UNIVERSAL SCIENCE

COOLING ELECTRONICS BY DESIGN

LED Lighting

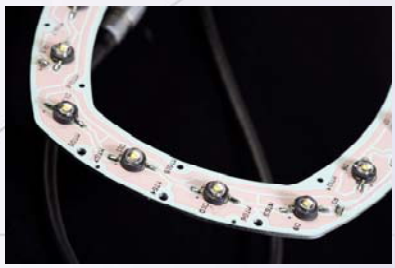
Industry Leading LED lighting

Universal Science offers a comprehensive service to Companies wishing to use LED's as a light source. With a dedicated range of materials designed to cool and package High powered LED's Universal Science manufactures your LED lighting requirements using the latest manufacturing techniques.

Typical applications include:

- Architectural internal and external lighting
- Automotive front and rear lighting, mood and warning
- Aircraft internal and external lighting systems
- Road side signage

Technical Expertise



"Universal Science has been supplying cooling systems for power semiconductors for many years it now uses that knowledge to design and manufacture LED lighting modules to suit customer's requirements".

Universal Science thermally models the design before manufacture and can also predict operating life. Prototypes are tested in the thermal laboratory where real time Junction temperatures are measured. Universal science manufactures it's own thermally conductive raw materials to build the cooling system and uses automated assembly to produce the highest quality LED lighting modules. We can apply your logo to the finished unit and package in your unique style to introduce or compliment your range of LED lighting.

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Technical Advantages

LED Matrix based lighting is increasingly being used in applications such as automotive lighting clusters, emergency, signage and decorative lighting in place of traditional filament or fluorescent tubes. The primary benefits of LED light is that is provides even, reliable, low power consumption illumination. Unlike traditional lighting LED light is monochromatic and has little or zero infra-red to harm or heat whilst it is operating.

Optics can be greatly simplified and provide a high degree of design flexibility with reduce costs.

One of the biggest concerns during normal operation when using LED's is the management of heat generated by the devices. Universal Science manufactures a range of Insulated Metal Circuits designed to carry the unwanted heat away and keep the light engine under thermal control.

The Led lighting modules normally comprise a matrix of surface mount high powered LED's soldered to an etched copper layer separated from a Aluminium or Copper heat dissipating base plate by a thermally efficient, electrically isolating dielectric material.

A new development in forming metal cored pcb's is called UniForm Technology. This enables the light to be wrapped around a 3 dimensional shape such as a cylinder with external or internal LED Lighting.

Universal Science LED Lighting design and manufacturing service.

- Free consulation to discuss customer requirement.Insulated
- Design suggestion from Universal science
- Design ownership transfers to customer
- Fast, low cost LED prototype modules
- Production made on automatic assembly machines for low cost.