surelight.com

Electroluminescent (EL) Parallel Panels

Olmec Advanced Materials Ltd / Surelight
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Company Reg No. 247 6257

Certificate No. 1644/98

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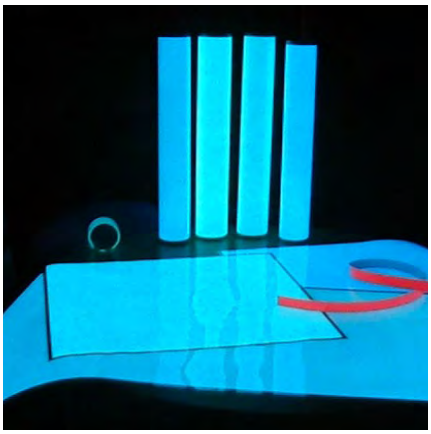

EL Parallel Panel Data Sheet

Electroluminescent technology is the new 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.

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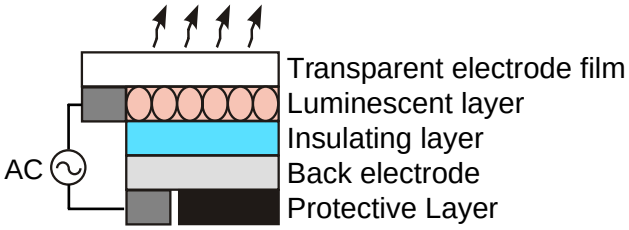
EL Parallel Panel Construction

Description

Electroluminescent Parallel Panels from surelight.com 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.



Features

- Ultra thin
- Flexible
- Highly efficient - Low energy, low temperature
- Easily cut to desired shape
- Vibration & shock resistant
- Different section can be activated separately

Ordering EL Parallel Panels from Surelight.com

There are several ways to order EL Panels:

As standard format:
A2 609 x 435 mm
A3 435 x 317 mm
A4 312 x 230 mm
Y1 415 x 135 mm

As special format:
Any size (within the above standard formats) can be ordered

Custom Size:
Special form and formats can be arranged from your specification

Custom Shape:
Custom shaped panels can be arranged from your specification

Animated Multi EL Panel displays:
Whilst the production method is more technical than tradition 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.

All Surelight's EL Panel range are supplied pre-laminated for added protection with appropriate connections, inverters are sold separately in our online shop or by contacting us directly.

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EL Parallel Panel - Applications, Colours & Connections

EL Parallel Panel Applications

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

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/m²	70	105	-
	Chromaticity	X	0.26	0.29	0.32
		Y	0.36	0.40	0.44
High Brightness Aqua (Blue/ Green)	Brightness	cd/m²	80	125	-
	Chromaticity	X	0.165	0.195	0.225
		Y	0.44	0.48	0.46

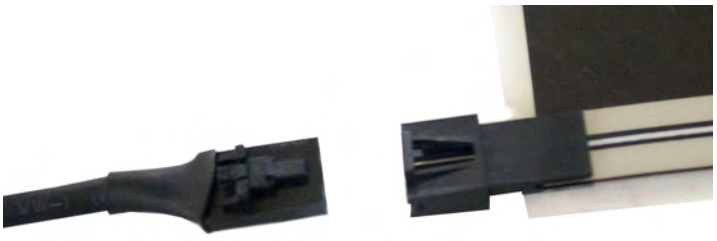
EL Parallel Panel lamination

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

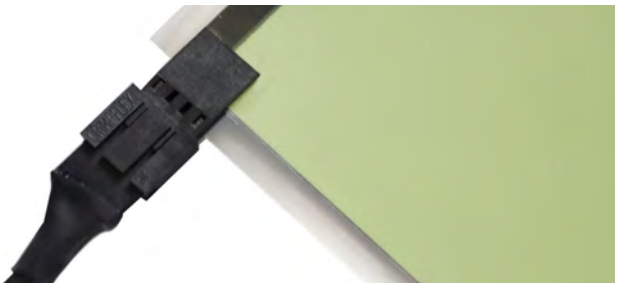
EL Parallel Panel Connections

Most Surelight EL Panels are 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

