

## LED:

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illumination. Don't be amazed to find your cash register countertop housing a moving, ever-changing series of advertisements. These applications and many more will be opening up new markets, some nowhere near the conventional sign industry. Perhaps the only challenge that remains here is to convince the traditionalists – both suppliers and end-users – of its true worth. **AVI**

### Adaptive Components launches AlphaEclipse PureColour

Adaptive Components has introduced a major new addition to its outdoor LED product family, the PureColour Available in standard configurations from 600mm x 1200mm., to 4500mm x 9000mm., larger custom sizes are also available.

The latest release in Adaptive's growing outdoor family of products, the AlphaEclipse™ 3600 PureColour™ Outdoor LED message centre is available as Monochromatic red or amber LEDs or, RGB full colour 24 bit driver design capable of displaying 16.7 million colours. Its unique modular design offers almost limitless possibilities for sizes and colours to meet any outdoor LED message centre communication or advertising requirement.

The Eclipse 3600 series offers many features and functions; modular front

and rear serviceable case design, silicone potted exposed LED design for superior light output and side angle visibility, parallel com processing to eliminate multiple driver failure, over 300 model configurations, wired or wireless control, industry standard compact flash memory, separate wire-way box for fast access to serial and power connections, and many more features too numerous to list here. The individual LED modules are front accessible, all internal turbo and power distribution boards, fans and power supplies are front or rear accessible from a separate, removable access door.

Popular applications include Stadiums & auditoriums for event advertising, Roadside monument signs, Replacement of static letter-boards, Highway truck stop signage, Casino spectaculars, Any outdoor "billboard" type advertising application, Corporate facility entrances and guard shacks and Time & Temp displays for any commercial business.

"The Alpha 3600 PureColour is the most

dynamic way to become a recognised landmark in your local community. Superior LED design provides you with a product that has high impact for your audience," says Donna Blackwood, Marketing Manager of Adaptive Components.

LED displays cost significantly less to operate. An Alpha Eclipse sign consumes one-tenth the power of a typical 5-watt, low voltage, wedge based system, and one-fortieth the power consumption of a high voltage 20 watt system.

Some of the standard features of the Alpha Eclipse displays are calendar scheduling of your messages, display graphics & animations, import BMP or GIF files. AlphaNet software is also included with a computer based training program.

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**W**ith all the hype focussed on LEDs building up over the last couple of years it is extremely important that Sign Companies and End user's alike research not only the type of LED that they are about to use but also the manufacturer that stands behind the product.

Most important of all they must be sure of the suitability of the application for that specific LED product.

It seems now that every Tom, Dick & Harry has a LED product that they say can light just about anything and last 100,000 hours plus (that's 24/7 operation or 34 years at 8 hours per day). That is a BIG commitment from any body.

It is therefore critical that the appropriate research is undertaken

#### How long will the LED really last?

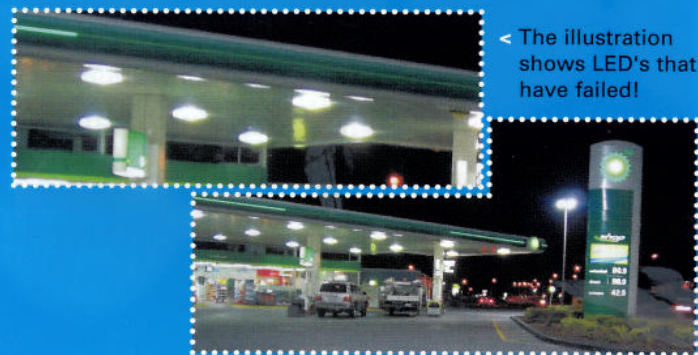
When any high performance claims are made make sure that your supplier validates these claims with the appropriate test reports etc.

One must also ensure that the manufacturer confirms the useful life and not just the operational life of the LED.

In some cases the LEDs are not powered correctly and are over driven with too higher current, in this case the useful life will only be a fraction of what it should be.

Over-driven LEDs typically appear brighter leading to claims of "Our LEDs are the brightest on the market", however, the stresses on the diode from higher operating temperatures may cause more rapid light degradation and/or premature failure.

#### How is the LED system protected?



< The illustration shows LED's that have failed!

Like any electrical system the LED is subject to failure if it is not adequately protected from adverse environmental conditions.

Most LED systems are suited only for indoor applications and if they are exposed to moisture, heat or corrosive elements will fail rapidly.

When using these systems outdoors or in an area subjected to moisture and heat make sure that the system is manufactured and installed in a manner that provides suitable protection.

This means not only the LEDs but also the Power Supplies.

Is the LED system suited to the lighting application?

The advent of the LED as a lighting system and the fact that the product is constantly evolving has really added much needed dynamics to the Illuminated Sign Industry.

It is not however the perfect replacement in all commercial lighting applications and its limitations must be recognized.

For example it does not offer a 360 degree light output like fluorescent and neon, its White light output is still limited and in many cases the cost is inhibitive. Be aware of the potential of hot spotting and narrow viewing angles and colour consistency, which is especially a problem with the cheaper forms of the product.

Other factors to be aware of when applying LED systems are their unique light wavelength and CRI which can affect the light output and visible colour emitted through and reflected from various translucent materials such as acrylic and vinyls.

For these reasons it is always best to prototype the product so that everyone is satisfied that the desired effect is achieved. Some manufacturers also have undertaken their own tests and can assist in this respect.

At the end of the day just like Incandescent, Fluorescent and Neon lighting if sufficient research is not undertaken in selecting the right form of the product, ensuring competent and professional installation as well as a routine maintenance program, then the use of LEDs may also create a very disillusioned and unhappy customer.

Make sure that this doesn't happen by asking the right questions of your supplier and educating yourself about the many forms of LED and finally ensure that the traditional lighting methods have been fairly compared and investigated.

