



# GWENT GROUP

ADVANCED MATERIAL SYSTEMS

## APPLICATION TO CONSTRUCT YOUR EL LAMP

- 1) Check the ITO film, to find out which side is conductive. This can be done using a resistance/conductivity meter.
  
- 2) It is recommended that the conductive side of the ITO is cleaned with isopropyl alcohol (CAS # 67-63-0). This is to remove any dirt or grease from the surface. Allow the ITO to air dry before printing.
  
- 3) The phosphor ink is then “double wet” printed directly on to the conductive side of the ITO. This then needs to be cured at 130°C for 3 minutes, using a belt dryer. Alternatively, a box oven can be used for 10 minutes at 130°C.
  
- 4) A single layer of dielectric is then printed onto the cured phosphor layer. This is then cured using the same method as for the phosphor layer.
  
- 5) The previous step is then repeated, with a second layer of dielectric.
  
- 6) The conductive layer (Silver or Carbon) is then printed on top of the dielectric layers. This layer is then cured in the same manner as the previous steps.
  
- 7) It is recommended that the finished lamp should be laminated. This can be done using a self-adhesive heat sealed film or a suitable encapsulation ink; this will help to maintain the longevity of the lamp.