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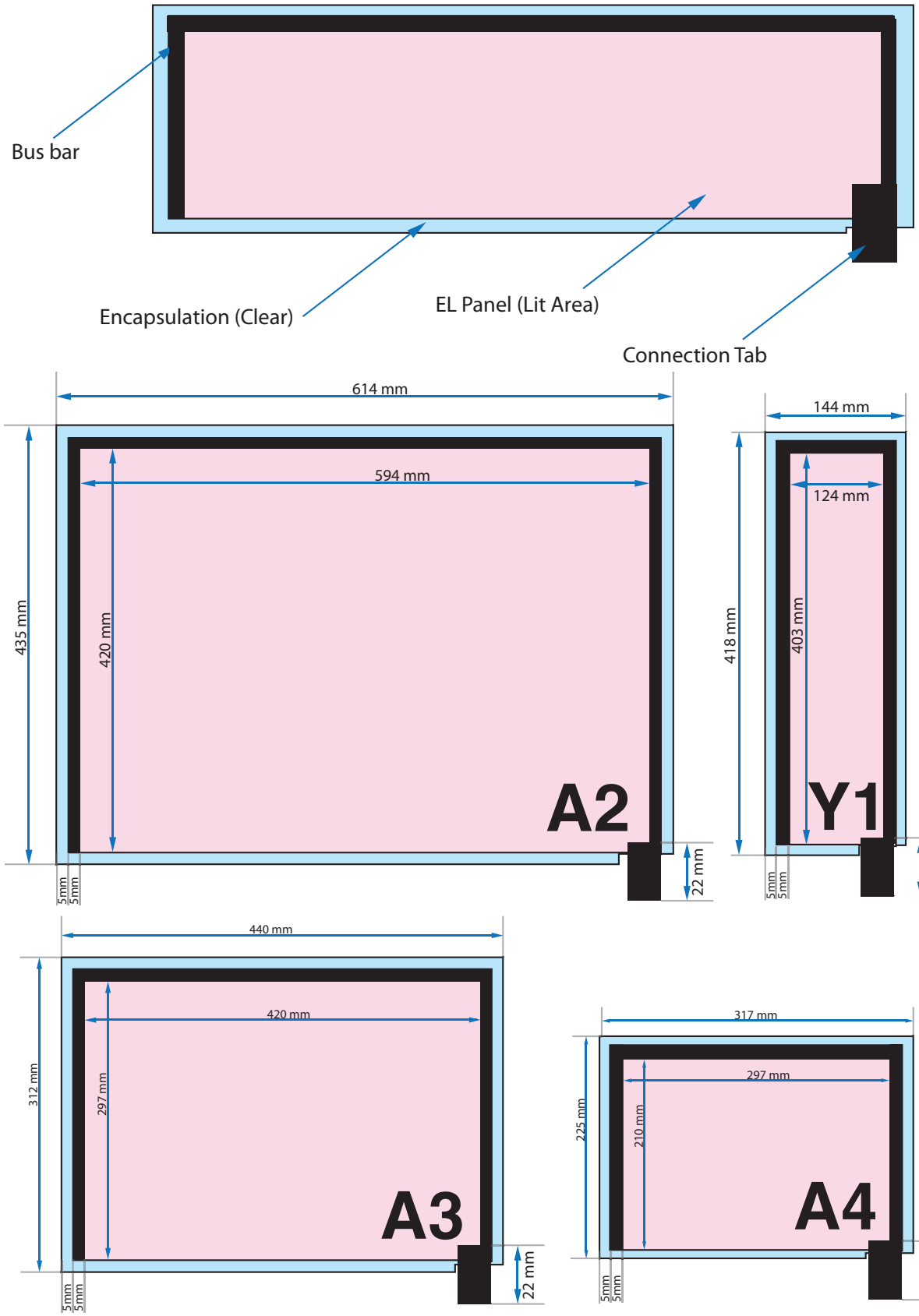
EL Parallel Panel - Available Standard Sizes



