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ELECTROLUMINESCENT LIGHTING

How does Electroluminescent Flat Lighting work?
A very thin layer of light emitting phosphor is placed between two thin electrodes. One is opaque and the other is translucent to allow light to escape. When an AC voltage is applied (approx. 240Vac, 400 - 1600 Hz), the phosphor will then rapidly charge and discharge, resulting in the emission of light. The brightness and color of the light depends on the chemical composition and dye pigments of the phosphor.

Benefits!
1.) Uniform lighting of the instrument panel due to the illumination of the entire strip's length
2.) The EL light strips will not produce reflections or glare when mounted above the panel
3.) The thin lighting strip is very light weight
4.) Almost impossible to shade your panel due to other factors or items that may move around in the cabin.

What colors are available?
Aircraft Extras, Inc. offers RED and BLUE/GREEN lighting for aircraft applications. These two colors are key for the aircraft industry because they do not ruin night vision. Other colors and WHITE are also available thru special order.

What Sizes are available?
Our standard light strips are available in 1" wide strips. 1" is the actual light width. The overall width is approximately 1.25" which includes a small border. The thickness is very thin, about 0.010". Our standard strip lengths are 24 and 36 inches. If a shorter length is desired, you may use a pair of scissors and simply snip off the end of the strip that does not have the connecting wires. A piece of clear tape should be placed over the modified or cut end to insulate the high voltage from personnel.

How long does the brightness of the EL sheet last?
Unlike incandescent or fluorescent lamps, EL lights do not fail abruptly. Instead the brightness will gradually dim over a long period of continuous use. Under ambient conditions, the useful life of the EL lamp is 6000-8000 hours.

EL Wiring
The EL strips are supplied with a +12Vdc inverter. Simply connect the BLK wire to the aircraft airframe. The Black with white stripe wire will be connected to +12V thru a proper fuse (usually 1/4A) and ON/OFF switch. The two WHT wires will be connected to the EL strip. Polarity is unimportant for this connection since the output is ac. Be sure to insulate all connections, especially the high voltage side of the inverter, the WHT wires. Simply mount the strip with "RTV", silicon rubber. This adhesive is easy to remove when desired.

EL Dimming
The EL strips can be connected thru a conventional aircraft dimmer. Simply connect the RED wire of the inverter to the dimmer output. By varying the inverter input voltage from zero to +12V, you can vary the brightness of your EL strips. The brightness is fairly linear with input voltage.

+24Vdc Systems - Inverters are available for 24Vdc systems. PLEASE inquire for pricing.