retail Display
- Signage
- Architecture
- Electronics; Watches, Mobile phones, other appliances
- Race Car Number Panels (for night racing)
- Safety Lighting
- Automotive Instrument Panels

EL Parallel Panel Colours/Brightness

We believe that Surelight's EL Parallel Panels are the brightest currently available anywhere in the world, denser coatings and higher quality phosphor on our EL Panels make them second to none.

Item		Unit	Minimum	Typical	Maximum
High Brightness White	Brightness	cd/m ²	70	105	-
	Chromaticity	X	0.26	0.29	0.32
		Y	0.36	0.40	0.44
High Brightness Aqua (Blue/Green)	Brightness	cd/m ²	80	125	-
	Chromaticity	X	0.165	0.195	0.225
		Y	0.44	0.48	0.46

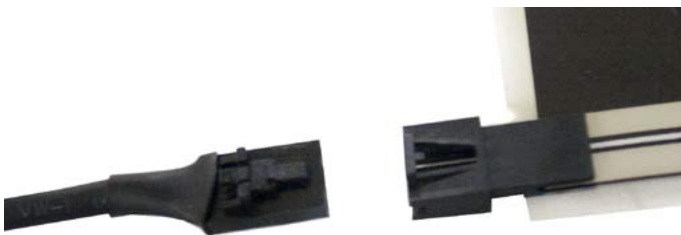
EL Parallel Panel Lamination

All Surelight EL Panel range can be supplied encapsulated (laminated) unless otherwise requested at the time of ordering. Lamination protects against moisture and mechanical damage.

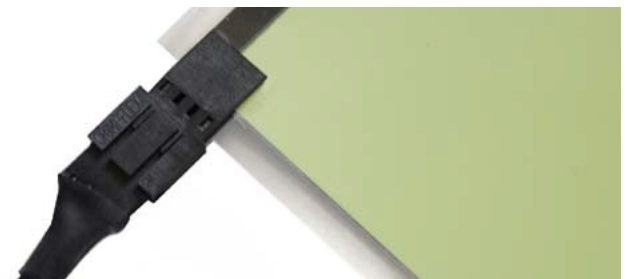
EL Parallel Panel Connections

Surelight EL Panels can be supplied pre-connected unless otherwise requested at the time of ordering.

Surelight use the highest quality connections, these connections have been designed to easily snap together making connecting and removing our EL Panels simple.



Surelight Connection view from EL Panel back



Surelight Connection on an unlit High Brightness Aqua EL Panel front

EL Parallel Panel - Life Time

Brightness versus accumulated lighting time

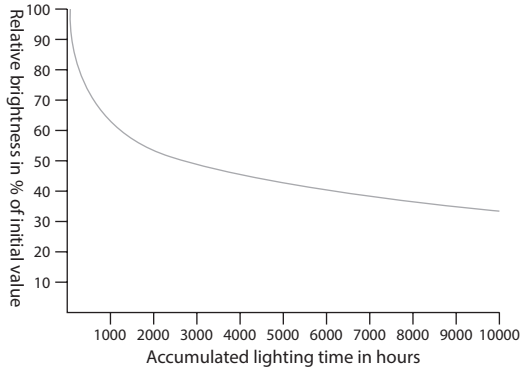


Figure 1: Brightness versus accumulated lighting time (Conditions: 100V AC, 400Hz, 20°C, 65% RH)

Unlike most other lighting which can critically fail, EL Panel brightness decreases with time.

Factors which have an impact on lifetime:

- Higher Voltage
- Higher Frequency
- DC Supply
- High Ambient Humidity
- High Ambient Temperature
- UV

Brightness can be increased by using a higher voltage or higher frequency. Higher voltage slightly decreases life time, but is preferred if higher supply current can be accepted.

Higher frequency considerably reduces lifetime, but is useful where low supply current is essential, higher frequency is most suited to applications with a short operating time.

DC supply should be avoided as lifetime of EL Panel will be reduced, If it is not possible to avoid DC, the + pole must be connected to the top (transparent) electrode.