Sizes may vary slightly depending on connection orientation

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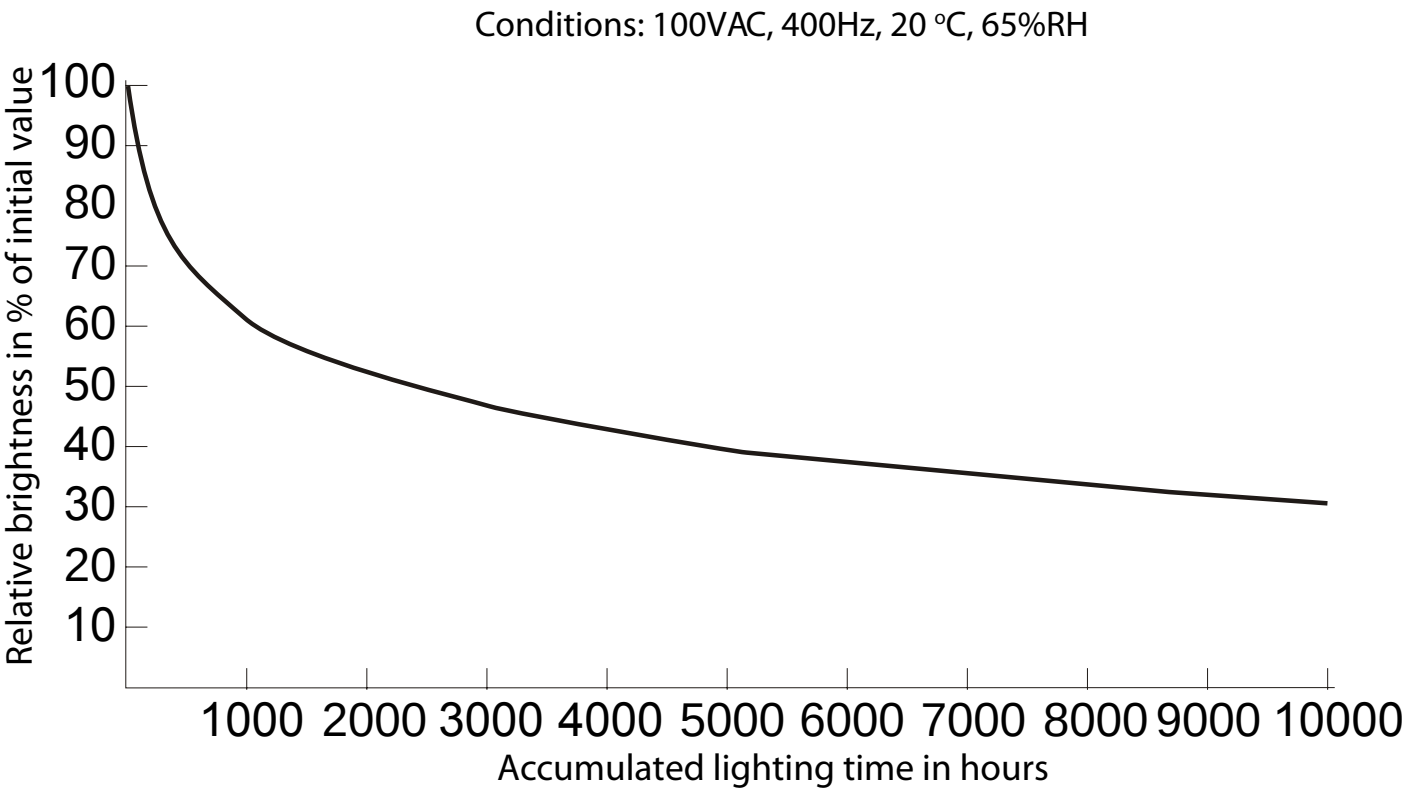
EL Parallel Panel - Life Time

Brightness versus accumulated lighting time



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

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 ne connected to the top (transparent) electrode.

