

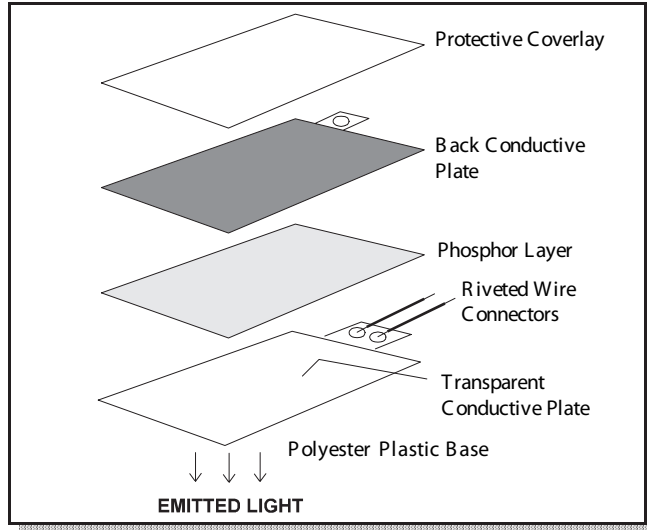
# FLAT PANEL ELECTROLUMINESCENT LAMPS

## FOR FLAT PANEL LIGHTING, EL LAMPS OFFER:

- **UNIFORM BRIGHTNESS & COLOR**  
An EL lamp provides an even color and light intensity output over the entire surface of the light. No **HOT** spots or uneven lighting at the edges!
- **LOW POWER CONSUMPTION**  
EL lamps draw only a fraction of the electrical power of an incandescent lamp. The efficiency of an EL lamp means more usable light output for the watts of power consumed.
- **“COLD” LIGHT SOURCE**  
No heat is generated by the light producing mechanisms of an EL lamp. This means they are cool to the touch. No more worries about heat management.
- **THIN PROFILE**  
EL lamps are extremely thin, making them perfect for placing behind graphic overlays or membrane switches. They are typically .010" thick.
- **CUSTOMIZABLE LIT AREA**  
An EL lamp can be created in a pattern that matches your application. Holes can be made for gauges or screw holes. A single lamp can replace a multitude of incandescent bulbs and wiring.
- **EASE OF ASSEMBLY**  
EL lamps are typically supplied with adhesive so you just peel the release liner and stick them in place. No special mounting hardware is required!

### ELECTROLUMINESCENT LAMPS

FILE EDIT DRAW WINDOWS HELP



Protective Coverlay  
Back Conductive Plate  
Phosphor Layer  
Riveted Wire Connectors  
Transparent Conductive Plate  
Polyester Plastic Base  
EMITTED LIGHT

An EL lamp is best described as a luminous capacitor consisting of a phosphor powder sandwiched between two electrically conducting layers (plates). At least one of the plates must be transparent to allow the light to escape. When the EL lamp is placed under an alternating electric field, electrons are excited to higher energy states. When these electrons return to their original state, energy is released in the form of emitted visible light. The intensity of the light increases with increasing voltage and frequency.

Electroluminescence was first described by the French physicist, Georges Destriau, in 1936. In the 1980s advancements in phosphor development and packaging technology made EL viable for commercial applications. Recent advancements have greatly improved phosphor stability and insured the long life of an EL lamp.

An EL lamp is not subject to catastrophic failure unless its thin plastic layers are damaged. Instead, an EL lamp will slowly decrease its light intensity over time, eventually stabilizing at a constant output. Usable lifetimes of 5,000 to 10,000 hours are possible.