Current vs Supply Voltage

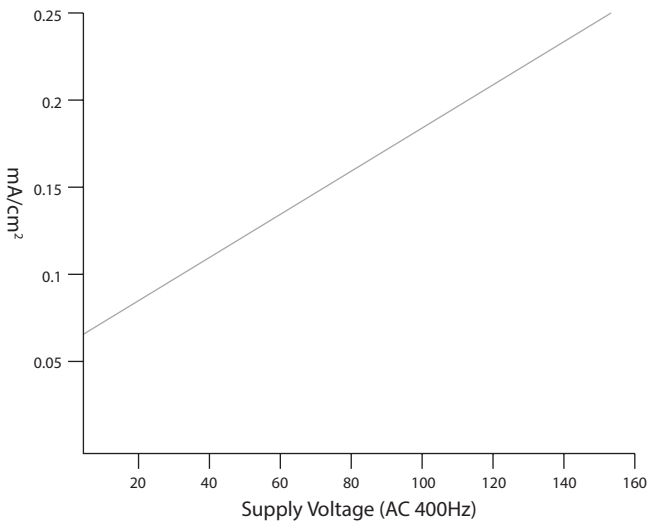


Figure 2: Current in mA/cm² versus supply voltage

Brightness vs Supply Voltage

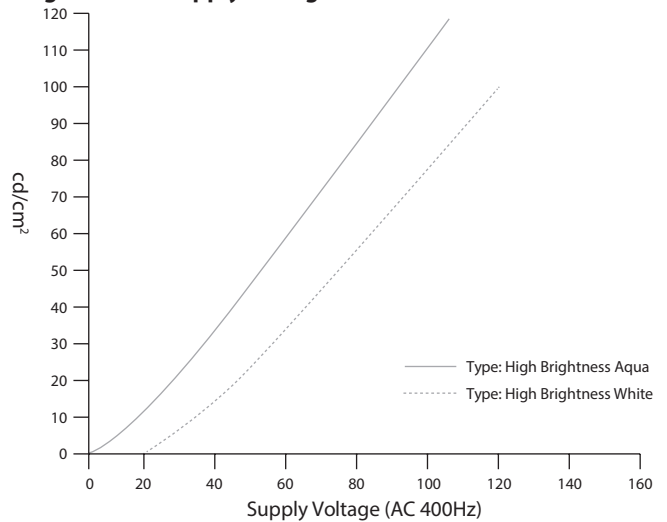


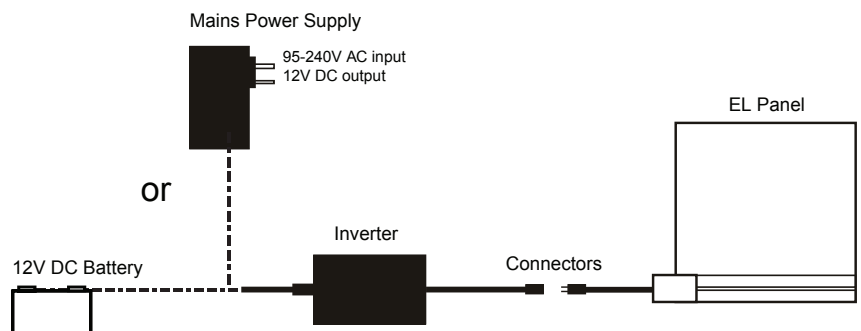
Figure 3: Brightness in cd/cm² versus supply voltage

EL Parallel Panel - Plug & Play System

Surelight Offers

- EL Parallel Panels in a "plug and play system"
- Standard Laminated EL Parallel Panels - A2, A3, A4 - Y1 with connectors (inverter sold separately)
- Custom size EL Parallel Panels
- Custom shaped EL Parallel Panels
- Power Supply Units
- A range of inverters to power any size of EL Parallel Panel

Typical Plug & Play EL Parallel Panel Setup

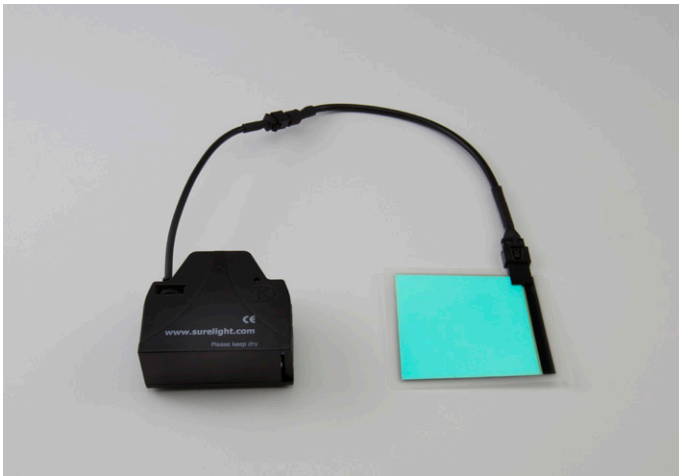


EL Parallel Panel - Evaluation Kits

We believe our Parallel EL Panels are of the highest quality and the brightest in the world.

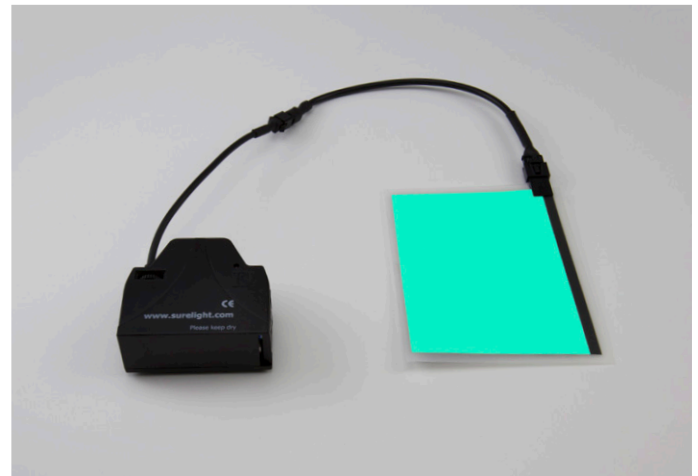
Surelight EL Parallel Panel Evaluation kits are the perfect way to try or EL Panels. For those who have never used or seen EL Panels in action before an EL Panel Evaluation Kit can give you a good idea if EL is right for your particular project.

Our EL Panel Evaluation Kits are available for purchase by contacting Surelight directly (info@surelight.com).



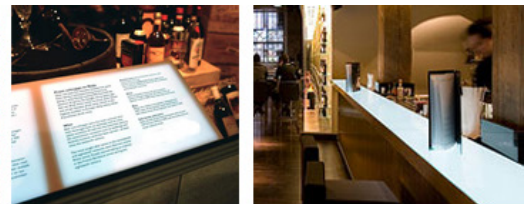
Small Evaluation Kit Includes

- Choice of Aqua or White EL Panel (approx. 50mm x 50mm)
- Inverter
- Batteries



Large Evaluation Kit

- Choice of Aqua or White EL Panel (approx. 70mm x 100mm)
- Inverter
- Batteries





Head Quarters:

Surelight
Unit 37, Venture One Business Park, Long Acre Close,
Holbrook Industrial Estate, Sheffield, S20 3FR

Telephone:

General Enquiries: +44 (0) 1142 322 322

Email: info@surelight.com

Website: www.surelight.com

Twitter: @surelight

Opening Hours: 09.00 - 17.00 Mon - Fri

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