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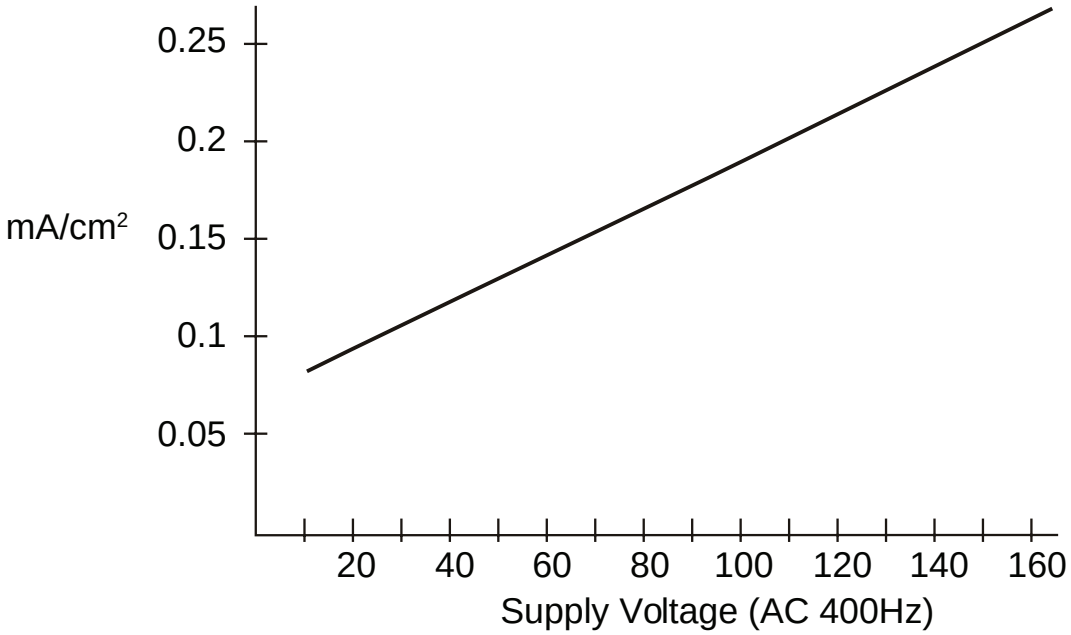
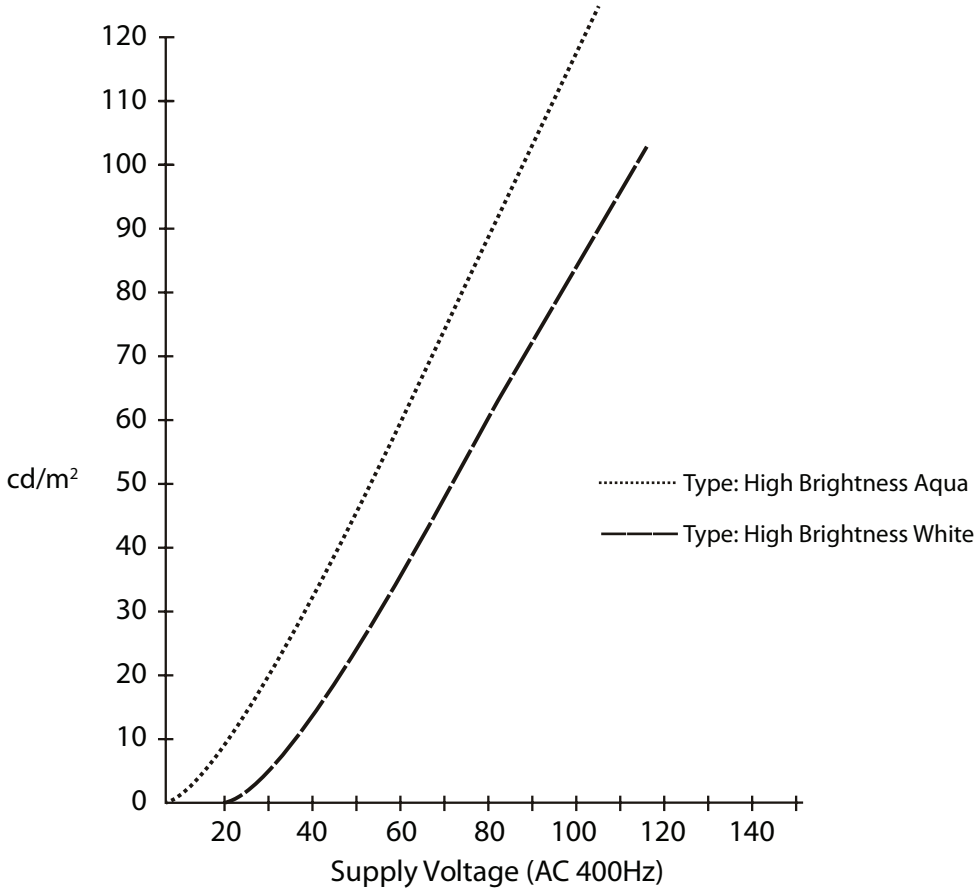
EL Parallel Panel - Life Time

