

Unipart Rail signalling success

Unipart Rail company, Dorman, has now manufactured and installed over 14,000 LED signals for installation on the UK rail network. Dorman LED signalling is now an established standard in UK signalling.

Since Dorman developed the breakthrough technology in 2000, which led to the first Network Rail acceptance of an LED signalling product, the product range has expanded to cover virtually the whole spectrum of LED signalling installations.

Massive changeout

The revolution in the use of LED signalling began with the introduction of the ground and elevated 'Ground Position Lights', which was the subject of a massive Network Rail changeout programme across the UK infrastructure starting in 2004 and completed in 2006. This programme, being the first widespread use of LED technology, was closely monitored and found that the signals performed excellently and were also welcomed by drivers who recognised that the LED display was an improvement on the previous filament version.

Technical success

The Dorman LED signalling succeeded through a range of technological innovations that:

- Effectively deals with phantoming.
- Maintains constant light output over time.
- Accurately matches the correct signal colours.
- Enables a single aspect to show up to three signal colours.
- Extends product life with reduced maintenance.
- Improves whole-life costs.

These innovations directly support Network Rail's challenges to the industry to create a railway that is:

- Safe.
- Reliable.
- Easily maintained.
- Energy efficient and sustainable.

2,400 colour light signals

The development of the colour light signals meant that the West Coast Route Modernisation (WCRM) programme could utilise the technology and there are now over 840 colour light signals and over 200 ground position light signals installed on the West Coast Main Line.

Using a unique optical arrangement, the possibility of phantom aspects is greatly reduced. The built in sighting scope, combined with the reduction in overall size and weight, means the signal can be installed into many restricted and difficult to site locations. Dorman LED signals provide a robust aluminium modular design that is fully maintainable from a place of safety. A complete range of spares and accessories have been produced to further optimise the effect of each installation.

LED signalling range

In total, there are now over 14,000 Dorman LED signals installed across the infrastructure and the range has extended significantly since the first approvals was received. The range



now covers:

- Colour light signals.
- Ground position light signals.
- Miniature tunnel signals.
- Junction route indicators.
- Alphanumeric (theatre) signals.
- Stencil indicators.
- Driver's crossing indicators.
- Miniature stop lights.
- Semaphore lamps.
- Level crossing barrier boom lights.
- Level crossing Wig Wags.

The Dorman LED Signals are a fully Network Rail approved alternative to the standard filament lamp. Their design provides full backwards compatibility with current signalling systems enabling simple installation via 2ba connections directly onto a terminal block. Utilising Dorman's proven LED technology, signal modules offer a constant light output throughout their life, irrespective of voltage fluctuations and temperature change enabling a comprehensive five year light output guarantee.

International interest

Together with Unipart Rail, Dorman will be exhibiting its LED technology at a number of

international exhibitions this autumn including:

- Rail Solutions Asia, Hong Kong.
- Nordic Rail, Sweden.
- AusRail, Sydney.

Dorman LED head/tail lamps have already been installed on Alstom's Lint trains and LED Signalling is being developed to meet the requirements of railways overseas.

LED Wig-Wag achieves HMRI and Network Rail Approval

The Unipart Rail LED level crossing Wig-Wag has been approved by the HMRI and Network Rail for introduction to new crossings and all renewals and upgrades. Manufactured by Unipart Rail, the LED level crossing Wig-Wag is compliant with EN 12368:2000 as defined in TR 2206.

The LED signalling solution provides increased safety and reliability thereby greatly reducing maintenance costs. Additionally, the units are vandal resistant and, as they are LED in construction, they provide a long and predictable service life. Although it is mandatory that after 1st February 2008 all installations should be fitted with the new LED Wig-Wags, orders can be placed immediately for upcoming projects. 