Supply Current - Current in mA/cm² versus supply voltage



Brightness in cd/m² versus supply voltage



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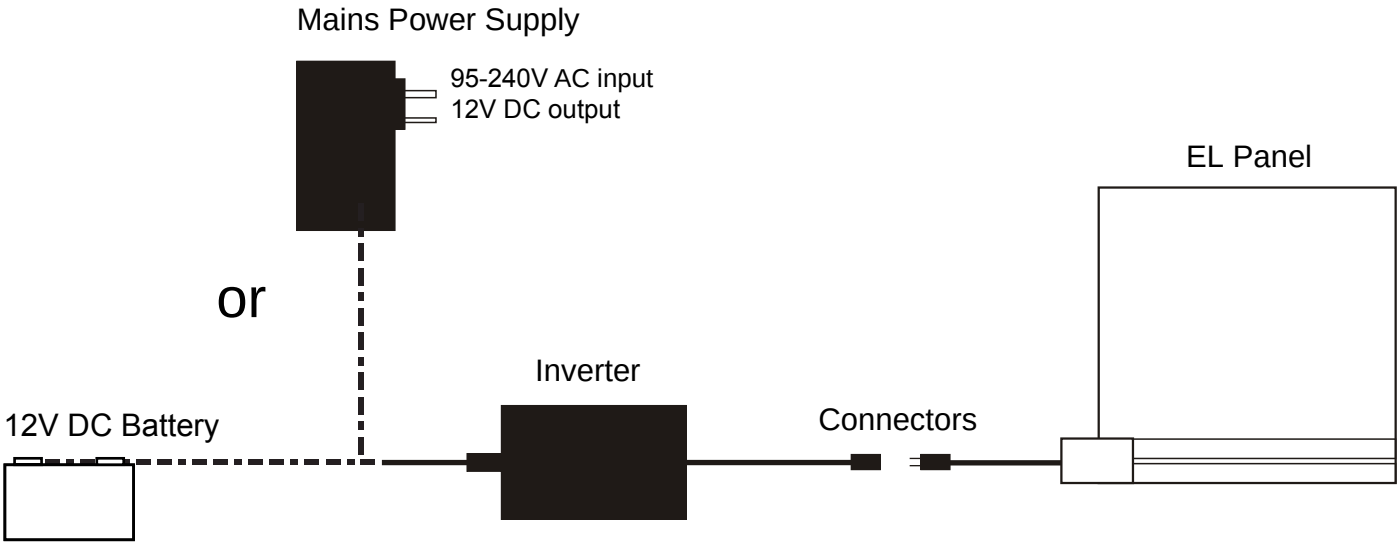
EL Parallel Panel - Plug & Play System

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



A 12VDC power supply is required, either from a mains PSU with 12DC output or a 12VDC Battery.

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EL Parallel Panel - Evaluation Kits

Try our EL Parallel Panels

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 in our Online Shop or by contacting Surelight directly.

Available in 3 sizes: small, medium or large

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